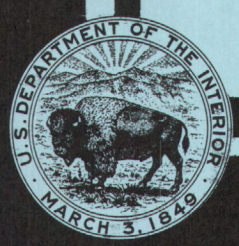
Water Resources Data for North Carolina

Water Year 1977



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NC-77-1

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

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UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, Secretary

GEOLOGICAL SURVEY

H. William Menard, Director

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Raleigh, North Carolina 27602

1978

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 L. B. Laird, Regional Hydrologist, Southeastern Region.

This report is one of a series issued State by State under the general direction of J. S. Cragwall, Jr., Chief, Hydrologist, and G. W. Whetstone, Assistant Chief Hydrologist for Scientific Publications and Data Management.

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16. Abstracts

Water resources data for the 1977 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 149 gaging stations; stage and contents for 24 lakes and reservoirs; water quality for 146 gaging stations; and water levels for 55 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.

17. Key Words and Document Analysis. 17a. Descriptors

*North Carolina, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperatures, Sampling sites, Water levels, Water analyses.

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(Letter after station name designates type of data: (d) discharge, (c) chemical (b) biological, (m) microbiological, (t) water temperature, (s) sediment)

GROUND-WATER WELLS, BY COUNTY, FOR WHICH RECORDS ARE PUBLISHED

WATER RESOURCES DATA FOR NORTH CAROLINA 1977

INTRODUCTION

Water resources data for the 1977 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 149 gaging stations; stage and contents for 24 lakes and reservoirs; water quality for 146 gaging stations and 32 miscllaneous sites; and water levels for 55 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, Va. 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-77-1." Water-data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161.

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,
Everette Knight, director.
State Board of Transportation, Division of Highways,
Billy Rose, highway administrator.
City of Asheville, William E. Edens, director of
Water and Sewers.
City of Burlington, James D. Mackintosh, Jr., city
manager.
City of Charlotte, John M. Belk, mayor.
City of Durham, I. Harding Hughes, Jr., city manager.
City of Greensboro, Tom Z. Osborne, city manager.
City of Rocky Mount, Frederick E. Turnage, mayor.
City of Winston-Salem, Franklin R. Shirley, mayor.
Water Resources Research Institute, University of
North Carolina, David H. Howells, director.

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, Va. and Raleigh, N. C.; Appalachian Power Co.; E. I. du Pont de Nemours and Co.; Carolina Power and Light Co.; Champion Paper and Fibre Co.; Duke Power Co.; J. P. Stephens Co. Inc.; Olin Mathieson Chemical Corp.; 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: Clyde E. Simmons, Herman C. Gunter, Ernst G. Wollin, Jr., Thomas E. Dillard, William H. Eddins, Rufus G. Allen, Russell G. Barker, Willie Blount, Isaac J. Forehand, Ronald G. Garrett, Edwin D. George, Stephen S. Howe, Phyllis M. Joyner, Ruth C. Linder, Donald P. McGeary, Bobby C. Ragland, Clarence M. Ray, Jr., Howard E. Reeder, Joseph S. Riggsbee, Jerry F. Rinehardt, Joseph E. Shoffner, Timothy C. Stamey, Eloise H. Stephens and Sherman G. Thompson.

HYDROLOGIC CONDITIONS

Streamflow during the 1977 water year was slightly above normal in the Mountains, normal in the western and central Piedmont, and well below normal in the eastern Piedmont and Coastal Plain regions. Annual runoff at the three index gaging stations, as compared with long-term normals, was as follows: French Broad River at Asheville, 110 percent; South Yadkin River near Mocksville, 103 percent; and Neuse River near Clayton, 49 percent.

Flows during the period October to December 1976 were generally near normal in the Coastal Plain region and above normal elsewhere. Heavey rains caused moderate flooding in the western Piedmont on October 7-9th. Record-breaking low temperatures during January, which caused unprecedented icing of streams and lakes, combined with below average rainfall to reduce streamflows to below-normal conditions. Receding flows continued into February and were only about one-half of normal for the month. During March, however, flows in most streams increased to normal conditions as a result of widespread rains. On April 4, flash-flooding caused moderate damages to property along many streams in the Mountain and northwestern Piedmont regions.

Following the rises in early April, flows in most of the Piedmont and Coastal Plain regions began a long recession which culminated in near-record drought conditions during late summer. A prelude to the severe drought occurred during June, when streamflows in about a dozen eastern counties decreased to less than a quarter of normal flow. Conditions worsened during July. From the western Piedmont to the coast, flows in major streams receded to record or near-record levels and numerous small streams went dry. Federal officials approved emergency drought relief funds for 56 counties. Declining water supplies forced several eastern towns, including Chapel Hill, Zebulon, and Southern Pines, to enact water-use ordinances. Flows in the upper Neuse and Cape Fear River basins ranged from only 5 to 20 percent of normal for July. Frequent showers during August improved flow conditions, but streams in the central part of the State remained below normal. The effects of drought conditions on flows in one major stream, the Neuse River near Clayton, are shown in figure 1.

The drought ended in early September when statewide rains caused most streams to rise to normal or above normal conditions for the first time since May. Heavy rains on September 9 and 15 caused minor flooding in several Mountain and western Piedmont counties.

Ground-water levels were extremely variable across the State. Levels in the Mountain region remained slightly above average during most of the year. In the Piedmont, levels were generally above or near average until late May, when deficient rainfall caused levels to decline rapidly. Ground-water levels in the Coastal Plain region declined unseasonably to below-normal conditions during November and did not return to normal levels until March. Insufficient recharge during the June-August drought period caused levels in many eastern Piedmont and Coastal Plain wells to decline to record or near-record low conditions. Levels in most wells returned to normal conditions during September.

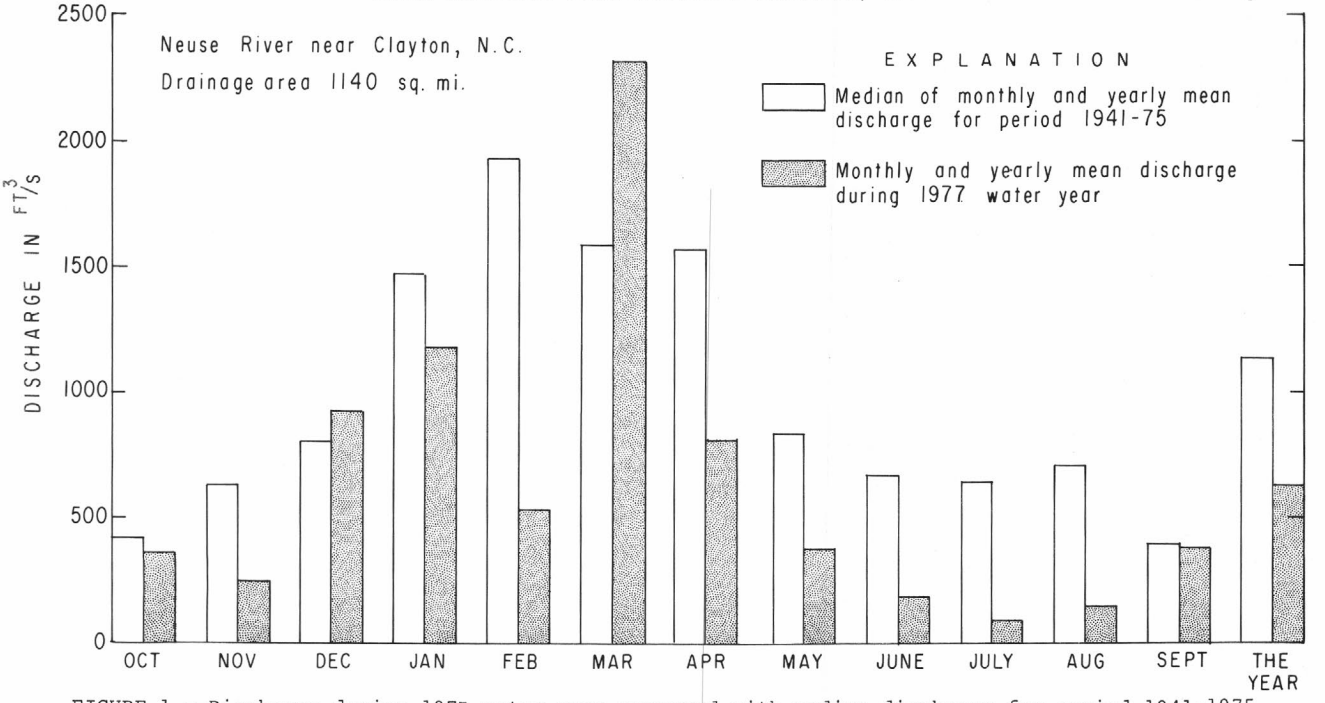

FIGURE 1.--Discharge during 1977 water year compared with median discharge for period 1941-1975 for the index gaging station in the eastern Piedmont region.

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°± 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. Chlorophyll 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 refers to the amount of substance present in true chemical solution. In practice, however, the term includes all forms of substance that will pass through a 0.45-micrometer membrane filter, and thus may include some very small (colloidal) suspended particles. Analyses are performed on filtered samples.

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.

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 milliters (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 disstilled 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.	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 disintergrations per second. A picocurie yields 2.22 dpm (disintergrations 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 (as used in tables of chemicals analyses) refers to the amount (concentration) of the total concentration that is in suspension in a water-sediment mixture. The water-sediment mixture is associated with (or sorbed on) that material retained on a 0.45 micrometer filter.

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.....Hexageria
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 load (tons) is the total quantity of any individual constituent, as measured by dry 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 0.0027 times the number of days.

Water year in the Geological Suvey 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, 1977, is called the "1977 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 before 1975.

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 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 arragned 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 insure an unique station number. See figure 2 below.

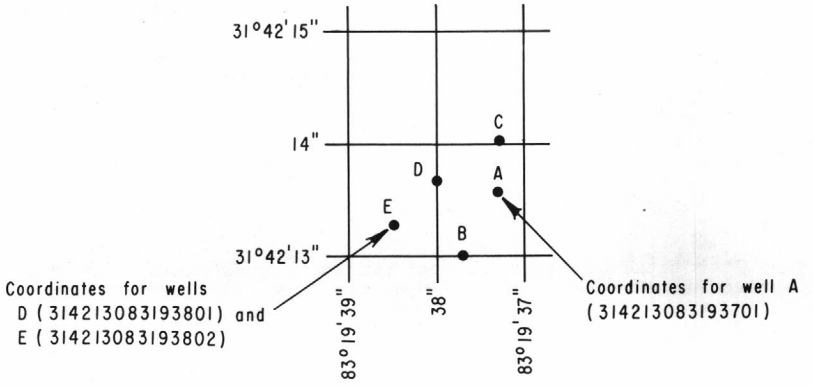

FIGURE 2.--System for numbering wells (latitude and longitude).

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 bench-mark 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 described in standard text-books, 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 above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE". In reference to datum of gage, the phrase "mean sea level" denotes "Sea Level Datum of 1921" as used by the Topographic Division of the Geological Survey, unless otherwise qualified. 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 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 back-water 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 that "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 that 1 cfs; to tenths between 1.0 and 10 cfs; to whole numbers between 10 and 1,000 cfs; and to 3 signifcant 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 1976 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

Only ground-water level data from a basic network of observation 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 mean sea level (msl) or land-surface datum (lsd). Mean sea level is the datum 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-one 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 section 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, 604 South Picket Street, Alexandria, VA 22304 (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 DI. 1975. 65 pages. $1.60.

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. $1.90.

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. $1.75

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. $0.25

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. $0.20.

3-A3. Measurement of peak discharge at culverts by indirect methods, by G. L. Bodhaine: USGS--TWRI Book 3, Chaper A3. 1968. 60 pages. $0.40.

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. $1.00.

3-A5. Measurement of peak discharge at dams by indirect methods, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages. $0.30.

3-A6. General procedure for gaging streams, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages. $0.20.

3-A7. Stage measurements at gaging stations, by T. J. Buchanan and W. P. Somers: USGS-TWRI Book 3, Chapeter A7. 1968. 28 pages. $0.45.

3-A8. Discharge measurements at gaging stations, by T. J. Buchanan and W. P. Somers: USGS--TWRI Booke 3, Chapter A8. 1969. 65 pages. $1.25

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. $0.40.

3-A12. Fluorometric procedures for dye tracing, by J. F. Wilson Jr.: USGS--TWRI Book 3, Chapter A12. 1968. 31 pages. $0.35. Not currently available.

3-B1. Aquifer-test design, observation, and data analysis, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages. $0.70

3-B2. Introduction to ground-water hydraulics-a programmed text for self-instruction, by D. S. 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. $0.65.

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. $0.70.

3-C3. Computation of fluvial-sediment discharge, by George Porterfield: USGS-TWRI Book 3, Chapter 3. 1972. 66 pages. $1.15.

4-A1. Some statistical tools in hydrology, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages. $0.30

4-A2. Frequency curves, by H. C. Riggs: USGS-TWRI Book 4, Chapter A2. 1968. 15 pages. $0.20.

4-B1. Low-flow investigations, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages. $0.65.

4-B2. Storage analyses for water supply, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages. $0.75.

4-B3. Regional analyses of streamflow characteristics, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages. $0.75.

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. $0.65.

5-A1. Methods for collection and analysis of water samples for dissolved minerals and gases, by Eugene Brown, M. W. Skougstad, and M. J. Fishman: USGS--TWRI Book 5, Chapter A1. 1970. 160 pages. $2.40

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. $0.80.

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. $0.90.

5-A4. Methods for collection and analysis of aquatic biological and microbiological samples, by K. V. Slack, R. C. Averett, P. E. Greeson, and P. G. Lipscomb: USGS--TWRI Book 5, Chapter A4. 1973. 165 pages. $1.95.

5-C1. Laboratory theory and methods for sediment analysis, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages. $0.65.

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.

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. $0.70

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. $0.40.

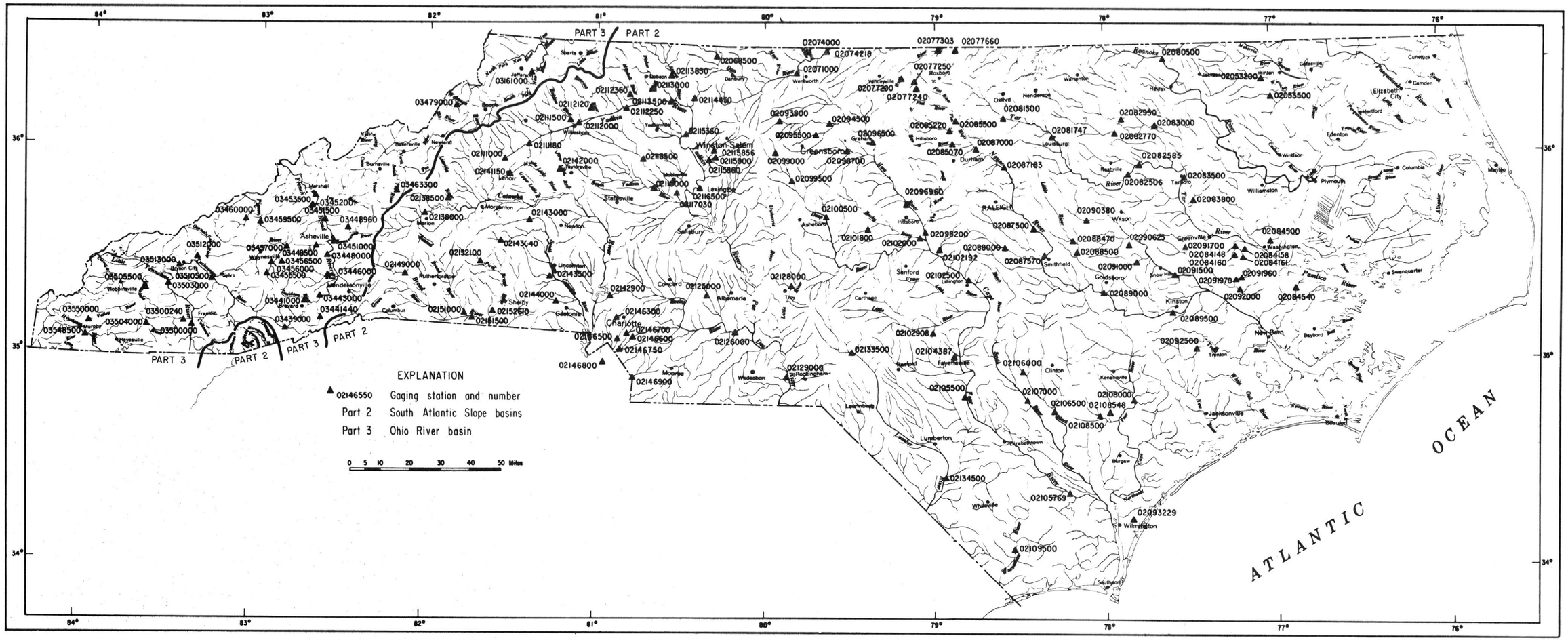

Figure 3. Map of North Carolina showing location of gaging stations.

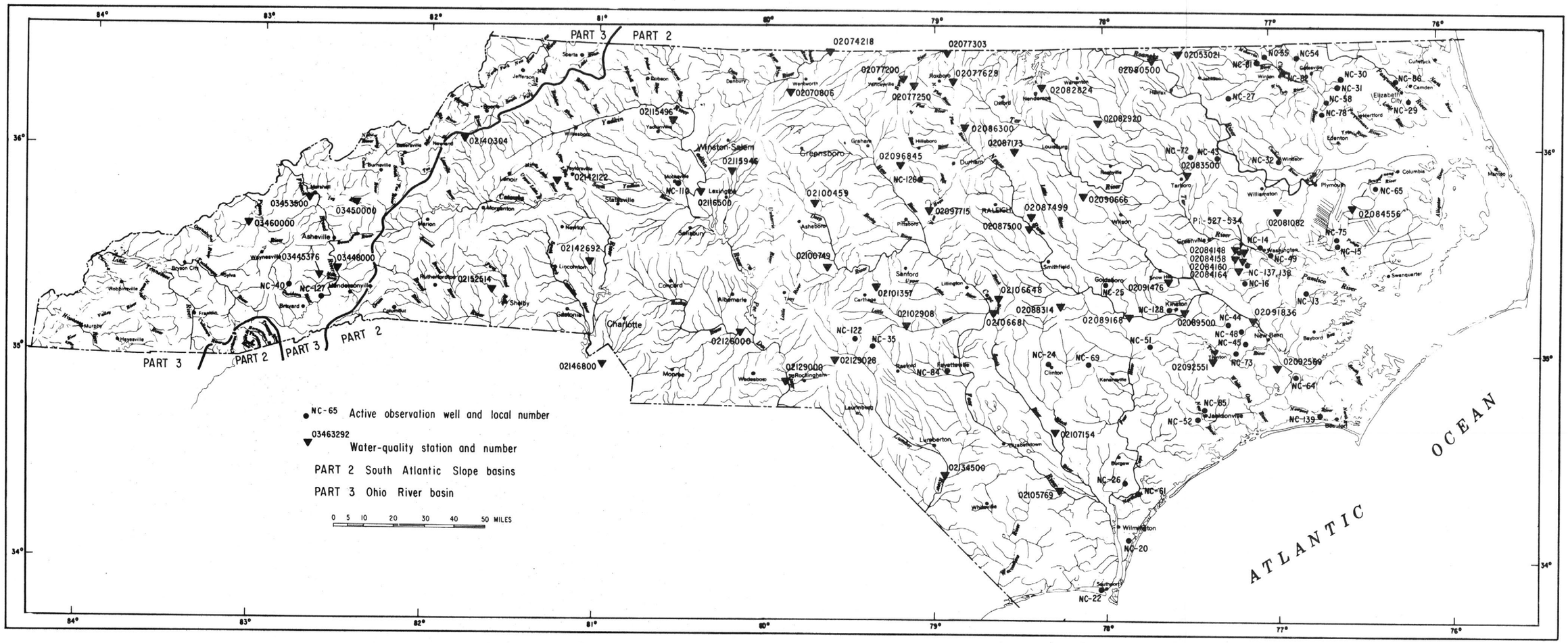

Figure 4. Map of North Carolina showing location of water-quality stations and observation well sites.

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.--191 mi^2 (495 km^2).

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) above mean sea level. Prior to Dec. 1, 1958, nonrecording gage at same site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 343 of this report.

AVERAGE DISCHARGE.--19 years, 230 ft^3/s (6.514 m^3/s), 16.35 in/yr (415 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,050 ft^3/s (115 m^3/s) May 10, 1958, gage height, 19.12 ft (5.828 m); minimum, 0.2 ft^3/s (0.006 m^3/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 ft^3/s (115 m^3/s), and flood of August 1940 reached a stage of 24.1 ft (7.35 m), discharge, 7,000 ft^3/s (198 m^3/s) from rating curve extended above 4,000 ft^3/s (113 m^3/s), from information furnished by North Carolina State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Maximum discharge,1,330 ft^3/s (37.7 m^3/s) Mar. 8, gage height, 11.76 ft (3.584 m); minimum, 1.2 ft^3/s (0.034 m^3/s) Sept. 29, 30, gage height, 1.36 ft (0.415 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	72	97	260	150	566	202	86	123	26	5.1	4.7
2	8.1	65	84	240	140	537	169	56	80	165	5.3	3.7
3	16	57	91	220	130	521	155	50	64	491	6.2	3.1
4	22	49	97	200	140	503	185	43	43	343	6.9	2.6
5	21	45	94	180	139	657	324	37	29	410	6.2	2.3
6	19	40	91	160	135	730	524	108	23	395	5.1	2.1
7	15	37	86	280	130	905	475	127	52	278	5.3	2.1
8	12	36	120	400	125	1260	391	92	55	160	7.9	3.4
9	13	31	204	600	110	1310	368	100	56	92	6.5	6.9
10	17	27	235	800	105	1260	328	73	141	53	5.8	6.5
11	21	26	346	1100	94	1130	264	75	103	98	4.9	5.4
12	23	25	456	1130	90	920	209	70	62	219	4.4	5.1
13	25	25	548	1150	98	734	168	60	52	135	4.1	3.8
14	23	25	534	1150	119	794	139	49	43	145	3.9	2.8
15	19	35	508	1090	127	764	115	37	33	182	4.3	2.5
16	15	71	509	983	128	677	95	28	28	143	5.8	2.2
17	13	93	545	850	139	589	85	23	22	80	5.3	2.3
18	14	79	531	740	141	485	67	19	18	48	15	2.6
19	14	76	501	580	135	393	55	16	18	32	22	2.3
20	16	89	459	480	131	324	67	13	19	22	18	2.2
21	34	95	422	380	127	296	76	11	15	17	14	2.1
22	59	95	393	300	117	329	95	9.6	11	13	23	1.9
23	58	85	322	220	108	456	146	8.5	11	11	46	1.8
24	54	75	291	160	113	410	155	29	17	8.9	47	1.7
25	73	66	255	140	256	373	254	554	18	7.7	39	1.7
26	82	60	252	150	302	366	263	934	16	7.1	29	1.6
27	96	54	300	169	255	340	165	728	14	6.7	21	1.6
28	98	50	340	185	423	294	137	509	12	6.2	15	1.5
29	90	66	360	180	---	246	126	396	35	5.6	11	1.4
30	81	99	350	170	---	219	107	298	50	5.4	7.9	1.3
31	79	---	300	160	---	224	---	199	---	5.3	6.0	---
TOTAL	1146.1	1748	9721	14807	4207	18612	5909	4837.1	1263	3610.9	406.9	85.2
MEAN	37.0	58.3	314	478	150	600	197	156	42.1	116	13.1	2.84
MAX	98	99	548	1150	423	1310	524	934	141	491	47	6.9
MIN	6.0	25	84	140	90	219	55	8.5	11	5.3	3.9	1.3
CFSM	.19	.31	1.64	2.50	.79	3.14	1.03	.82	.22	.61	.07	.02
IN.	.22	.34	1.89	2.88	.82	3.62	1.15	.94	.25	.70	.08	.02

CAL YR 1976 TOTAL 50785.4 MEAN 139 MAX 1990 MIN 1.8 CFSM .73 IN 9.89
WTR YR 1977 TOTAL 66353.2 MEAN 182 MAX 1310 MIN 1.3 CFSM .95 IN 12.92

CHOWAN RIVER BASIN

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) above mean sea level (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. Suspended-sediment records for the current year are published on page 343 of this report.

AVERAGE DISCHARGE.--27 years, 63.6 ft³/s (1.801 m³/s), 15.15 in/yr (385 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 since canalization, 1.4 ft³/s (0.040 m³/s) Sept. 1, 1976.

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.--Peak discharges above base of 720 ft³/s (20.4 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 26	0800	*770	21.8	*8.50	2.591

Minimum discharge, 2.0 ft³/s (0.057 m³/s) Sept. 30, gage height, 1.10 ft (0.335 m)

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	2.9	9.6	15	20	95	54	24	20	23	5.0	2.6
2	2.6	3.3	6.9	13	18	58	46	21	46	447	5.5	2.5
3	2.4	2.9	5.5	12	17	45	43	13	148	423	9.3	2.5
4	2.6	2.6	4.9	12	18	139	56	52	50	122	12	2.4
5	2.6	2.5	4.6	11	18	479	140	63	27	51	7.5	2.3
6	2.4	2.6	4.3	11	17	264	206	196	28	31	5.7	2.5
7	2.4	2.5	7.2	24	16	580	101	82	67	21	5.0	2.2
8	2.3	2.4	22	39	15	619	66	78	29	17	4.6	7.0
9	3.3	2.4	19	29	14	308	51	46	52	14	4.6	14
10	2.3	2.4	12	445	14	172	44	31	67	21	4.5	9.8
11	2.4	2.6	10	498	14	114	39	23	31	139	4.2	5.8
12	2.4	2.8	26	170	14	89	36	18	21	70	4.0	4.2
13	2.3	2.6	37	73	17	229	34	15	16	30	3.8	3.3
14	2.1	2.6	23	54	22	375	31	14	14	19	4.3	2.9
15	1.9	8.3	17	153	21	190	29	12	13	15	5.2	2.6
16	1.8	16	39	108	21	118	26	11	12	13	4.0	2.9
17	2.4	10	40	63	21	82	27	9.6	11	11	3.7	2.9
18	2.1	6.9	26	41	20	64	25	9.0	10	9.1	13	7.3
19	1.9	5.4	19	34	20	55	24	8.7	15	8.3	16	7.8
20	5.1	4.4	17	30	22	56	44	8.4	12	7.7	7.7	4.6
21	5.8	4.5	21	27	22	65	36	7.8	9.8	7.2	5.3	3.3
22	7.5	4.1	19	24	20	189	31	7.5	8.8	7.6	4.4	2.8
23	5.0	3.8	16	22	18	176	27	7.5	11	7.5	3.8	2.6
24	3.3	3.3	14	21	31	101	39	155	13	6.5	3.6	2.5
25	3.4	3.1	13	22	96	71	116	715	12	6.0	6.7	2.5
26	3.8	3.2	24	25	58	56	65	738	12	6.0	11	2.7
27	3.2	3.3	34	25	50	48	44	345	12	6.0	5.6	2.3
28	3.0	4.2	25	26	180	44	35	129	13	5.6	4.0	2.3
29	2.7	8.0	20	26	---	41	31	62	127	5.4	3.7	2.3
30	2.4	11	16	23	---	54	27	37	32	5.4	2.9	2.1
31	3.4	---	15	21	---	68	---	27	---	5.3	2.8	---
TOTAL	93.4	136.6	567.0	2097	834	5044	1573	2955.5	939.6	1560.6	183.4	117.5
MEAN	3.01	4.55	18.3	67.6	29.8	163	52.4	95.7	31.3	50.3	5.92	3.92
MAX	7.5	16	40	498	180	619	206	738	148	447	16	14
MIN	1.8	2.4	4.3	11	14	41	24	7.5	8.8	5.3	2.8	2.1
CFSM	.05	.08	.32	1.19	.52	2.86	.92	1.68	.55	.88	.10	.07
IN.	.06	.09	.37	1.37	.54	3.29	1.03	1.94	.61	1.02	.12	.08

CAL YR 1976 TOTAL 11577.3 MEAN 31.6 MAX 852 MIN 1.4 CFSM .55 IN 7.56
WTR YR 1977 TOTAL 16111.6 MEAN 44.1 MAX 738 MIN 1.8 CFSM .77 IN 10.51

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 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.--124 mi² (321 km²)

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

REVISED RECORDS.--WSP 892: Drainage area. 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. Considerable diurnal fluctuation and regulation from mills and powerplants above station. Talbott and Townes reservoirs above Pinnacles Hydroelectric Plant in Virginia, 28 mi (45 km) above station, were completed in 1938 (see p. 257). Suspended-sediment records for the current year are published on page 343 of this report.

AVERAGE DISCHARGE.--53 years, 188 ft³/s (5.324 m³/s), 20.59 in/yr (523 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,400 ft³/s (351 m³/s) Oct. 19, 1937, gage height, 12.45 ft (3.795 m); 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)
Oct. 9	0330	*4260	121	*6.72	2.048	Apr. 5	0800	2660	75.3	5.21	1.588
Oct. 25	2400	2460	69.7	5.01	1.527						

Minimum discharge, 46 ft³/s (1.30 m³/s) Sept. 30, gage height, 1.06 ft (0.323 m); minimum daily, 54 ft³/s (1.53 m³/s) Aug. 1, 2, Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	159	188	234	170	150	143	178	134	93	139	54	101
2	124	218	207	180	190	161	178	158	143	118	54	105
3	120	220	207	170	160	142	183	174	116	72	91	95
4	87	201	190	160	134	194	204	170	99	69	65	82
5	130	198	125	160	136	206	1320	143	102	68	63	59
6	115	180	139	160	160	256	496	152	94	142	90	63
7	134	142	862	147	170	259	387	205	123	141	104	103
8	558	124	383	151	230	262	345	150	77	116	116	206
9	2330	193	275	142	220	242	274	110	82	125	133	133
10	523	155	206	159	187	219	229	154	76	109	111	83
11	352	134	185	170	139	203	187	129	73	131	104	71
12	268	137	217	170	127	173	221	115	72	138	79	65
13	267	122	169	160	190	526	244	119	72	164	123	65
14	203	129	226	160	163	418	241	147	137	116	89	66
15	187	140	244	160	141	250	226	162	85	111	108	65
16	183	163	247	149	138	194	202	115	103	95	74	85
17	207	131	213	170	153	195	168	146	103	79	87	98
18	188	127	165	180	153	228	161	192	113	70	108	76
19	201	113	132	160	145	197	221	169	93	123	76	70
20	340	91	196	150	110	233	218	185	74	109	68	91
21	326	112	240	150	125	198	199	104	135	106	65	66
22	281	108	272	132	113	275	195	120	96	93	92	63
23	200	134	162	120	119	241	190	84	105	69	105	63
24	165	129	140	127	183	224	320	93	104	61	77	64
25	407	122	136	115	167	191	190	90	132	60	120	63
26	836	92	205	131	119	169	194	116	89	62	69	80
27	313	106	146	145	131	146	198	135	91	57	68	70
28	263	247	146	138	135	146	165	129	142	55	66	84
29	241	526	132	112	---	175	152	100	154	56	64	151
30	196	265	179	140	---	202	156	124	132	59	89	54
31	246	---	143	140	---	189	---	86	---	56	94	---
TOTAL	10150	4947	6723	4678	4288	6857	7842	4210	3110	2969	2706	2540
MEAN	327	165	217	151	153	221	261	136	104	95.8	87.3	84.7
MAX	2330	526	862	180	230	526	1320	205	154	164	133	206
MIN	87	91	125	112	110	142	152	84	72	55	54	54
(†)	+8	-4	+1	-10	+1	+11	-2	-9	-3	-9	-5	+19

CAL YR 1976 TOTAL 68794 MEAN 188 MAX 2330 MIN 59 MEAN‡ 188 CFSM‡ 1.52 IN‡ 20.65
WTR YR 1977 TOTAL 61020 MEAN 167 MAX 2330 MIN 54 MEAN‡ 167 CFSM‡ 1.35 IN‡ 18.28

† 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.

ROANOKE RIVER BASIN

02071000 DAN RIVER NEAR WENTWORTH, N. C.

LOCATION.--Lat 36°24'47", long 79°49'45", 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.--1,050 mi² (2,720 km²), approximately.

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

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

GAGE.--Water-stage recorder. Datum of gage is 512.98 ft (156.356 m) above mean sea level. 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 mills and Talbott and Townes reservoirs. (See p. 257). Suspended-sediment records for the current year are published on page 343 of this report.

AVERAGE DISCHARGE.--38 years, 1,203 ft³/s (34.07 m³/s), 15.56 in/yr (395 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. 10	0030	*17700	501	*20.12	6.133	Apr. 5	2200	13700	388	17.48	5.328

Minimum discharge, 182 ft³/s (5.15 m³/s) Aug. 2, 3, gage height, 0.77 ft (0.235 m); minimum daily, 185 ft³/s (5.24 m³/s) Aug. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1230	1400	1540	791	617	971	843	693	545	398	194	264
2	742	1070	1220	692	617	862	787	663	541	398	185	274
3	629	997	1060	895	665	838	829	667	529	371	213	259
4	525	941	950	870	723	829	956	702	465	320	335	270
5	416	881	900	870	800	1080	8590	711	431	301	260	294
6	435	820	791	855	697	1470	6100	689	435	294	229	236
7	405	792	6660	890	657	2320	2500	689	461	333	245	305
8	881	728	5010	800	645	1630	1840	787	501	336	249	1090
9	11700	654	3080	822	710	1340	1520	663	414	302	252	1740
10	9190	733	1960	845	764	1210	1290	557	430	346	277	791
11	2070	706	1590	764	791	1150	1160	585	403	483	262	513
12	1340	672	1620	773	829	1110	1050	565	381	536	258	400
13	1070	676	1830	850	961	1130	1030	549	380	735	249	341
14	951	637	1400	945	1100	1870	1010	537	437	594	263	316
15	787	646	1360	1140	971	1440	966	541	589	388	284	310
16	715	654	1860	1080	843	1190	941	545	468	343	312	359
17	773	676	1610	800	737	1060	862	513	436	309	295	483
18	951	621	1320	755	706	1020	801	529	419	283	299	436
19	746	621	1140	870	728	1010	810	553	415	265	358	376
20	2810	597	1080	895	815	946	920	541	378	295	306	335
21	2930	573	1460	905	693	1050	866	549	345	278	275	318
22	1490	581	1220	870	663	1030	815	461	376	267	286	295
23	1150	557	1160	778	680	1220	783	465	354	272	458	280
24	961	581	1000	775	796	1040	895	435	414	313	441	278
25	982	585	890	800	1160	961	1260	469	584	280	321	274
26	4210	581	1180	786	976	890	862	537	603	226	321	277
27	2350	589	1240	732	900	843	796	633	455	226	273	317
28	1450	693	1020	742	1150	796	773	581	401	210	264	317
29	1190	4450	975	645	---	796	742	513	446	194	256	280
30	1070	2960	865	561	---	852	706	905	454	194	242	346
31	1250	---	915	577	---	935	---	733	---	194	244	---
TOTAL	57399	27672	49906	25373	22394	34889	43303	18560	13490	10284	8706	12374
MEAN	1852	922	1610	818	800	1125	1443	599	450	332	281	412
MAX	11700	4450	6660	1140	1160	2320	8590	905	603	735	458	1740
MIN	405	557	791	561	617	796	706	435	345	194	185	236
CFSM	1.76	.88	1.53	.78	.76	1.07	1.37	.57	.43	.32	.27	.39
IN.	2.03	.98	1.77	.90	.79	1.24	1.53	.66	.48	.36	.31	.44

CAL YR 1976 TOTAL 372915 MEAN 1019 MAX 11700 MIN 233 CFSM .97 IN 13.21
WTR YR 1977 TOTAL 324350 MEAN 889 MAX 11700 MIN 185 CFSM .85 IN 11.49

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) above mean sea level.

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). Some additional regulation by hydroelectric plant at Martinsville, Va. 18 mi (29 km) upstream. Suspended-sediment records for the current year are published on page 344 of this report.

AVERAGE DISCHARGE.--38 years, 608 ft^3/s (17.22 m^3/s), 15.35 in/yr (390 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, 10,600 ft^3/s (300 m^3/s) Oct. 9, gage height, 10.29 ft (3.136 m); minimum, 70 ft^3/s (1.98 m^3/s) July 10, Sept. 25, 26 gage height, 1.39 ft (0.424 m); minimum daily, 80 ft^3/s (2.27 m^3/s) Sept. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	765	615	765	381	440	415	726	154	433	351	146	539
2	511	962	602	149	480	415	690	294	443	393	347	363
3	309	938	527	336	490	392	177	540	388	90	318	366
4	287	943	448	396	550	409	466	555	387	121	315	355
5	341	928	233	397	600	462	3410	554	105	388	309	139
6	327	842	396	401	145	370	1550	620	235	372	315	313
7	322	189	3200	375	304	745	1390	578	482	376	293	486
8	604	346	1690	363	365	538	1200	222	470	369	148	680
9	6330	638	1190	168	365	499	1110	306	478	410	322	717
10	1030	652	936	307	381	456	1020	366	483	112	313	589
11	603	646	800	400	415	438	351	350	516	150	306	525
12	968	657	536	430	381	398	879	353	118	636	296	136
13	883	672	816	430	218	398	856	351	151	577	326	335
14	872	156	1170	430	392	710	848	363	465	430	301	337
15	807	299	1150	420	415	505	845	124	430	403	150	331
16	820	337	1190	214	415	946	839	168	391	455	343	436
17	359	425	1120	400	386	902	176	380	382	89	314	501
18	441	412	1080	440	355	888	342	364	415	112	356	133
19	822	406	1010	450	392	867	621	334	101	363	334	144
20	2010	299	388	450	152	247	611	322	155	320	316	358
21	1510	224	973	450	318	512	617	278	350	314	294	340
22	987	294	913	400	370	759	618	139	337	311	162	336
23	748	362	924	179	370	774	611	238	398	310	463	336
24	302	373	907	347	432	717	300	315	428	302	339	396
25	617	389	802	440	518	676	454	352	457	152	327	80
26	2610	365	285	450	403	614	596	409	122	330	319	175
27	1120	399	377	440	214	200	565	401	161	304	313	377
28	856	275	436	408	415	409	560	363	359	292	297	352
29	814	2140	434	370	---	731	573	153	386	298	145	335
30	713	1040	418	142	---	760	564	342	359	307	493	335
31	431	---	414	350	---	761	---	527	---	277	535	---
TOTAL	30119	17223	26130	11313	10681	17913	23565	10815	10385	9714	9555	10845
MEAN	972	574	843	365	381	578	786	349	346	313	308	362
MAX	6330	2140	3200	450	600	946	3410	620	516	636	535	717
MIN	287	156	233	142	145	200	176	124	101	89	145	80
(+)	+254	-69	-25	+29	+1	+75	+8	+3	-72	-132	-174	-149

CAL YR 1976 TOTAL 213736 MEAN 584 MAX 6330 MIN 68 MEAN‡ 578 CFSM‡ 1.07 IN‡ 14.56
WTR YR 1977 TOTAL 188258 MEAN 516 MAX 6330 MIN 80 MEAN‡ 495 CFSM‡ 0.92 IN‡ 12.49

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

ROANOKE RIVER BASIN

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, and 3.0 mi (4.8 km) northwest of Mayfield.

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

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1976 to September 1977.

GAGE.--Water-stage recorder. Datum of gage is 458.4 ft (139.7 m) above mean sea level (levels by Corps of Engineers).

REMARKS.--Water-discharge record good. Diurnal flucutation and regulation at low flow caused by mills and Talbott and Townes reservoirs on the Dan River (see p. 257) and Philpott Lake on Smith River (see sta 02074000). Duke Power Company gage-height and temperature telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 22, 1972 reached a stage of 28.1 ft (8.56 m), from floodmarks.

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. 9	2030	*21100	598	*20.56	6.267	Apr. 5	2300	16400	464	18.13	5.526
Dec. 7	2330	15100	428	17.33	5.282						

Minimum discharge, 345 ft³/s (9.77 m³/s) Aug. 2, gage height, 1.95 ft (0.594 m). Minimum daily, 395 ft³/s (11.2 m³/s) July 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1610	2030	2550	1500	1300	1720	1750	1130	1070	829	396	779
2	1560	2160	1990	1010	1310	1510	1690	1020	1030	809	489	639
3	1130	1990	1640	1260	1360	1430	1280	1340	971	574	509	632
4	953	1890	1480	1460	1510	1400	1430	1440	951	478	604	620
5	899	1810	1220	1500	1610	1630	10000	1450	638	643	629	487
6	834	1760	1170	1440	1210	1910	11200	1480	597	717	557	530
7	848	1080	8410	1450	968	3280	4560	1450	961	684	538	752
8	981	1060	9510	1410	1140	2640	3440	1260	1010	718	430	1430
9	13900	1300	5230	1170	1130	2150	2970	1130	937	701	528	2840
10	14800	1360	3350	1270	1280	1930	2680	1100	934	528	594	1890
11	3120	1350	2800	1400	1340	1810	1780	1040	927	696	602	1290
12	2510	1330	2520	1250	1410	1770	2220	1060	673	1030	581	744
13	2070	1350	2910	1320	1310	1580	2130	1040	514	1310	577	768
14	1890	1010	2930	1550	1590	2530	2110	1030	847	1190	559	752
15	1740	915	2740	1880	1590	2260	2050	913	1070	888	473	728
16	1610	1080	3190	1750	1480	2400	2030	808	977	833	616	792
17	1170	1110	3100	1440	1320	2160	1400	968	895	518	642	1120
18	1460	1080	2710	1400	1190	2090	1260	1000	857	395	658	880
19	1590	1070	2470	1390	1220	2080	1590	1000	632	618	701	640
20	5300	1030	1620	1380	1170	1460	1760	975	539	568	698	788
21	6070	904	2580	1450	1080	1630	1710	1000	687	649	611	748
22	2970	882	2460	1440	1180	1940	1640	744	731	574	492	732
23	2220	962	2260	1240	1180	2190	1640	736	754	586	769	700
24	1410	995	2170	1100	1300	2010	1290	859	848	606	906	756
25	1490	1020	2020	1370	1810	1850	1870	916	1020	497	737	488
26	6170	1000	1630	1430	1770	1790	1720	1080	935	548	663	402
27	4490	1050	1880	1390	1370	1230	1550	1170	690	543	648	738
28	2610	1020	1740	1350	1740	1250	1520	1140	801	518	590	784
29	2090	5530	1630	1210	---	1700	1510	881	851	497	455	704
30	1890	5020	1520	872	---	1770	1460	1030	831	496	696	732
31	1630	---	1490	912	---	1870	---	1430	---	489	770	---
TOTAL	93015	46148	84820	41994	37868	58970	75240	33620	25178	20730	18718	25885
MEAN	3000	1538	2736	1355	1352	1902	2508	1085	839	669	604	863
MAX	14800	5530	9510	1880	1810	3280	11200	1480	1070	1310	906	2840
MIN	834	882	1170	872	968	1230	1260	736	514	395	396	402
(†)	+254	-69	-25	+29	+1	+75	+8	+3	-72	-132	-174	-149

WTR YR 1977 TOTAL 562186 MEAN 1540 MAX 14800 MIN 395 MEAN‡ 1519 CFSM‡ 0.85 IN‡ 11.54

† 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, October 1976 to September 1977.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1976 to September 1977.
WATER TEMPERATURES: October 1976 to September 1977.

REMARKS.--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.

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

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 199 micromhos July 29; minimum daily, 37 micromhos Oct. 10.
WATER TEMPERATURES: Maximum daily, 33.0°C July 20; minimum daily, 1.0°C Jan. 3.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
OCT										
08...	1300	760	127	6.9	20.0	20	--	22	0	5.7
09...	1600	19500	50	6.0	18.5	450	7.1	9	2	2.2
09...	1800	20500	46	5.7	18.5	280	7.0	10	3	2.5
10...	1030	18300	37	5.9	16.5	250	7.6	9	4	2.2
11...	1035	3200	49	6.1	15.5	70	--	12	3	3.0
12...	1100	3030	73	6.1	13.0	60	10.5	15	2	3.7
20...	1100	3760	82	6.7	11.0	50	10.6	17	2	3.9
20...	1300	5850	76	6.5	11.5	100	10.4	16	1	3.7
20...	1530	7910	68	6.3	11.5	100	10.4	16	3	3.4
22...	1130	2960	72	6.2	11.0	100	10.2	17	3	4.0
FEB										
10...	1050	1340	104	7.0	1.0	5	15.2	23	1	5.9
APR										
05...	1130	10700	70	6.5	--	250	--	32	18	8.2
06...	1145	11800	51	6.2	11.0	150	9.9	14	7	3.0
08...	1030	3910	78	6.8	9.5	35	11.1	23	5	4.1
JUL										
07...	1030	696	75	7.3	28.5	10	7.3	22	0	5.7
28...	1000	544	167	7.3	25.0	10	7.5	25	0	6.5

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)
OCT										
08...	1.8	15	57	1.4	2.4	29	0	24	5.8	9.0
09...	.9	3.1	35	.4	2.4	9	0	7	14	7.0
09...	1.0	2.3	27	.3	2.5	9	0	7	29	6.4
10...	.9	1.5	21	.2	2.7	6	0	5	12	6.4
11...	1.0	2.9	30	.4	2.4	10	0	8	13	6.8
12...	1.5	6.0	42	.7	2.2	16	0	13	20	8.4
20...	1.8	7.0	43	.7	2.1	18	0	15	5.7	7.1
20...	1.6	6.3	42	.7	2.2	18	0	15	9.1	7.4
20...	1.7	5.2	38	.6	2.4	15	0	12	12	7.3
22...	1.8	6.1	40	.6	2.1	18	0	15	18	6.7
FEB										
10...	2.0	11	49	1.0	1.6	27	0	22	4.3	6.3
APR										
05...	2.8	6.5	29	.5	1.8	17	0	14	8.6	15
06...	1.5	3.0	28	.4	2.2	8	0	7	8.1	7.6
08...	3.0	7.3	39	.7	1.7	22	0	18	5.6	6.4
JUL										
07...	2.0	5.4	32	.5	1.8	27	0	22	2.2	4.9
28...	2.2	21	62	1.8	2.1	32	0	26	2.6	11

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)
OCT										
08...	16	.2	15	91	79	.12	187	--	--	--
09...	2.8	.1	7.5	45	31	.06	2370	.22	.12	.34
09...	2.5	.1	7.3	24	29	.03	1330	--	--	--
10...	2.1	.1	6.4	24	26	.03	1190	.31	.09	.40
11...	2.7	.1	9.7	47	34	.06	406	.39	.03	.42
12...	7.0	.2	11	86	48	.12	704	.34	.02	.36
20...	6.8	.1	12	80	50	.11	812	.25	.02	.27
20...	6.2	.1	10	77	46	.10	1220	--	--	--
20...	4.9	.1	9.4	70	42	.10	1500	.27	.03	.30
22...	5.8	.1	12	75	48	.10	599	.21	.01	.22
FEB										
10...	11	.1	15	69	68	.09	250	.21	.01	.22
APR										
05...	6.9	.0	10	61	60	.08	1760	.27	.04	.31
06...	2.9	.1	9.1	40	33	.05	1270	.35	.00	.35
08...	7.8	.1	13	64	54	.09	676	.28	.01	.29
JUL										
07...	3.8	.1	12	54	49	.07	101	.23	.01	.24
28...	25	.1	12	108	96	.15	159	.36	.01	.37

DATE	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE IN BOT. MAT. (MG/KG)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA (NH4) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	DIS-SOLVED ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	SUS-PENDED KJEL. NITRO-GEN (N) (MG/L)	DIS-SOLVED KJEL. NITRO-GEN (N) (MG/L)
OCT										
08...	--	--	--	--	--	--	--	--	--	--
09...	.29	--	.32	.17	.22	3.6	.33	3.9	3.4	.50
09...	--	--	--	--	--	--	--	--	--	--
10...	.37	--	.21	.12	.15	1.4	.29	1.6	1.2	.41
11...	.40	--	.08	.02	.03	.78	.24	.86	.60	.26
12...	.35	--	.08	.01	.01	.80	.35	.88	.52	.36
20...	.24	--	.04	.00	.00	1.8	.15	1.8	1.7	.15
20...	--	--	--	--	--	--	--	--	--	--
20...	.28	--	.06	.00	.00	3.3	.22	3.4	3.2	.22
22...	.22	--	.03	.00	.00	.53	.35	.56	.21	.35
FEB										
10...	.23	.0	.11	.11	.14	.39	.17	.50	.22	.28
APR										
05...	.30	--	.13	.08	.10	3.4	.33	3.5	3.1	.41
06...	.34	--	.13	.03	.04	1.1	.20	1.2	.97	.23
08...	.27	--	.04	.02	.03	.66	.18	.70	.50	.20
JUL										
07...	.24	--	.11	.06	.08	.22	.23	.33	.04	.29
28...	.29	.5	.07	.07	.09	.31	.17	.38	.14	.24

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL KJEL. NITRO-GEN IN BOTTOM MAT. (MG/KG)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	TOTAL PHOS-PHORUS IN BOT-TOM MA-TERIAL (MG/KG)	TOTAL ARSENIC (AS) (UG/L)
OCT										
08...	--	--	--	--	--	--	--	--	--	--
09...	--	4.2	19	1.1	.01	.19	.01	.03	--	8
09...	--	--	--	--	--	--	--	--	--	9
10...	--	2.0	8.9	.43	.01	.13	.01	.03	--	2
11...	--	1.3	5.7	.27	.02	.07	.01	.03	--	3
12...	--	1.2	5.5	.28	.02	.06	.01	.03	--	2
20...	--	2.1	9.2	.45	.03	.06	.01	.03	--	3
20...	--	--	--	--	--	--	--	--	--	--
20...	--	3.7	16	.47	.02	.08	.01	.03	--	6
22...	--	.78	3.5	.15	.02	.05	.01	.03	--	--
FEB										
10...	1000	.72	3.2	.15	.12	.11	.11	.34	58	--
APR										
05...	--	3.8	17	.97	.02	.08	.01	.03	--	--
06...	--	1.6	6.9	.39	.01	.09	.00	.00	--	--
08...	--	.99	4.4	.16	.04	.04	.03	.09	--	--
JUL										
07...	--	.57	2.5	.13	.08	.12	.09	.28	--	--
28...	1000	.75	3.3	.16	.16	.33	.15	.46	200	--

DATE	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL CHRO-MIUM IN BOTTOM MA-TERIAL (UG/G)	TOTAL COBALT (CO) (UG/L)
OCT										
09...	7	1	0	0	0	60	60	0	--	15
09...	9	0	0	0	0	140	130	10	--	17
10...	2	0	0	0	0	30	20	10	--	10
11...	3	0	0	0	0	20	20	0	--	8
12...	1	1	0	0	0	20	20	0	--	7
20...	3	0	0	0	0	50	50	0	--	8
20...	--	--	--	--	--	50	50	0	--	--
20...	6	0	0	0	0	30	30	0	--	9
22...	--	--	--	--	--	30	30	0	--	--
FEB										
10...	--	--	--	--	--	10	10	0	60	--
APR										
05...	--	--	--	--	--	40	35	5	--	--
06...	--	--	--	--	--	30	30	0	--	--
08...	--	--	--	--	--	--	--	--	--	--
JUL										
07...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	<10	--	--	<10	--

DATE	SUS-PENDED COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL COPPER IN BOTTOM MA-TERIAL (UG/G)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL IRON IN BOTTOM MA-TERIAL (UG/G)	TOTAL LEAD (PB) (UG/L)
OCT										
09...	15	0	90	83	7	--	79000	190	--	8
09...	17	0	110	110	3	--	99000	130	--	9
10...	10	0	20	14	6	--	31000	100	--	18
11...	8	0	20	15	5	--	14000	50	--	23
12...	7	0	18	15	3	--	11000	90	--	19
20...	8	0	31	26	5	--	26000	60	--	28
20...	--	--	41	36	5	--	27000	90	--	45
20...	9	0	27	23	4	--	25000	80	--	33
22...	--	--	13	8	5	--	7300	90	--	33
FEB										
10...	--	--	19	7	12	<10	2600	100	16000	2
APR										
05...	--	--	68	64	4	--	46000	80	--	33
06...	--	--	21	15	6	--	26000	20	--	30
08...	--	--	--	--	--	--	--	--	--	--
JUL										
07...	--	--	--	--	--	--	--	--	--	--
28...	--	--	19	5	14	<10	1300	160	19000	5

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL LEAD IN BOTTOM MA-TERIAL (UG/G)	TOTAL MAN-GANESE (MN) (UG/L)	SUS-PENDED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	SUS-PENDED MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)
OCT										
09...	6	2	--	2000	1900	130	--	--	.0	1
09...	4	5	--	2500	2400	70	.1	.1	.0	1
10...	16	2	--	570	440	130	.0	.0	.0	0
11...	18	5	--	320	310	10	.0	.0	.0	0
12...	19	0	--	300	300	0	.0	.0	.0	0
20...	23	5	--	60	0	60	.1	.1	.0	1
20...	35	10	--	--	--	--	--	--	--	--
20...	30	3	--	50	20	30	.1	.1	.0	1
22...	27	6	--	--	--	--	--	--	--	--
FEB										
10...	2	0	60	--	--	--	--	--	--	--
APR										
05...	33	0	--	--	--	--	--	--	--	--
06...	30	0	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
JUL										
07...	--	--	--	--	--	--	--	--	--	--
28...	5	0	<10	--	--	--	--	--	--	--

DATE	SUS-PENDED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ZINC IN BOTTOM MA-TERIAL (UG/G)	TOTAL ORGANIC CARBON (C) (MG/L)	DIS-SOL-VED ORGANIC CARBON (C) (MG/L)	ORGANIC CARBON IN BOT-TOM MA-TERIAL (C) (G/KG)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
OCT										
09...	1	0	160	140	20	--	31	4.7	--	.00
09...	1	0	230	220	10	--	--	--	--	--
10...	0	0	60	40	20	--	12	7.6	--	.10
11...	0	0	20	10	10	--	7.6	4.2	--	.10
12...	0	0	20	10	10	--	6.4	3.8	--	.00
20...	1	0	60	50	10	--	20	5.4	--	.00
20...	--	--	80	70	10	--	--	--	--	--
20...	1	0	60	50	10	--	17	6.3	--	.00
22...	--	--	20	10	10	--	6.9	5.1	--	.10
FEB										
10...	--	--	10	10	0	20	8.6	4.7	2.6	.00
APR										
05...	--	--	80	80	0	--	--	--	--	.00
06...	--	--	50	50	0	--	6.8	3.4	--	.00
08...	--	--	--	--	--	--	4.2	2.6	--	.00
JUL										
07...	--	--	--	--	--	--	6.3	2.4	--	.00
28...	--	--	20	20	0	90	6.0	3.1	2.7	.00

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Feb. 10	1050	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	15	2	
		Pediastrum	15	2	
		Quadrigula	8	1	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Achnanthes	4	1	
		Asterionella	23	3	
		Cyclotella	12	2	
		Cymbella	58	8	
		Fragilaria	8	1	
		Gomphonema	19	3	
		Meridion	4	1	
		Melosira	62	9	
		Navicula	31	5	
		Nitzschia	23	3	
		Surirella	43	6	
		Synedra	58	8	
		CYANOPHYTA			
		Myxophyceae			
		Lyngbya	250	36	
		Oscillatoria	54	8	
		TOTAL	680		
July 28	1000	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	43	3	
		Oocystis	78	5	
		Scenedesmus	290	18	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Achnanthes	43	3	
		Amphora	69	4	
		Cocconeis	17	1	
		Cyclotella	60	4	
		Gomphonema	26	2	
		Navicula	190	12	
		Nitzschia	190	12	
		Pinnularia	9	1	
		Synedra	34	2	
		CYANOPHYTA			
		Cyanophyceae			
		Anacystis	470	29	
		EUGLENOPHYTA			
		Euglenophyceae			
		Euglena	17	1	
		Trachelomonas	52	3	
		TOTAL	1,600		

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114	61	58	63	79	90	101	91	96	147	153	133
2	71	80	65	73	88	90	100	83	113	135	120	100
3	80	86	69	56	92	93	78	96	118	116	197	153
4	67	86	70	57	91	91	83	87	115	84	171	143
5	73	88	67	72	88	97	70	97	113	80	153	84
6	129	87	59	71	68	76	56	97	92	89	163	78
7	125	57	56	69	67	69	67	103	142	76	171	99
8	129	61	57	71	86	72	82	88	123	75	155	93
9	69	77	56	69	96	101	87	82	107	77	115	104
10	37	77	58	69	116	91	68	85	120	84	163	105
11	44	75	61	64	90	92	59	127	122	84	143	89
12	75	73	60	73	100	104	70	125	108	84	173	83
13	77	80	55	92	77	77	101	130	93	88	173	92
14	59	65	64	87	72	76	97	127	104	78	163	163
15	88	65	75	80	79	76	93	127	135	109	138	141
16	82	68	78	70	98	103	117	95	126	125	99	121
17	58	82	71	63	92	99	74	92	123	115	176	112
18	62	102	64	75	91	101	80	152	127	100	153	101
19	63	107	61	96	88	100	89	137	130	100	151	94
20	65	94	52	99	81	70	101	135	95	166	141	146
21	50	79	67	91	88	75	99	125	108	152	143	136
22	63	71	69	94	90	94	95	110	165	148	131	138
23	69	46	70	90	95	84	96	106	147	153	98	142
24	54	98	63	68	94	85	79	135	129	128	94	143
25	57	112	54	74	126	90	79	135	118	143	127	141
26	78	98	53	94	101	94	98	132	108	100	142	102
27	50	71	53	98	74	78	102	143	94	184	153	110
28	61	62	55	90	78	70	92	101	113	173	166	125
29	67	---	59	92	---	107	91	122	135	199	138	133
30	69	---	64	90	---	99	100	104	118	189	107	151
31	61	---	67	71	---	101	---	84	---	187	143	---
MEAN	72	79	62	78	89	89	87	111	118	122	146	119

WTR YR 1977 MEAN 98 MAX 199 MIN 37

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	12.0	6.0	3.0	3.0	11.5	16.0	17.0	23.0	27.0	27.5	24.0
2	18.0	12.0	6.0	1.5	3.0	10.0	15.0	20.0	24.5	27.0	28.0	26.0
3	18.0	12.0	5.0	1.0	4.0	9.0	18.0	20.0	24.5	27.0	27.0	27.0
4	18.0	12.0	5.0	4.0	4.0	10.5	16.0	22.0	25.0	28.0	27.5	27.5
5	18.5	12.0	5.0	3.0	4.0	10.5	13.0	21.0	26.0	27.5	29.0	28.0
6	19.5	11.0	5.0	4.0	3.0	10.5	11.5	22.0	26.0	28.0	29.0	28.0
7	20.0	10.0	6.0	5.0	4.0	11.0	10.0	21.0	23.0	29.0	28.5	25.0
8	20.0	10.0	7.0	4.0	5.0	10.0	10.5	22.0	21.0	29.0	28.0	21.0
9	19.5	9.0	6.0	3.0	4.0	10.0	11.0	21.5	20.5	30.0	29.0	20.0
10	17.5	9.0	11.0	2.0	4.0	10.5	11.0	19.0	21.0	30.0	27.5	22.0
11	16.0	10.0	10.0	2.0	5.0	11.5	14.5	20.5	20.0	27.5	29.0	21.0
12	15.0	9.0	8.0	2.0	4.0	12.0	16.5	18.0	23.0	28.0	29.0	22.0
13	15.0	10.0	9.0	4.0	5.0	15.0	17.0	20.0	25.0	27.0	28.0	24.0
14	15.0	7.0	8.0	2.0	5.0	15.0	18.0	22.0	24.5	29.0	30.5	25.0
15	15.5	8.0	8.0	3.0	6.0	14.0	18.0	22.5	25.0	29.0	30.0	25.0
16	16.0	8.0	8.0	3.0	5.5	14.0	17.0	23.0	25.0	29.5	30.5	22.0
17	15.0	8.0	9.0	2.0	4.0	12.0	19.0	23.0	26.0	31.5	29.5	22.0
18	13.0	9.0	8.0	2.0	2.5	12.0	20.0	24.0	27.0	32.0	27.5	25.0
19	13.0	12.0	9.0	4.0	2.5	11.5	20.5	26.5	28.5	29.5	26.5	29.0
20	12.0	11.0	8.0	5.0	4.0	12.0	20.0	26.0	30.0	33.0	26.0	26.0
21	12.0	9.0	7.0	4.0	3.5	11.0	20.0	25.0	29.5	31.5	26.0	25.5
22	12.0	10.0	5.0	4.0	5.0	11.0	20.5	25.0	28.0	30.0	26.5	25.0
23	11.0	10.0	5.0	3.0	8.5	11.0	19.0	27.0	24.5	28.5	26.5	23.0
24	12.0	8.0	3.0	3.0	9.0	11.0	20.0	24.0	23.0	27.5	26.5	23.5
25	14.0	7.0	4.0	4.0	10.0	11.5	19.0	22.5	23.5	27.5	26.0	25.5
26	15.0	7.0	4.0	3.0	11.0	12.5	16.5	22.0	25.0	28.5	26.0	26.0
27	14.0	8.0	4.0	3.0	12.0	13.0	17.0	22.0	29.0	27.5	27.5	25.0
28	12.0	10.0	4.0	2.0	11.5	15.0	18.0	24.5	28.0	28.0	27.5	25.0
29	12.0	---	5.0	3.0	---	15.0	19.0	24.0	28.5	27.0	29.0	25.0
30	10.0	---	5.0	3.0	---	15.0	16.5	23.5	29.0	27.0	28.0	23.0
31	11.5	---	5.0	2.0	---	17.0	---	22.0	---	28.0	27.0	---
MEAN	15.0	9.5	6.5	3.0	5.5	12.0	16.5	22.5	25.0	28.5	28.0	24.5

WTR YR 1977 MEAN 16.5 MAX 33.0 MIN 1.0

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

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE FOR SELECTED DAYS, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT				
09...	1600	19500	1790	94200
09...	1800	20500	1970	109000
10...	1030	18300	629	31100
11...	1035	3200	334	2890
12...	1100	3030	263	2150
20...	1100	3760	815	8280
20...	1300	5850	933	14700
20...	1530	7910	733	15700
22...	1130	2960	168	1340
FEB				
10...	1050	1340	68	246
APR				
05...	1130	10700	1470	42500
06...	1145	11800	810	25800
08...	1030	3910	190	2010
JUL				
07...	1030	696	19	36
28...	1000	544	26	38

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)
OCT									
05...	1300	880	70	7.3	18.0	9.1	11	.6	210
NOV									
08...	1225	1040	50	7.3	7.0	12.0	16	.2	140
DEC									
02...	1135	1810	45	7.0	4.5	10.8	12	.6	620
JAN									
24...	1100	1040	50	7.0	2.0	12.6	<10	.6	80
MAR									
01...	1220	1720	55	7.1	8.0	10.8	<10	.9	290
16...	1135	2840	90	6.9	12.5	9.0	15	2.2	670
APR									
13...	1015	2620	65	6.9	15.0	8.2	10	.9	80
MAY									
05...	1010	1150	90	7.3	20.0	8.1	<10	1.4	150
JUN									
27...	1345	676	90	6.7	29.0	7.2	15	.9	180
JUL									
12...	1500	1300	90	6.4	28.5	6.7	12	--	200
AUG									
29...	1405	423	135	6.7	28.0	7.5	10	1.3	100

02077200 HYCO CREEK NEAR LEASBURG, N. C.

LOCATION.--Lat 36°24'07", long 79°12'13", 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.--44.0 sq mi² (114.0 km²).

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) above mean sea level.

REMARKS.--Water-discharge record good.

AVERAGE DISCHARGE.--13 years, 41.7 ft³/s (1.181 m³/S), 12.87 in/yr (327 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.--Maximum discharge, 422 ft³/s (11.9 m³/s) Jan. 11, gage height, 31.08 ft (9.47 m), no peak above base of 900 ft³/s (25.5 m³/s); no flow July 25 to Aug. 17, Sept. 1-7, 28-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	9.2	19	22	19	62	28	6.0	6.5	1.0	.00	.00
2	.80	6.8	13	20	19	42	26	5.6	5.8	.92	.00	.00
3	.80	5.4	11	19	18	34	26	6.0	4.8	.60	.00	.00
4	.90	5.2	10	19	18	32	28	8.5	3.7	.60	.00	.00
5	.90	5.0	9.0	19	17	47	84	9.2	2.7	.54	.00	.00
6	.80	4.6	8.8	18	17	92	114	8.0	2.4	.42	.00	.00
7	.80	4.4	66	19	16	227	46	10	6.2	.30	.00	.00
8	.80	4.2	119	21	16	123	30	13	5.8	.18	.00	58
9	10	4.4	96	21	16	71	22	8.8	5.0	.18	.00	52
10	28	4.4	54	137	16	52	19	6.2	4.0	.06	.00	16
11	8.2	4.2	45	340	17	42	16	5.2	3.0	38	.00	5.2
12	3.0	4.2	112	152	19	36	15	5.0	2.5	12	.00	2.0
13	1.8	4.6	122	109	24	57	14	4.6	2.0	2.2	.00	1.2
14	1.2	5.0	62	81	28	75	13	4.4	2.0	1.0	.00	1.0
15	1.1	6.0	47	174	23	50	12	4.0	2.7	.60	.00	.92
16	1.1	7.5	114	116	19	40	11	3.7	2.6	.50	.00	.68
17	1.3	7.2	83	82	16	34	10	3.2	2.3	.30	.00	92
18	2.1	5.4	52	68	15	31	9.5	2.9	2.4	.20	1.5	1.3
19	3.4	5.2	38	58	16	30	9.2	2.9	2.0	.20	1.4	1.2
20	24	5.4	32	50	17	30	8.7	2.4	1.5	.10	1.0	.84
21	74	5.0	42	45	16	32	8.2	2.2	1.1	.10	.54	.60
22	16	4.8	32	42	15	66	8.2	1.7	1.0	.05	.36	.48
23	8.8	4.4	28	38	19	96	8.0	1.7	1.1	.05	.36	.42
24	7.0	4.2	25	35	27	59	8.7	1.7	1.2	.05	1.2	.40
25	6.5	4.2	21	32	62	46	8.7	18	8.0	.00	3.4	.30
26	7.8	4.0	34	29	41	38	7.8	62	6.0	.00	1.6	.20
27	8.8	4.4	47	26	40	33	7.2	41	4.0	.00	.92	.10
28	7.0	5.8	34	24	97	31	7.0	15	2.6	.00	.60	.00
29	5.8	70	29	23	---	30	7.0	9.8	1.7	.00	.36	.00
30	5.6	54	24	21	---	32	6.5	7.5	1.4	.00	.18	.00
31	8.8	---	23	20	---	34	---	7.0	---	.00	.06	---
TOTAL	247.50	269.1	1451.8	1880	683	1704	618.7	287.2	98.0	60.15	13.48	234.84
MEAN	7.98	8.97	46.8	60.6	24.4	55.0	20.6	9.26	3.27	1.94	.43	7.83
MAX	74	70	122	340	97	227	114	62	8.0	38	3.4	92
MIN	.40	4.0	8.8	18	15	30	6.5	1.7	1.0	.00	.00	.00
CFSM	.18	.20	1.06	1.38	.56	1.25	.47	.21	.07	.04	.01	.18
IN.	.21	.23	1.23	1.59	.58	1.44	.52	.24	.08	.05	.01	.20

CAL YR 1976 TOTAL 8183.57 MEAN 22.4 MAX 590 MIN .00 CFSM .51 IN 6.92
WTR YR 1977 TOTAL 7547.77 MEAN 20.7 MAX 340 MIN .00 CFSM .47 IN 6.38

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

WATER-QUALITY RECORDS

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.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 29.0°C July 8-11, Aug. 7-13, 1977; minimum, 0.0°C on several days during winter months in most years.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 29.0°C July 8-11, Aug. 7-13; minimum, 0.0°C Feb. 1-12, 18, 19.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14.0	14.0	10.0	9.0	5.5	3.5	2.0	0.5	0.5	0.0	8.0	5.5
2	14.0	14.0	9.5	6.5	3.5	2.0	0.5	0.5	0.0	0.0	6.0	5.0
3	14.0	14.0	8.0	5.5	3.5	2.0	0.5	0.5	0.0	0.0	6.5	5.0
4	14.0	13.5	8.0	5.5	2.0	1.5	0.5	0.5	0.0	0.0	9.0	6.5
5	15.5	14.0	8.0	5.5	3.0	1.5	1.0	0.5	0.0	0.0	9.5	9.0
6	15.5	15.0	6.5	4.5	3.0	2.0	1.5	1.0	0.0	0.0	9.5	9.0
7	16.5	15.5	6.5	5.0	5.0	3.0	1.5	1.0	0.0	0.0	9.0	8.0
8	18.0	16.5	6.5	5.0	5.5	5.0	1.5	0.5	0.0	0.0	8.5	6.5
9	18.5	18.0	5.0	3.5	5.5	3.5	1.0	0.5	0.0	0.0	8.0	6.5
10	18.0	14.5	5.5	3.5	3.5	3.0	0.5	0.5	0.0	0.0	8.5	8.0
11	14.5	12.0	5.5	4.0	5.5	3.5	0.5	0.5	0.0	0.0	10.0	8.5
12	13.5	10.0	5.5	5.5	8.0	5.5	0.5	0.5	2.0	0.0	11.5	10.0
13	12.0	10.0	5.5	3.5	8.5	8.0	0.5	0.5	4.5	2.0	15.0	11.5
14	13.0	12.0	4.5	4.0	8.0	5.5	0.5	0.5	4.5	3.0	15.0	13.0
15	13.0	10.0	4.5	4.5	5.5	5.0	1.0	0.5	4.0	3.5	13.5	11.0
16	13.5	12.0	5.5	4.5	7.0	5.5	1.0	1.0	4.0	3.5	13.5	12.0
17	13.5	11.5	5.5	4.5	7.0	6.5	1.0	0.5	3.5	1.0	13.5	11.0
18	11.5	9.0	6.0	4.5	6.5	5.5	0.5	0.5	1.0	0.0	13.0	11.5
19	9.0	7.0	8.0	5.0	6.0	5.5	0.5	0.5	2.0	0.0	---	---
20	10.0	8.5	8.0	7.0	6.5	6.0	0.5	0.5	3.0	2.0	---	---
21	10.0	10.0	8.0	6.0	6.5	4.0	0.5	0.5	3.0	1.5	---	---
22	10.0	9.0	7.0	5.5	4.0	1.5	0.5	0.5	3.5	1.0	11.5	10.0
23	10.0	8.0	5.5	3.5	2.0	1.5	0.5	0.5	6.0	3.5	12.0	10.0
24	10.0	9.0	4.0	3.0	2.0	1.5	0.5	0.5	8.0	6.0	11.0	9.5
25	12.0	9.5	4.0	2.0	2.0	1.5	0.5	0.5	8.0	6.5	12.0	10.0
26	13.0	12.0	5.0	4.0	3.5	1.5	0.5	0.5	9.5	7.0	13.5	10.5
27	13.0	10.0	8.0	5.0	3.5	3.0	0.5	0.5	10.0	9.5	13.5	11.5
28	10.0	8.0	10.0	8.0	4.5	3.0	0.5	0.5	10.0	8.0	15.5	13.5
29	8.0	5.5	10.5	10.0	4.5	4.0	0.5	0.5	---	---	16.5	15.5
30	8.0	6.0	10.0	5.5	4.0	1.5	0.5	0.5	---	---	18.0	16.5
31	10.0	7.0	---	---	3.0	1.5	0.5	0.5	---	---	20.0	18.0
MONTH	18.5	5.5	10.5	2.0	8.5	1.5	2.0	0.5	10.0	0.0	20.0	5.0

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	19.0	15.0	16.5	15.5	23.0	21.0	25.5	24.5	25.5	24.0	24.0	22.0
2	17.0	16.5	19.5	16.5	24.0	22.0	25.5	24.5	25.0	23.0	24.0	22.0
3	19.5	17.0	20.0	19.0	23.5	21.0	25.0	22.0	25.0	23.5	24.0	22.0
4	19.5	16.5	20.0	19.0	22.0	20.0	24.5	21.5	26.0	23.0	24.0	22.0
5	16.5	15.5	21.5	20.0	22.0	20.0	25.5	23.5	26.5	24.0	24.5	22.0
6	15.5	13.0	21.5	19.0	24.0	21.5	27.0	24.5	28.0	24.5	24.0	22.0
7	13.5	12.0	22.0	21.0	22.0	19.5	28.0	25.0	29.0	25.0	23.5	22.0
8	13.5	12.0	21.0	18.5	19.5	17.0	29.0	25.5	29.0	25.5	22.0	20.0
9	14.0	11.5	20.0	18.0	19.5	18.5	29.0	26.5	29.0	25.5	20.0	20.0
10	14.5	11.0	18.0	14.5	19.5	18.0	29.0	26.5	29.0	25.0	22.0	19.0
11	17.0	13.5	16.0	13.5	20.0	17.0	29.0	24.0	29.0	25.0	20.0	19.5
12	20.0	15.5	17.0	14.0	21.0	19.5	26.5	25.0	29.0	24.5	20.0	18.0
13	20.5	17.0	19.0	15.0	21.5	20.0	28.0	26.5	29.0	24.5	19.0	17.0
14	20.5	18.5	20.0	17.0	21.5	21.0	28.5	26.5	28.5	24.5	21.0	19.0
15	21.0	19.0	20.5	18.5	22.0	21.0	28.0	25.5	28.5	24.5	21.0	20.5
16	21.0	19.0	20.0	18.0	22.0	22.0	27.0	25.5	28.5	24.5	20.5	20.0
17	20.5	18.0	21.5	18.0	23.0	21.5	27.0	25.5	26.5	25.0	21.0	20.0
18	21.0	18.0	22.0	19.0	23.0	21.5	28.5	26.0	25.0	21.0	22.0	21.0
19	22.0	20.0	23.0	20.0	---	---	28.5	26.0	21.0	19.5	22.0	21.0
20	22.0	20.0	23.5	20.5	---	---	28.5	26.5	20.0	19.5	23.5	22.0
21	21.5	20.0	23.0	19.5	---	---	28.5	25.5	21.5	20.0	23.0	20.0
22	21.0	19.0	21.5	20.0	---	---	28.5	24.5	22.0	20.0	19.5	18.0
23	21.0	20.5	21.5	20.5	---	---	25.5	22.0	23.0	20.5	19.0	16.5
24	22.0	20.5	21.5	20.5	---	---	25.0	21.5	23.0	22.0	20.0	18.0
25	21.0	18.0	21.5	20.0	---	---	24.5	22.0	22.0	21.0	20.0	19.5
26	19.0	16.5	20.0	19.5	---	---	25.5	24.0	21.0	20.0	21.5	20.0
27	16.5	13.5	21.0	19.5	24.0	22.0	25.0	21.5	22.0	20.0	21.0	19.0
28	20.0	14.5	21.5	20.0	24.5	22.0	24.0	20.5	23.5	20.5	20.0	19.0
29	18.5	16.5	22.0	20.5	25.0	22.0	23.5	20.5	24.0	21.0	18.0	16.5
30	18.0	14.5	22.0	21.5	25.0	23.0	25.0	22.0	23.5	23.0	18.0	15.5
31	---	---	21.5	21.0	---	---	26.0	22.0	23.5	23.0	---	---
MONTH	22.0	11.0	23.5	13.5	25.0	17.0	29.0	20.5	29.0	19.5	24.5	15.5
YEAR	29.0	0.0										

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 to September 1977.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 450.39 ft (137.279 m) above mean sea level.

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

AVERAGE DISCHARGE.--11 years (water years 1965-75) 7.53 ft³/s (0.213 m³/s), 13.69 in/yr (348 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 (0.0008 m³/s) Oct. 3, 4, 5, 7, 1968, Oct. 6, 7, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period April to September, 108 ft³/s (3.06 m³/s) July 11, gage height, 3.43 ft (1.045 m), no peak above base of 170 ft³/s (4.81 m³/s); minimum, 0.04 ft³/s (0.001 m³/s) Aug. 7, 8, gage height, 1.47 ft (0.448 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR APRIL 1977 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							3.8	1.7	1.1	.20	.07	.22
2							3.8	1.6	.80	.19	.06	.19
3							4.1	1.6	.69	.22	.07	.16
4							4.6	2.6	.63	.17	.07	.14
5							16	4.3	.60	.19	.06	.13
6							9.8	3.8	.55	.17	.05	.12
7							6.3	2.5	.70	.08	.04	.42
8							5.1	3.6	.80	.08	.05	12
9							4.4	2.1	.70	.08	.05	6.3
10							3.9	1.7	.60	.61	.05	2.5
11							3.6	1.6	.56	12	1.1	1.2
12							3.4	1.7	.52	1.6	1.1	.79
13							3.1	1.6	.48	.80	.15	.66
14							2.9	1.4	.45	.69	3.7	.57
15							2.8	1.4	.50	.58	3.7	.60
16							2.6	1.3	.58	.47	.49	1.2
17							2.5	1.1	.47	.42	1.9	1.8
18							2.4	1.1	.47	.36	6.1	.79
19							2.3	1.0	.47	.25	1.1	.67
20							2.2	1.0	.36	.30	.54	.57
21							2.2	.90	.25	.20	.42	.49
22							2.0	.90	.23	.22	.39	.43
23							1.9	.90	.47	.17	3.6	.41
24							2.4	.85	.74	.12	6.4	.41
25							1.8	1.7	.95	.09	1.4	.39
26							1.7	3.2	.63	.08	.85	.35
27							1.6	3.8	.47	.08	.67	.32
28							1.6	1.8	.41	.08	.59	.27
29							2.0	1.2	.41	.08	.49	.22
30							1.7	1.1	.25	.07	.35	.20
31							---	1.1	---	.07	.28	---
TOTAL							108.5	56.15	16.84	20.72	35.89	34.52
MEAN							3.62	1.81	.56	.67	1.16	1.15
MAX							16	4.3	1.1	12	6.4	12
MIN							1.6	.85	.23	.07	.04	.12
CFSM							.49	.24	.08	.09	.16	.15
IN.							.54	.28	.08	.10	.18	.17

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 mi^2 (140 km^2), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1964-66. October 1966 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 400.05 ft (121.935 m) above mean sea level.

REMARKS.--Water-discharge record good except those for period of no gage-height record, Jan. 11-15, which are fair.

AVERAGE DISCHARGE.--11 years, 52.1 ft^3/s (1.475 m^3/s), 12.86 in/yr (327 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,030 ft^3/s (227 m^3/s) July 13, 1975, gage height, 30.04 ft (9.156 m), from rating curve extended above 2,000 ft^3/s (566 m^3/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, 685 ft^3/s (19.4 m^3/s) Jan. 11, gage height, 17.55 ft (5.349 m), from floodmarks, no peak above base of 700 ft^3/s (19.8 m^3/s); no flow July 28 to Aug. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	7.9	29	23	20	72	30	8.1	6.4	2.1	.00	4.7
2	2.7	6.6	20	22	20	50	28	7.8	5.8	1.3	.00	1.8
3	2.3	5.8	16	20	19	39	28	8.5	4.6	1.0	.00	.72
4	1.6	5.7	14	20	19	39	31	10	3.7	.85	.00	.44
5	1.4	5.5	12	19	18	81	121	18	3.5	.69	.00	.35
6	1.2	5.0	11	19	18	154	145	23	3.3	.53	.00	.27
7	1.1	4.8	67	21	18	303	99	13	6.2	.39	.00	1.3
8	1.3	4.7	142	22	18	158	73	20	7.7	.23	.00	82
9	24	4.4	108	22	18	80	56	12	5.8	.11	.00	79
10	22	4.6	50	167	18	61	44	8.8	4.5	.34	.00	34
11	6.7	4.8	40	616	19	49	37	7.5	3.7	41	.00	17
12	3.8	4.9	104	380	18	42	32	6.9	3.1	16	.00	7.5
13	2.7	4.8	124	190	29	84	27	6.3	2.8	12	.00	4.3
14	2.3	4.7	57	103	30	114	24	5.8	2.7	9.4	3.8	2.9
15	1.9	6.0	44	161	23	64	22	5.2	2.8	7.5	23	2.5
16	1.7	6.8	110	107	19	50	20	5.0	2.7	5.3	3.8	2.5
17	2.3	6.6	77	92	16	40	17	4.9	2.5	2.7	5.1	7.1
18	2.8	6.1	49	80	16	37	16	4.7	2.3	1.4	32	6.3
19	2.8	5.5	37	64	18	32	15	4.5	2.2	1.1	13	4.1
20	40	5.4	33	54	22	38	14	4.7	2.1	.77	4.6	2.8
21	83	5.4	39	47	19	40	14	6.3	1.8	.54	2.4	2.1
22	24	5.1	33	45	16	75	13	7.2	1.3	.46	1.8	1.6
23	12	4.7	29	41	16	122	12	6.2	1.4	.24	5.5	1.3
24	8.6	4.6	25	38	29	74	13	6.7	1.7	.08	37	1.2
25	7.7	4.7	23	34	75	54	12	15	12	.05	9.9	1.1
26	8.7	4.9	34	31	52	42	11	29	9.3	.05	5.8	1.0
27	7.7	5.7	43	28	47	36	9.7	55	5.6	.02	4.0	1.0
28	6.2	10	34	27	122	32	9.0	17	3.8	.00	2.5	1.4
29	5.5	79	29	24	---	28	9.6	11	2.7	.00	2.5	1.2
30	4.9	59	27	22	---	30	8.7	7.8	2.4	.00	2.1	1.1
31	7.2	---	24	21	---	34	---	6.6	---	.00	1.6	---
TOTAL	302.3	293.7	1484	2560	772	2154	991.0	352.5	120.4	106.15	160.40	274.58
MEAN	9.75	9.79	47.9	82.6	27.6	69.5	33.0	11.4	4.01	3.42	5.17	9.15
MAX	83	79	142	616	122	303	145	55	12	41	37	82
MIN	1.1	4.4	11	19	16	28	8.7	4.5	1.3	.00	.00	.27
CFSM	.18	.18	.87	1.50	.50	1.26	.60	.21	.07	.06	.09	.17
IN.	.20	.20	1.00	1.73	.52	1.46	.67	.24	.08	.07	.11	.19

CAL YR 1976 TOTAL 9414.08 MEAN 25.7 MAX 733 MIN .00 CFSM .47 IN 6.37
WTR YR 1977 TOTAL 9571.03 MEAN 26.2 MAX 616 MIN .00 CFSM .48 IN 6.47

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: January 1967 to current year.

INSTRUMENTATION.--Temperature recorder since January 1967.

REMARKS.--Miscellaneous chemical data published for water years 1966-67.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 30.5°C Aug. 22, 1968; minimum, 0.0°C on many days in January and February 1968 and 1973.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 29.5°C Aug. 8-11; minimum, 0.5°C Jan. 7-18, 22-31, Feb. 1-4.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.0	19.0	13.0	10.5	5.5	3.0	2.0	1.0	0.5	0.5	9.0	5.5
2	19.0	19.0	11.5	9.0	4.5	2.0	1.0	1.0	0.5	0.5	8.5	5.0
3	19.0	19.0	11.0	9.0	4.5	2.0	1.0	1.0	0.5	0.5	8.5	5.5
4	19.0	18.0	11.0	9.0	3.0	2.0	2.0	1.0	1.5	0.5	9.5	8.5
5	18.0	17.0	10.5	9.0	3.5	2.0	2.0	1.0	2.0	1.0	9.5	9.0
6	18.0	16.5	10.0	8.0	3.5	2.0	1.5	1.0	1.0	1.0	9.5	9.0
7	19.0	18.0	10.0	8.0	5.0	3.5	1.5	0.5	1.0	1.0	9.0	8.0
8	20.0	19.0	10.0	9.0	5.5	4.5	1.5	0.5	1.0	1.0	9.0	6.0
9	21.0	19.5	9.0	6.0	4.5	3.0	1.0	0.5	1.0	1.0	9.0	6.0
10	19.5	17.0	9.5	6.5	4.0	2.0	0.5	0.5	3.0	1.0	9.0	8.0
11	18.0	14.5	9.5	8.0	5.0	4.0	0.5	0.5	4.0	1.0	10.0	9.0
12	15.5	14.0	9.5	9.0	8.0	5.0	0.5	0.5	3.5	1.5	11.0	10.0
13	14.5	13.5	9.0	5.5	8.5	7.0	0.5	0.5	6.0	3.5	15.5	11.0
14	15.0	14.5	8.0	5.5	7.0	4.5	0.5	0.5	5.5	2.0	14.5	12.0
15	15.0	13.5	6.5	6.5	5.0	4.5	0.5	0.5	5.5	3.5	13.5	11.5
16	14.5	13.5	8.0	6.5	7.0	5.0	1.0	0.5	5.5	3.5	14.5	12.0
17	14.0	13.5	7.0	5.5	7.0	6.5	1.0	0.5	4.0	1.0	13.5	12.0
18	13.5	11.0	8.5	5.5	6.5	5.0	1.0	0.5	2.0	1.0	13.5	12.0
19	12.0	10.0	9.5	6.5	6.5	4.5	1.0	1.0	4.0	1.0	13.5	12.0
20	12.0	11.0	10.0	9.0	6.5	6.0	1.0	1.0	4.5	2.0	13.5	12.0
21	13.5	12.0	10.0	8.0	6.0	3.0	1.0	1.0	4.5	2.0	13.5	11.0
22	13.5	11.0	9.0	6.0	3.0	1.0	1.0	0.5	5.5	1.5	12.0	11.0
23	12.0	10.0	6.0	4.5	2.0	1.0	0.5	0.5	8.5	4.5	11.5	8.0
24	12.0	11.0	5.5	3.5	1.5	1.0	0.5	0.5	8.5	8.0	10.5	8.0
25	14.5	12.0	6.5	4.0	1.5	1.0	0.5	0.5	9.0	6.5	11.5	8.5
26	15.5	14.5	8.0	5.5	3.5	1.5	0.5	0.5	10.0	8.0	12.0	9.0
27	15.5	13.0	9.5	7.0	3.0	1.5	0.5	0.5	10.0	10.0	12.0	10.0
28	13.0	10.5	10.0	9.5	4.5	2.0	0.5	0.5	10.0	8.5	15.0	11.5
29	10.5	8.5	10.0	9.5	4.5	4.0	0.5	0.5	---	---	16.0	15.0
30	10.5	9.0	10.0	5.5	4.0	1.0	0.5	0.5	---	---	17.0	15.5
31	13.5	10.0	---	---	3.5	2.0	0.5	0.5	---	---	19.5	16.0
MONTH	21.0	8.5	13.0	3.5	8.5	1.0	2.0	0.5	10.0	0.5	19.5	5.0

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	17.0	14.0	18.5	15.0	23.0	21.0	24.5	24.0	25.5	25.0	24.5	23.5
2	16.5	15.0	20.5	17.0	23.5	21.5	25.0	24.0	25.5	24.5	24.5	23.5
3	19.0	16.0	20.0	18.5	23.5	20.0	24.5	22.0	25.0	24.5	24.0	23.5
4	18.5	15.5	20.5	18.5	21.5	19.0	23.0	21.0	25.5	24.5	24.0	23.5
5	15.5	14.5	22.0	19.0	21.0	20.0	23.5	22.0	26.5	25.5	23.5	22.0
6	15.0	11.5	21.5	18.0	22.0	21.0	24.5	23.5	28.0	25.5	23.5	23.0
7	14.0	10.5	22.0	19.5	22.0	19.0	25.0	24.5	29.0	26.5	23.0	22.0
8	14.0	11.5	21.0	18.5	20.5	16.5	25.5	25.0	29.5	28.0	22.0	21.5
9	14.5	10.5	20.5	16.5	19.5	18.5	26.0	25.5	29.5	28.0	22.0	21.5
10	15.0	11.0	18.0	14.0	19.5	17.0	26.5	25.5	29.5	27.0	21.5	20.5
11	18.5	13.5	16.5	13.5	19.5	16.5	26.5	23.5	29.5	27.0	21.0	21.0
12	18.5	15.0	18.0	14.0	20.0	19.0	25.5	23.5	28.5	25.5	21.0	19.5
13	21.0	16.5	19.0	14.5	21.0	19.5	26.5	25.0	28.0	26.0	21.0	19.0
14	21.0	17.0	20.5	16.5	21.0	20.0	27.0	25.5	28.0	25.0	22.0	21.0
15	21.0	18.0	20.5	18.5	21.0	20.0	27.0	25.0	25.0	24.5	22.0	21.5
16	21.5	18.0	20.5	17.0	21.0	20.0	26.5	24.5	24.5	24.5	22.0	21.5
17	21.0	16.5	20.5	18.5	22.0	21.0	26.5	25.0	25.0	24.5	22.0	21.5
18	21.0	18.0	21.0	19.0	22.0	21.0	26.5	25.0	24.5	23.0	23.0	22.0
19	22.0	19.0	21.5	20.0	23.5	22.0	26.5	25.0	23.0	21.0	23.0	22.0
20	21.5	19.5	21.5	20.5	24.0	23.0	26.0	25.0	22.0	21.0	23.0	23.0
21	20.5	19.0	21.5	19.5	24.0	22.0	26.0	25.5	22.0	21.5	23.5	21.0
22	21.0	18.0	21.0	19.5	23.5	21.0	26.0	25.5	22.0	22.0	21.0	19.0
23	21.0	20.0	21.0	20.0	22.0	21.0	25.5	23.0	22.0	22.0	20.0	18.5
24	22.0	20.0	21.0	20.0	21.0	20.0	23.5	22.0	23.0	22.0	20.0	19.0
25	21.0	17.0	20.0	19.5	21.5	20.0	24.0	22.0	23.0	22.0	20.5	20.0
26	19.0	16.0	20.0	19.5	24.0	21.0	25.0	24.0	22.0	21.5	20.5	20.5
27	17.0	14.0	21.5	19.5	24.5	22.0	25.0	23.0	22.0	21.5	20.5	19.5
28	19.0	15.0	22.0	19.5	25.0	23.5	23.5	22.0	23.0	22.0	20.0	20.0
29	19.0	16.0	23.5	21.0	25.0	23.5	23.5	22.0	23.5	22.0	20.0	17.0
30	18.5	14.5	23.5	22.0	24.5	23.5	25.0	23.5	24.5	21.5	18.0	16.5
31	---	---	22.0	21.0	---	---	25.0	24.0	24.0	23.5	---	---
MONTH	22.0	10.5	23.5	13.5	25.0	16.5	27.0	21.0	29.5	21.0	24.5	16.5
YEAR	29.5	0.5										

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 mi^2 (508 km^2).

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) above mean sea level (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) above mean sea level. Published as Hyco River at McGehees Mill, N. C.

REMARKS.--Water-discharge record good above 10 ft^3/s (0.28 m^3/s), and poor below. Flow regulated by Roxboro Steam-Electric Generating Plant afterbay Reservoir (see p. 259).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,300 ft^3/s (320 m^3/s) July 14, 1975, gage height, 24.40 ft (7.437 m); minimum, 0.25 ft^3/s (0.007 m^3/s) Sept. 21, 22, 1977, gage height, 2.13 ft (0.649 m); minimum daily, 0.31 ft^3/s (0.009 m^3/s) Sept. 21, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 681 ft^3/s (19.3 m^3/s) Mar. 8, gage height, 7.53 ft (2.295 m); minimum, 0.25 ft^3/s (0.007 m^3/s) Sept. 21, 22, gage height, 2.13 ft (0.649 m); minimum daily, 0.31 ft^3/s (0.009 m^3/s) Sept. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	22	11	49	65	139	298	6.0	24	15	2.0	.68
2	14	21	11	49	53	148	296	4.9	24	15	1.9	.80
3	14	20	11	48	67	132	295	4.3	24	15	1.7	.83
4	14	20	9.6	49	89	126	294	5.4	23	15	2.4	.86
5	15	19	9.2	49	87	139	319	15	23	15	2.5	.80
6	15	18	9.0	49	83	224	307	21	23	15	1.8	.92
7	15	18	12	49	79	547	298	24	23	17	1.2	1.1
8	16	18	14	49	77	647	295	25	22	17	.94	3.7
9	27	18	15	49	76	489	290	28	22	18	1.0	1.9
10	23	17	15	69	76	341	289	45	21	19	1.5	2.3
11	22	16	15	103	76	247	251	58	21	20	1.9	3.6
12	22	16	17	126	76	188	113	64	21	20	2.0	3.0
13	21	15	17	145	79	192	42	66	20	21	1.9	2.5
14	20	14	17	196	77	213	29	66	19	21	1.9	2.2
15	20	14	17	385	76	209	28	64	19	21	1.7	1.5
16	19	13	18	442	75	181	27	65	19	22	1.4	.81
17	19	13	21	428	75	145	26	65	19	23	1.4	.59
18	19	13	27	412	75	131	24	63	19	23	2.5	.40
19	19	13	30	389	75	105	23	59	19	23	2.4	.42
20	30	13	33	365	75	94	22	42	19	23	1.8	.41
21	28	12	35	339	74	96	21	33	18	23	1.2	.31
22	26	12	38	307	74	142	19	29	18	22	.97	.45
23	24	12	40	272	74	233	17	28	18	21	.83	3.2
24	23	11	42	208	79	339	15	28	17	19	.97	3.0
25	23	10	42	158	83	288	14	28	17	18	.90	2.4
26	25	10	42	133	79	255	13	33	17	17	.75	1.7
27	24	9.6	44	116	81	247	11	28	17	16	.68	1.4
28	24	10	45	100	97	243	9.4	26	16	15	.62	.90
29	23	12	46	89	---	249	9.0	26	15	11	.49	.68
30	23	12	48	83	---	298	7.6	25	15	5.3	.57	3.2
31	23	---	48	75	---	300	---	25	---	2.1	.61	---
TOTAL	644	441.6	798.8	5380	2152	7327	3702.0	1099.6	592	547.4	44.43	46.56
MEAN	20.8	14.7	25.8	174	76.9	236	123	35.5	19.7	17.7	1.43	1.55
MAX	30	22	48	442	97	647	319	66	24	23	2.5	3.7
MIN	14	9.6	9.0	48	53	94	7.6	4.3	15	2.1	.49	.31

CAL YR 1976 TOTAL 24831.40 MEAN 67.8 MAX 626 MIN 9.0
WTR YR 1977 TOTAL 22775.39 MEAN 62.4 MAX 647 MIN .31

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.

REMARKS.--Lost record from Nov. 24-26, Dec. 1-28 was due to malfunctions of the thermograph.

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, 33.5°C July 20, 21, 22; minimum, 2.0°C Jan. 11, 12, 13, Feb. 1.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.5	21.0	11.5	11.0	---	---	4.0	3.5	3.0	2.0	11.0	10.5
2	21.0	20.0	11.0	10.5	---	---	3.5	3.0	3.0	3.0	10.5	9.5
3	21.0	20.0	11.0	10.5	---	---	3.0	3.0	3.5	3.0	10.0	10.0
4	20.0	20.0	10.5	10.5	---	---	3.5	3.0	4.0	3.5	11.0	10.0
5	20.0	19.5	11.0	10.5	---	---	3.5	3.5	4.0	3.5	12.0	11.0
6	19.5	19.0	10.5	10.0	---	---	3.5	3.5	3.5	3.0	12.0	11.5
7	20.5	19.5	10.5	10.0	---	---	4.0	3.5	3.0	3.0	12.0	11.5
8	20.5	20.0	10.0	9.0	---	---	4.0	3.5	3.5	3.0	12.0	11.5
9	20.5	20.0	9.0	9.0	---	---	3.5	3.5	3.5	3.5	12.0	12.0
10	20.0	19.0	9.0	8.5	---	---	3.5	3.5	4.5	3.5	13.0	12.0
11	19.0	18.0	9.5	9.0	---	---	3.5	2.0	5.0	4.5	13.5	13.0
12	18.0	16.5	9.0	9.0	---	---	2.0	2.0	5.0	5.0	14.5	13.5
13	17.0	16.0	9.0	8.5	---	---	3.0	2.0	5.5	5.0	16.0	14.5
14	17.0	16.5	8.5	8.5	---	---	3.0	3.0	7.0	5.5	16.0	15.5
15	17.0	16.0	8.5	8.5	---	---	3.5	3.0	8.0	7.0	16.0	15.0
16	18.0	17.0	8.5	8.0	---	---	4.0	3.5	8.0	7.0	16.0	15.5
17	18.0	15.5	8.5	8.0	---	---	4.5	4.0	7.0	6.0	16.0	15.5
18	15.5	14.5	8.5	8.0	---	---	4.5	3.5	6.0	5.5	15.5	15.0
19	14.5	14.0	8.5	8.0	---	---	3.5	3.5	5.5	5.0	15.0	14.5
20	14.0	13.5	9.0	8.5	---	---	3.5	3.5	6.0	5.5	14.5	14.0
21	13.5	13.0	9.0	8.5	---	---	3.5	3.5	6.0	5.5	14.5	13.5
22	13.0	12.0	8.5	8.5	---	---	3.5	3.5	6.0	5.5	14.0	13.5
23	12.0	12.0	8.5	8.0	---	---	3.5	3.5	8.0	6.0	13.5	11.0
24	12.0	11.5	---	---	---	---	3.5	3.5	9.0	8.0	13.0	12.0
25	13.0	11.5	---	---	---	---	3.5	3.5	10.0	9.0	14.0	13.0
26	14.0	13.0	---	---	---	---	3.5	3.5	11.0	10.0	14.5	13.5
27	14.0	13.0	8.5	8.0	---	---	3.5	3.5	11.5	11.0	14.5	14.0
28	13.0	11.5	9.0	8.5	---	---	4.0	3.5	11.5	11.0	15.5	14.5
29	11.5	11.0	9.5	9.0	4.5	4.5	4.0	3.0	---	---	17.0	15.5
30	11.5	11.0	9.5	8.5	4.5	4.0	3.5	3.0	---	---	18.0	17.0
31	11.5	11.0	---	---	4.5	4.0	3.5	3.0	---	---	18.5	18.0
MONTH	21.5	11.0	11.5	8.0	---	---	4.5	2.0	11.5	2.0	18.5	9.5

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	18.5	17.0	20.5	19.0	26.0	25.5	30.5	29.5	29.0	26.0	31.0	24.5
2	18.0	18.0	20.5	19.5	28.0	26.0	30.5	29.5	29.5	26.0	31.0	24.5
3	19.0	18.0	23.0	20.5	28.0	26.5	30.0	28.5	28.0	26.0	29.5	24.5
4	19.0	18.0	24.0	21.5	28.5	26.5	29.0	27.0	29.5	25.5	30.5	25.0
5	18.0	16.0	24.5	23.0	28.5	28.0	30.0	29.0	30.0	26.5	29.0	24.5
6	16.0	14.5	25.5	23.5	29.0	28.0	31.0	29.5	30.5	27.0	30.5	24.5
7	14.5	14.0	26.5	25.5	28.0	25.5	32.0	31.0	31.0	27.0	26.5	25.0
8	15.0	14.0	26.0	25.0	25.5	24.0	32.0	31.0	30.0	27.0	25.0	24.0
9	15.5	14.5	25.5	23.5	24.5	23.5	33.0	31.5	32.0	27.0	24.0	23.5
10	16.0	15.0	23.5	21.0	23.5	22.0	33.0	31.0	31.0	27.0	25.5	22.0
11	18.0	16.0	21.5	20.0	24.0	22.0	31.0	29.5	31.5	28.0	26.0	23.5
12	19.5	17.0	22.0	20.5	25.0	23.5	30.5	29.5	30.5	28.0	25.5	22.0
13	20.5	18.0	23.0	21.0	26.0	25.0	32.0	30.0	30.5	28.0	24.5	22.0
14	21.5	20.5	24.5	22.0	26.0	25.0	33.0	31.5	30.0	27.0	26.0	23.0
15	21.5	20.5	24.5	23.5	25.0	24.5	32.0	31.0	31.0	28.0	25.0	23.5
16	22.0	21.0	25.0	23.5	25.0	25.0	32.0	31.0	30.0	27.0	25.5	23.0
17	21.5	21.0	25.5	24.0	26.0	25.0	32.0	31.0	28.5	26.5	25.5	23.0
18	21.5	21.0	27.0	25.0	28.0	25.5	33.0	31.5	28.5	26.5	28.0	23.0
19	23.0	21.5	27.0	25.5	29.0	28.0	33.0	31.5	29.5	25.5	27.0	23.5
20	23.5	23.0	27.0	26.0	29.0	28.5	33.5	32.0	29.0	25.0	27.0	23.5
21	23.0	22.0	26.5	25.5	29.5	28.0	33.5	32.0	27.0	24.5	28.0	22.0
22	23.5	22.0	26.0	25.5	29.0	27.0	33.5	31.0	28.5	24.5	26.5	20.5
23	23.5	23.0	26.5	25.5	28.0	25.0	31.0	29.0	30.5	24.5	25.0	22.0
24	24.0	23.0	26.5	25.5	25.0	23.5	30.0	28.5	27.0	24.5	24.5	22.0
25	23.0	21.5	25.5	24.5	24.5	23.5	29.5	28.5	29.5	24.5	25.5	23.0
26	21.5	19.5	24.5	24.5	27.0	24.5	32.0	28.5	28.0	24.0	24.5	23.0
27	20.0	19.0	26.5	25.5	29.0	27.0	28.5	26.5	28.0	24.0	24.5	21.5
28	20.0	19.0	28.0	26.5	30.0	28.5	27.0	25.5	30.0	24.0	25.0	21.5
29	21.5	19.5	28.0	26.0	30.0	29.0	27.0	25.5	29.5	24.5	23.5	19.5
30	21.5	19.0	26.0	25.5	30.0	29.0	30.5	25.5	30.5	24.5	23.0	20.5
31	---	---	26.0	25.5	---	---	30.0	25.0	31.0	24.5	---	---
MONTH	24.0	14.0	28.0	19.0	30.0	22.0	33.5	25.0	32.0	24.0	31.0	19.5
YEAR	33.5	2.0										

02077660 MAYO CREEK NEAR WOODSDALE, N. C.

LOCATION.--Lat 36°31'48", long 78°52'42", Person County, Hydrologic Unit 03010104, near left bank on downstream side of bridge on Secondary Road 1501, 4 mi (6.4 km) downstream from Spoonwater Creek, and 5.2 mi (8.4 km) northeast of Woodsdale.

DRAINAGE AREA.--51.8 mi² (134.2 km²).

PERIOD OF RECORD.--Occasional low flow measurements water years 1956-64, 1966. July 1975 to September 1977 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 342.16 ft (104.290 m) above mean sea level (levels by Carolina Power and Light Company).

REMARKS.--Records fair prior to Aug. 1 and good thereafter. Suspended-sediment records for the current year are published on page 344 of this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,520 ft³/s (71.4 m³/s) July 13, 1975, gage height, 11.25 ft (3.429 m); minimum, no flow Aug. 1-13, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 4, 1974 reached a stage of 12.20 ft (3.719 m), from flood-marks.

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)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 9	1230	457	12.9	4.78	1.457	July 11	1100	*680	19.3	*6.30	1.920
Oct. 20	1930	420	11.9	4.51	1.375						

No flow August 1-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	34	8.0	15	10	55	22	8.5	12	1.6	.00	.39
2	.96	27	7.0	15	9.0	34	19	8.5	12	1.2	.00	.31
3	.96	21	5.0	14	8.5	25	19	8.1	9.2	1.1	.00	.23
4	.80	9.9	4.0	12	8.4	27	21	9.0	5.6	.90	.00	.18
5	.70	18	3.5	12	8.0	84	87	9.1	4.2	.74	.00	.15
6	.62	20	3.5	12	7.8	203	60	54	4.0	.58	.00	.13
7	.61	16	4.0	16	7.6	251	28	13	5.4	.53	.00	.15
8	.83	13	126	15	7.2	126	22	14	4.2	.47	.00	101
9	256	11	48	14	7.0	70	19	11	3.4	.35	.00	92
10	48	8.4	14	210	7.0	49	17	9.0	4.6	.28	.00	35
11	8.0	7.8	10	197	7.0	39	16	8.4	4.2	302	.00	14
12	3.6	8.9	87	169	12	32	15	7.8	3.6	129	.00	8.0
13	2.2	8.4	66	100	22	90	13	7.5	3.0	63	.00	4.9
14	1.9	6.1	24	50	24	77	13	7.2	2.7	36	4.5	3.1
15	1.8	6.0	19	100	19	44	13	6.8	3.2	20	90	2.5
16	1.6	6.7	53	90	17	31	12	6.6	4.3	13	6.7	2.0
17	2.1	6.8	41	60	15	27	13	6.5	3.1	6.6	3.4	2.3
18	2.9	5.6	26	35	14	25	12	6.4	6.2	3.5	72	1.9
19	4.1	5.4	20	20	16	23	12	6.4	6.1	2.0	26	2.1
20	201	4.2	21	19	18	28	11	6.1	3.1	1.2	8.1	1.6
21	164	4.2	27	18	17	31	9.8	6.6	2.1	.65	4.0	1.5
22	42	4.5	23	17	15	126	9.6	6.0	1.7	.51	2.4	1.4
23	15	3.2	19	16	14	108	10	5.9	1.7	.37	1.9	.85
24	6.6	2.8	18	18	30	53	10	5.7	2.6	.28	12	.63
25	5.0	3.1	18	20	78	38	10	8.4	3.9	.23	62	.47
26	14	2.9	22	18	37	31	9.6	15	11	.10	3.1	.43
27	22	3.5	28	16	47	27	9.4	120	5.3	.05	2.0	.34
28	16	6.4	22	15	141	26	8.9	56	2.8	.04	1.3	.30
29	25	31	20	14	---	25	8.7	25	1.9	.01	.74	.29
30	33	11	17	13	---	27	9.2	15	1.9	.01	.55	.25
31	38	---	16	12	---	27	---	13	---	.01	.45	---
TOTAL	920.28	316.8	820.0	1352	623.5	1859	539.2	490.5	139.0	586.31	301.14	278.40
MEAN	29.7	10.6	26.5	43.6	22.3	60.0	18.0	15.8	4.63	18.9	9.71	9.28
MAX	256	34	126	210	141	251	87	120	12	302	90	101
MIN	.61	2.8	3.5	12	7.0	23	8.7	5.7	1.7	.01	.00	.13
CFSM	.57	.21	.51	.84	.43	1.16	.35	.31	.09	.37	.19	.18
IN.	.66	.23	.59	.97	.45	1.34	.39	.35	.10	.42	.22	.20

CAL YR 1976 TOTAL 8758.30 MEAN 23.9 MAX 459 MIN .04 CFSM .46 IN 6.29
WTR YR 1977 TOTAL 8226.13 MEAN 22.5 MAX 302 MIN .00 CFSM .43 IN 5.91

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.

LOCATION.--Lat 36°28'04", long 77°37'18", 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) above mean sea level. 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. 257); since September 1962 by Leesville Lake, since October 1962 by Lake Gaston (see p. 257); and since September 1963 by Smith Mountain Lake.

AVERAGE DISCHARGE.--65 years (1912-77) 8,016 ft³/s (227.0 m³/s) adjusted for storage, 12.95 in/yr (329 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, 19,500 ft³/s (552 m³/s) Oct. 29, Nov. 8, gage height, 8.50 ft (2.591 m); minimum, 1,070 ft³/s (30.3 m) Jan. 9, gage height, 2.02 ft (0.616 m). Minimum daily, 1,150 ft³/s (32.6 m³/s) Nov. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2300	13700	11700	7600	7360	3500	6660	6220	2290	2410	2300	2380
2	2370	14900	6830	5300	3730	1560	6460	12300	3020	2510	2330	2400
3	2390	18600	8770	11400	3680	2180	2320	14400	2350	2420	2370	2320
4	2430	17100	4510	2610	2400	1290	5600	14400	2280	2380	2340	2350
5	2410	13100	6400	5950	6540	1170	8760	11900	2300	2700	2660	2410
6	2410	4700	6380	7250	5270	1200	11700	9660	2270	4690	2660	2400
7	2430	3040	2290	1720	12100	11400	13700	6210	2360	6700	2310	2370
8	8490	13100	7070	10200	11200	5490	18700	6260	2350	6230	2320	2370
9	3730	18900	7910	7690	5020	2540	18100	6230	2390	8790	2340	2310
10	2470	18700	11800	11300	3230	2970	2530	6330	2350	2370	2310	2320
11	2950	11000	7470	11900	2910	2140	12800	8640	2360	2310	2350	2240
12	4050	18500	4100	11900	3020	4380	13900	6240	2320	9900	2290	2290
13	4540	17600	11200	10200	1170	1710	13200	6210	2320	7970	2310	2340
14	3630	11500	5680	3920	10600	8690	10100	6220	2330	3850	2360	2330
15	3390	12100	8710	3450	11600	4020	12000	6240	2330	5790	2320	2420
16	3390	11900	7050	10800	14100	2320	9680	6280	2340	3270	2410	2330
17	12300	11600	11400	17100	9330	2120	2540	6230	2300	2570	2380	2880
18	16200	9350	10000	7300	5450	8270	3100	11800	2290	5020	2420	2340
19	15900	2880	6800	5420	2370	1210	6690	6240	2310	3870	2320	7950
20	14800	1240	7890	4100	1240	1170	10500	6260	2300	2450	2370	2660
21	12700	1210	13400	5100	7280	2880	8670	6340	2300	2360	2440	2310
22	12100	7950	15500	10700	2250	8420	4030	6310	2280	2340	2420	2350
23	11500	10300	14700	4640	1170	11500	2880	6320	2340	2440	2290	2960
24	5840	8390	5340	3180	1180	6970	2420	6270	2330	2380	2310	2320
25	8610	1180	2200	1720	1180	7790	2330	6180	3070	2380	2310	2320
26	13600	1160	1570	1730	1180	4010	5170	6150	2310	2330	2320	7810
27	15100	1150	12100	1370	1200	1190	6260	6100	2280	2400	2300	4880
28	18700	1170	5000	1380	3970	7160	6280	2330	2270	2370	2310	2470
29	17000	9790	11700	1380	---	5500	6220	2270	2270	2760	2820	2400
30	8890	11800	9940	4400	---	9170	6270	2290	2340	2340	4270	2390
31	6030	---	6170	8520	---	8140	---	2300	---	2420	5610	---
TOTAL	242650	297610	251580	201230	141730	142060	239570	217130	70950	114720	78870	85620
MEAN	7827	9920	8115	6491	5062	4583	7986	7004	2365	3701	2544	2854
MAX	18700	18900	15500	17100	14100	11500	18700	14400	3070	9900	5610	7950
MIN	2300	1150	1570	1370	1170	1170	2320	2270	2270	2310	2290	2240
(†)	+4561	-5747	+2335	-1132	+531	+4941	+1245	-3361	+272	-2823	-1420	-922

CAL YR 1976 TOTAL 2457570 MEAN 6715 MAX 19000 MIN 1150 MEAN‡ 6594 CFSM‡ 0.78 IN‡ 10.62
WTR YR 1977 TOTAL 2083720 MEAN 5709 MAX 18900 MIN 1150 MEAN‡ 5590 CFSM‡ 0.66 IN‡ 8.96

†Change in contents, equivalent in cubic feet per second, in Leesville and Smith Mountain Lakes, furnished by Applachian Power Co.; in 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 station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949, 1968-73, October 1976 to September 1977.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1976 to September 1977.
WATER TEMPERATURES: October 1948 to September 1949, October 1976 to September 1977.

REMARKS.--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.

EXTREMES FOR PERIOD OF DAILY RECORD.--
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, 119 micromhos Aug. 20; minimum daily, 83 micromhos Jan. 15, 21, 24, 29, 30.
WATER TEMPERATURES: Maximum daily, 30.0°C July 21, Aug. 11, 15, 16, 17; minimum daily, 1.0°C Jan. 18-22, 30, 31, Feb. 1.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	FECAL COLIFORM .7UM-MF (COL./100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
OCT 05...	1200	2420	104	6.6	20.5	3	7.1	B32	B24	32	1	8.0
NOV 11...	1100	18200	108	6.7	11.0	6	10.0	<1	B2	32	0	7.6
DEC 07...	1115	1260	108	6.5	8.0	3	10.6	B8	B16	32	2	7.5
JAN 31...	1110	18000	98	7.0	.5	5	14.9	B4	B14	28	0	6.9
FEB 28...	1100	6500	89	6.5	6.5	7	14.1	<1	<1	29	3	6.3
MAR 22...	1115	9470	87	5.8	10.5	6	12.4	B10	B24	29	6	6.7
APR 19...	1100	2340	94	7.8	16.0	4	10.8	B6	B2	30	4	7.0
MAY 31...	1030	2310	99	7.1	21.0	2	8.6	B7	B4	30	5	7.1
JUN 14...	1300	2340	100	6.4	22.0	1	8.5	B2	B13	23	0	3.9
AUG 02...	1145	2370	109	6.1	26.0	2	8.3	B12	B12	30	3	7.4
23...	1100	2150	105	7.1	27.0	1	8.7	B6	B2	--	--	--
SEP 12...	1130	2310	109	6.8	25.0	2	7.4	50	29	31	1	7.6

DATE	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
OCT 05...	3.0	7.3	31	.6	2.1	38	0	31	15	5.5	5.9	.1
NOV 11...	3.2	8.3	34	.6	2.3	40	0	33	13	7.3	7.3	.2
DEC 07...	3.2	8.0	33	.6	2.2	36	0	30	18	8.4	7.3	.3
JAN 31...	2.7	7.1	33	.6	2.3	34	0	28	5.4	7.5	6.1	.0
FEB 28...	3.2	6.7	32	.5	2.2	32	0	26	16	8.5	6.1	.1
MAR 22...	3.0	6.3	30	.5	2.1	28	0	23	71	8.3	5.5	.1
APR 19...	3.0	7.2	33	.6	2.0	32	0	26	.8	7.0	7.6	.1
MAY 31...	3.0	7.5	33	.6	1.9	31	0	25	3.9	8.2	6.6	.1
JUN 14...	3.1	7.5	40	.7	1.9	30	0	25	19	6.7	6.8	.1
AUG 02...	2.9	7.3	33	.6	1.9	34	0	28	43	7.4	7.9	.1
23...	--	7.8	--	--	2.1	34	0	28	4.3	6.9	7.1	.1
SEP 12...	3.0	8.2	34	.6	2.2	37	0	30	9.4	7.1	7.2	.1

B Results based on colony count outside the acceptable range (non-ideal colony count).

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
OCT											
05...	8.3	57	59	.08	372	.03	.34	.37	1.6	.02	--
NOV											
11...	8.4	88	64	.12	4320	.21	.33	.54	2.4	.08	0
DEC											
07...	8.1	60	63	.08	204	.20	.34	.54	2.4	.02	--
JAN											
31...	8.7	66	58	.09	3210	.22	.35	.57	2.5	.02	--
FEB											
28...	6.9	62	56	.08	1090	.19	.39	.58	2.6	.02	--
MAR											
22...	5.0	64	51	.09	1640	.11	.37	.48	2.1	.02	0
APR											
19...	3.3	62	53	.08	392	.04	.32	.36	1.6	.03	--
MAY											
31...	3.4	65	53	.09	405	.05	.32	.37	1.6	.01	2
JUN											
14...	2.3	51	47	.07	322	.00	.32	.32	1.4	.03	--
AUG											
02...	3.7	65	55	.09	416	.01	.37	.38	1.7	.02	--
23...	4.8	63	--	.09	366	.01	.42	.43	1.9	.01	0
SEP											
12...	5.7	65	59	.09	405	.36	.53	.89	3.9	.08	--

DATE	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	SUS-PENDED COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)
NOV											
11...	0	0	--	--	0	20	20	0	0	0	0
MAR											
22...	0	0	0	0	0	<10	<10	0	0	0	0
MAY											
31...	0	2	0	0	0	20	13	7	0	0	0
AUG											
23...	0	0	0	0	0	10	10	0	0	0	0

DATE	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	SUS-PENDED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
NOV											
11...	3	0	3	350	30	13	8	5	80	80	0
MAR											
22...	3	3	0	400	40	0	0	0	30	20	10
MAY											
31...	2	2	0	90	10	8	2	6	80	70	10
AUG											
23...	0	0	0	440	40	10	5	5	90	70	20

DATE	TOTAL MERCURY (HG) (UG/L)	SUS-PENDED MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
NOV										
11...	.3	.1	.2	0	0	0	10	0	10	4.6
MAR										
22...	.0	.0	.0	0	0	0	20	20	0	4.8
MAY										
31...	.0	.0	.0	0	0	0	0	0	0	5.2
AUG										
23...	.0	.0	.0	0	0	0	0	0	0	--

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ALDRIN (UG/L)	ALDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL CHLORDANE (UG/L)	CHLORDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDD (UG/L)	DDD IN BOTTOM MATERIAL (UG/KG)	TOTAL DDE (UG/L)	DDE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDT (UG/L)
NOV										
11...	1100	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB										
28...	1100	ND	--	ND	--	ND	--	ND	--	ND
MAY										
31...	1030	ND	ND	ND	ND	ND	--	ND	--	ND
AUG										
23...	1100	ND	--	ND	--	ND	--	ND	--	ND

DATE	DDT IN BOTTOM MATERIAL (UG/KG)	TOTAL DIAZINON (UG/L)	DIAZINON IN BOTTOM MATERIAL (UG/KG)	TOTAL DIELDRIN (UG/L)	DIELDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ENDRIN (UG/L)	ENDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ETHION (UG/L)	ETHION IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR (UG/L)
NOV										
11...	ND	ND	ND	ND	4.0	ND	ND	ND	ND	ND
FEB										
28...	--	ND	--	.01	--	ND	--	ND	--	ND
MAY										
31...	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG										
23...	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	HEPTACHLOR IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR EPOXIDE (UG/L)	HEPTACHLOR EPOXIDE IN BOTTOM MATERIAL (UG/KG)	TOTAL LINDANE (UG/L)	LINDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL MALATHION (UG/L)	MALATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHOXYCHLOR (UG/L)	METHOXYCHLOR IN BOTTOM MATERIAL (UG/KG)
NOV									
11...	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB									
28...	--	ND	--	ND	--	ND	--	ND	--
MAY									
31...	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG									
23...	--	ND	--	ND	--	ND	--	ND	--

DATE	TOTAL METHYL PARATHION (UG/L)	METHYL PARATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHYL TRITHION (UG/L)	METHYL TRITHION IN BOTTOM MATERIAL (UG/KG)	TOTAL PARATHION (UG/L)	PARATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL TOXAPHENE (UG/L)	TOXAPHENE IN BOTTOM MATERIAL (UG/KG)
NOV								
11...	ND	ND	ND	ND	ND	ND	ND	ND
FEB								
28...	ND	--	ND	--	ND	--	ND	--
MAY								
31...	ND	ND	ND	ND	ND	ND	ND	ND
AUG								
23...	ND	--	ND	--	ND	--	ND	--

DATE	TOTAL TRITHION (UG/L)	TRITHION IN BOTTOM MATERIAL (UG/KG)	TOTAL 2,4-D (UG/L)	2,4-D IN BOTTOM MATERIAL (UG/KG)	TOTAL 2,4,5-T (UG/L)	2,4,5-T IN BOTTOM MATERIAL (UG/KG)	TOTAL SILVEX (UG/L)	SILVEX IN BOTTOM MATERIAL (UG/KG)
NOV								
11...	ND	ND	ND	ND	ND	ND	ND	ND
FEB								
28...	ND	--	ND	--	ND	--	ND	--
MAY								
31...	ND	ND	ND	ND	ND	ND	ND	ND
AUG								
23...	ND	--	ND	--	ND	--	ND	--

ND Not detected.

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Oct. 5	1200	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	590	5	
		Chlamydomonas	130	1	
		Chodatella	65	1	
		Scenedesmus	1,500	13	
		Tetraedron	200	2	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Melosira	2,400	21	
		Nitzschia	720	6	
		CYANOPHYTA			
		Myxophyceae			
		Oscillatoria	1,700	15	
		Raphidiopsis	3,900	35	
		TOTAL	11,000		
Nov. 11	1100	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	87	3	
		Scenedesmus	120	3	
		Tetraedron	21	1	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	120	3	
		Melosira	2,800	83	
		Navicula	58	2	
		Nitzschia	140	4	
		EUGLENOPHYTA			
		Euglenophyceae			
		Trachelomonas	29	1	
		TOTAL	3,400		
Dec. 7	1115	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	300	5	
		Crucigenia	54	1	
		Gloeocystis	54	1	
		Scenedesmus	270	5	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	240	4	
		Melosira	3,000	53	
		Nitzschia	41	1	
		Tabellaria	95	2	
		CYANOPHYTA			
		Myxophyceae			
		Anabaena	68	1	
		Oscillatoria	1,400	25	
		TOTAL	5,600		
Jan. 31	1110	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	790	8	
		Dictyosphaerium	300	3	
		Micractinium	340	3	
		Scenedesmus	450	5	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Asterionella	610	6	
		Cyclotella	720	7	
		Melosira	5,400	55	
		CYANOPHYTA			
		Myxophyceae			
		Oscillatoria	1,200	12	
		TOTAL	9,900		

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Feb. 28	1100	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	320	1	
		Dictyosphaerium	220	1	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Asterionella	290	1	
		Cyclotella	860	1	
		Melosira	19,000	88	
		Nitzschia	220	1	
		Stephanodiscus	95	0	
		Tabellaria	160	1	
		CYANOPHYTA			
		Myxophyceae			
		Anacystis	320	1	
		TOTAL	21,000		
May 31	1030	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	94	2	
		Dictyosphaerium	47	1	
		Kirchneriella	35	1	
		Oocystis	47	1	
		Scenedesmus	260	6	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	70	2	
		Melosira	1,700	42	
		Nitzschia	35	1	
		Stephanodiscus	150	4	
		Tabellaria	150	4	
		Chrysophyceae			
		Dinobryon	110	3	
		CYANOPHYTA			
		Myxophyceae			
		Agmenellum	190	5	
		Anacystis	94	2	
		Oscillatoria	1,000	26	
		TOTAL	4,000		
June 14	1300	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	180	1	
		Cosmarium	79	1	
		Crucigenia	210	2	
		Oocystis	160	1	
		Scenedesmus	210	2	
		Selenastrum	160	1	
		Micractinium	290	2	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	400	3	
		Fragilaria	160	1	
		Melosira	4,900	35	
		Nitzschia	160	1	
		CYANOPHYTA			
		Myxophyceae			
		Agmenellum	530	4	
		Anacystis	5,700	41	
		Oscillatoria	610	4	
		TOTAL	14,000		

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Aug. 2	1145	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	270	2	
		Chlamydomonas	180	2	
		Crucigenia	450	4	
		Dictyosphaerium	140	1	
		Kirchneriella	91	1	
		Micractinium	230	2	
		Oocystis	270	2	
		Scenedesmus	410	3	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	180	2	
		Melosira	2,100	18	
		Stephanodiscus	91	1	
		Chrysophyceae			
		Dinobryon	230	2	
		TOTAL	12,000		
Aug. 23	1100	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	40	1	
		Crucigenia	590	10	
		Golenkinia	40	1	
		Oocystis	53	1	
		Scenedesmus	210	4	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	530	9	
		Melosira	1,500	26	
		Synedra	53	1	
		Tabellaria	93	2	
		CYANOPHYTA			
		Cyanophyceae			
		Anabaena	120	2	
		Anacystis	410	7	
		Aphanizomenon	130	2	
		Gomphosphaeria	210	4	
		Lyngbya	1,400	25	
		PYRRHOPHYTA			
		Dinophyceae			
		Peridinium	93	2	
		TOTAL	5,700		

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Sept. 12	1130	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	65	4	
		Crucigenia	80	4	
		Euastrum	15	1	
		Micractinium	50	3	
		Oocystis	75	4	
		Pediastrum	30	2	
		Scenedesmus	20	1	
		Staurastrum	10	1	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	45	2	
		Fragilaria	50	3	
		Melosira	770	42	
		Navicula	10	1	
		Synedra	60	3	
		CYANOPHYTA			
		Cyanophyceae			
		Anabaena	120	6	
		Anacystis	400	22	
		EUGLENOPHYTA			
		Euglenophyceae			
		Trachelomonas	25	1	
		TOTAL	1,800		

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PERIPHYTON

Date	Length of exposure (days)	Biomass (mg/m²)		Chlorophyll a (mg/m²)	Chlorophyll b (mg/m²)	Biomass chlorophyll ratio	Sampling method
		Dry weight	Ash weight				
Nov. 11	36	846	462	0.060	0.054	6400	Polyethylene strip
Sept. 12	19	236	157	.126	.043	627	

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	102	95	94	98	97	96	108	110	108	110	107
2	97	100	92	94	100	95	113	108	111	108	111	107
3	98	100	91	89	96	95	98	113	112	108	113	112
4	98	101	95	92	96	108	98	113	112	108	110	107
5	98	101	91	91	98	96	98	118	113	118	112	107
6	98	102	93	86	98	93	98	108	114	103	113	107
7	98	107	91	90	96	93	96	108	108	108	112	107
8	98	102	92	88	94	96	96	108	103	103	113	107
9	96	102	91	85	96	95	113	108	108	112	112	112
10	101	102	90	87	92	93	98	113	103	108	113	102
11	94	101	90	84	95	93	98	108	108	108	114	102
12	98	101	89	85	92	93	98	110	105	108	111	105
13	94	102	90	84	96	93	98	110	104	108	111	102
14	98	102	89	84	93	90	108	108	104	108	112	102
15	98	102	90	83	92	91	102	108	103	108	113	102
16	102	101	87	85	91	90	103	108	104	108	115	104
17	98	102	90	88	98	90	107	108	108	108	113	108
18	94	100	92	86	91	90	105	110	103	108	112	108
19	95	100	92	85	92	91	106	113	108	108	113	103
20	92	101	87	84	92	91	103	108	108	113	119	103
21	91	102	86	83	92	93	108	108	104	113	113	103
22	100	100	88	84	92	93	108	109	104	108	111	107
23	98	100	89	85	91	93	108	108	105	108	111	107
24	97	102	88	83	91	94	108	108	103	108	112	107
25	96	102	90	85	97	92	108	108	104	108	111	111
26	97	102	89	88	92	92	108	104	103	108	111	107
27	99	102	87	85	90	92	108	108	103	112	112	107
28	98	102	87	85	89	96	108	108	103	112	112	107
29	102	100	88	83	---	94	108	118	103	112	111	107
30	99	102	87	83	---	92	103	108	103	118	112	109
31	98	---	87	84	---	91	---	108	---	108	110	---
MEAN	97	102	90	86	94	93	104	109	105	109	112	106

WTR YR 1977 MEAN 101 MAX 119 MIN 83

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	15.0	8.0	4.0	1.0	8.5	14.0	19.0	22.0	27.0	26.0	27.0
2	23.0	13.0	8.0	4.0	1.5	8.5	15.0	19.5	22.5	27.0	26.5	27.0
3	22.5	13.0	8.0	4.0	2.0	9.0	15.5	20.0	22.0	27.0	27.0	27.5
4	22.0	13.0	7.5	4.5	2.5	8.5	14.5	20.0	22.5	27.0	28.0	27.5
5	22.0	13.0	8.0	4.5	2.0	8.5	15.0	21.0	22.5	27.0	28.0	28.0
6	21.5	13.0	7.5	4.0	2.0	8.5	15.0	21.0	24.5	27.5	27.0	28.0
7	21.5	13.0	8.5	4.0	2.0	8.5	14.0	21.0	25.0	27.0	28.5	27.5
8	21.5	12.5	8.5	4.0	2.5	9.0	14.0	21.0	24.5	26.5	29.0	27.0
9	22.0	11.0	7.0	4.0	3.0	8.0	13.5	20.5	24.0	26.5	29.5	27.0
10	21.0	11.5	5.0	4.0	3.0	8.0	13.5	20.0	23.0	26.5	29.5	26.5
11	20.5	12.0	6.0	4.0	2.0	8.0	15.5	20.0	23.0	26.5	30.0	26.5
12	20.0	10.5	8.0	3.0	3.5	10.0	16.0	20.5	23.0	27.0	29.0	25.0
13	19.5	11.0	8.0	3.0	3.5	10.0	16.5	20.0	22.5	27.0	29.0	25.0
14	20.0	10.5	7.0	3.0	3.0	12.0	17.5	20.0	22.5	26.0	29.0	25.0
15	19.0	10.5	7.5	3.0	3.0	12.0	17.0	20.5	23.0	26.5	30.0	25.0
16	19.0	10.5	8.0	2.5	2.5	13.5	17.0	21.5	23.0	27.0	30.0	24.5
17	19.0	10.5	6.0	1.5	2.5	13.5	16.5	22.0	23.0	27.0	30.0	25.0
18	17.5	10.5	4.0	1.0	3.0	13.0	16.0	22.0	25.0	27.0	28.5	25.0
19	17.5	11.0	5.0	1.0	3.0	13.0	17.5	22.0	26.0	27.0	28.0	25.0
20	18.0	11.0	6.0	1.0	3.5	13.0	17.0	21.0	26.0	28.0	27.0	26.0
21	17.0	11.0	4.5	1.0	4.0	12.5	18.5	21.0	27.5	30.0	26.5	25.5
22	16.5	9.5	4.5	1.0	4.0	11.0	18.0	22.0	27.0	29.0	27.0	25.5
23	12.0	9.5	5.0	2.0	4.0	11.5	18.5	22.0	25.0	28.0	27.5	25.5
24	12.5	8.5	5.0	2.0	5.0	11.0	19.0	21.5	25.0	28.0	28.0	25.0
25	14.0	8.5	5.5	2.0	5.0	11.0	19.5	21.5	25.0	28.0	27.0	25.0
26	14.0	9.0	6.0	2.5	7.0	11.0	20.0	22.0	25.5	28.0	27.0	25.0
27	11.0	10.0	5.0	2.5	7.0	11.0	19.0	22.0	25.0	28.0	26.0	25.0
28	10.0	10.0	5.5	2.0	7.0	12.0	19.0	21.5	25.0	26.0	26.5	25.5
29	9.0	10.0	5.5	2.0	---	13.0	19.0	21.5	27.0	25.5	26.5	25.0
30	9.0	9.0	5.0	1.0	---	13.5	19.0	22.0	26.0	26.0	27.0	25.0
31	15.0	---	5.5	1.0	---	14.5	---	22.0	---	26.0	27.0	---
MEAN	17.5	11.0	6.5	2.5	3.5	11.0	16.5	21.0	24.5	27.0	28.0	26.0

WTR YR 1977 MEAN 16.5 MAX 30.0 MIN 1.0

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

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE FOR SELECTED DAYS, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT					
01...	1005	2380	5	32	100
05...	1200	2420	6	39	91
NOV					
11...	1100	18200	16	786	100
DEC					
01...	1135	18600	7	352	100
07...	1115	1260	6	20	100
JAN					
03...	1030	18600	8	402	100
31...	1110	18000	11	535	100
FEB					
01...	1120	16900	13	593	100
28...	1100	6500	12	211	100
MAR					
01...	1200	2040	19	105	86
22...	1115	9470	12	307	100
APR					
01...	0940	15200	9	369	100
19...	1100	2340	8	51	100
MAY					
02...	1350	17900	9	435	100
31...	1030	2310	5	31	100
JUN					
01...	1220	2290	3	19	100
14...	1300	2340	1	6.3	100
29...	1108	2320	4	25	100
AUG					
01...	1000	2380	8	51	--
02...	1145	2370	5	32	100
SEP					
01...	1050	2290	4	25	100
12...	1130	2310	7	44	100

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) above mean sea level.

REMARKS.--Records good. Town of Oxford diverts about 1.5 ft³/s (0.042 m³/s) for municipal water supply. Occasional intermittent diversion for irrigation. Suspended sediment records for the current year are published on page 344 of this report.

AVERAGE DISCHARGE.--38 years, 152 ft³/s (4.305 m³/s), 12.36 in/yr (314 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,100 ft³/s (371 m³/s) Aug. 18, 1955, gage height, 18.07 ft (5.508 m); no flow for part of Aug. 14, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,730 ft³/s (49.0 m³/s) Jan. 10, gage height, 6.95 ft (2.118 m), no peak above base of 2,000 ft³/s (56.6 m³/s); no flow for part of Aug. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	2.7	68	38	35	305	101	18	13	1.5	.20	.44
2	2.7	2.1	40	31	34	165	79	18	11	1.4	.18	.44
3	2.4	1.5	28	29	32	119	74	19	10	1.3	.20	.45
4	2.2	1.4	22	28	32	129	76	21	8.6	1.1	.15	.36
5	2.5	1.5	19	28	31	766	323	20	8.4	1.1	.14	.26
6	3.0	1.4	16	28	30	689	415	19	8.6	1.1	.16	.20
7	2.5	.92	82	37	32	1340	162	39	8.7	.87	.14	.19
8	2.0	1.3	496	61	30	616	115	71	7.5	.69	.14	59
9	5.4	1.2	341	67	28	272	93	33	5.9	.48	.10	191
10	29	1.3	137	1150	30	182	78	24	4.9	56	.08	47
11	30	1.3	97	1030	30	145	69	19	4.3	29	.06	21
12	15	1.5	446	256	31	124	64	16	3.9	25	.04	11
13	9.0	1.7	406	209	45	421	57	14	3.8	28	.02	6.7
14	5.9	2.2	162	150	76	372	51	13	3.7	13	.02	4.4
15	4.0	5.0	102	627	69	178	45	11	3.6	8.3	1.1	3.3
16	2.9	11	170	399	56	132	39	10	3.5	5.6	15	3.4
17	2.1	12	183	230	46	107	36	9.8	3.4	3.9	12	5.2
18	2.1	9.1	109	167	39	92	33	8.9	2.9	3.0	11	27
19	1.9	7.4	76	107	38	83	31	8.5	4.8	2.4	29	14
20	137	7.2	63	73	43	93	29	8.0	5.7	2.0	19	7.6
21	373	6.4	89	61	58	146	28	7.6	4.0	3.0	10	4.7
22	75	5.8	102	52	52	489	26	7.1	3.0	6.0	6.0	3.1
23	31	5.3	69	46	43	498	25	6.3	2.7	5.0	3.0	2.2
24	17	5.0	56	43	55	202	25	6.3	2.5	3.0	4.0	1.9
25	11	4.8	45	48	199	140	34	13	2.2	.94	6.0	1.5
26	8.3	4.6	67	56	151	110	29	93	2.0	.87	5.0	1.4
27	6.5	4.6	130	50	178	95	24	87	1.9	.62	4.0	1.3
28	6.1	5.2	94	45	970	85	21	51	1.8	.40	3.0	1.1
29	4.6	248	71	40	---	79	20	29	1.7	.26	2.0	.99
30	3.9	156	57	42	---	100	18	19	1.5	.17	1.0	.78
31	3.6	---	46	38	---	137	---	15	---	.19	.47	---
TOTAL	804.8	519.42	3889	5266	2493	8411	2220	734.5	149.5	206.19	133.20	421.91
MEAN	26.0	17.3	125	170	89.0	271	74.0	23.7	4.98	6.65	4.30	14.1
MAX	373	248	496	1150	970	1340	415	93	13	56	29	191
MIN	1.9	.92	16	28	28	79	18	6.3	1.5	.17	.02	.19
CFSM	.16	.10	.75	1.02	.53	1.62	.44	.14	.03	.04	.03	.08
IN.	.18	.12	.87	1.17	.56	1.87	.49	.16	.03	.05	.03	.09

CAL YR 1976 TOTAL 25624.61 MEAN 70.0 MAX 1940 MIN .39 CFSM .42 IN 5.71
WTR YR 1977 TOTAL 25248.52 MEAN 69.2 MAX 1340 MIN .02 CFSM .41 IN 5.62

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

LOCATION.--Lat 36°05'36", long 78°17'48", Franklin County, Hydrologic Unit 03020101. on left bank 3 ft (1 m) downstream from bridge on U.S. Highway 401 (Bickett Boulevard), at Louisburg, and 0.3 mi (0.5 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) above mean sea level. Prior to Nov. 21, 1973, nonrecording gage at bridge 0.3 mi (0.5 km) upstream at datum 1.82 ft (0.555 m) higher.

REMARKS.--Records good. Suspended sediment records for the current year are published on page 344 of this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft³/s (303 m³/s) July 15, 1975, gage height, 23.00 ft (7.010 m); minimum gage height observed, 1.30 ft (0.396 m) several days in September 1967, August, September and October 1968 at former site and datum. 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 former site and datum, from information of Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,400 ft³/s (68.0 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)
Jan. 12	0230	*3310	93.7	*15.84	4.828	Mar. 14	0430	2430	68.8	13.75	4.191
Mar. 8	1400	3160	89.5	15.53	4.734						

Minimum discharge, 7.3 ft³/s (0.21 m³/s) Aug. 14; minimum gage height, 3.63 ft (1.106 m) Sept. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	115	344	160	150	1640	344	101	84	29	12	15
2	53	102	227	140	140	640	285	99	78	27	12	14
3	49	91	179	130	130	380	266	98	71	26	23	13
4	46	87	151	120	120	380	279	109	64	24	31	12
5	45	84	133	110	110	860	374	121	65	23	24	11
6	44	81	124	120	108	1200	1200	139	67	21	19	10
7	43	79	200	160	105	2090	540	131	99	19	16	12
8	43	78	810	200	130	3050	420	152	82	17	14	336
9	81	75	1220	277	105	1500	342	186	71	16	12	2130
10	333	73	530	1120	120	690	293	117	72	19	10	590
11	161	74	421	2790	120	480	267	99	65	395	9.7	248
12	108	79	623	2540	145	450	247	92	59	304	9.3	134
13	78	84	1360	520	190	1090	225	86	54	112	8.9	87
14	65	83	580	500	200	2250	208	81	49	104	8.1	65
15	56	120	463	855	190	890	192	77	49	62	8.9	53
16	51	203	408	1290	160	540	178	72	48	44	45	46
17	50	184	509	540	130	430	166	68	46	37	115	113
18	58	140	428	400	135	360	157	65	46	32	90	155
19	60	120	318	300	140	330	150	63	48	28	232	91
20	253	109	258	270	145	330	145	62	51	24	112	67
21	1530	102	274	260	160	382	138	59	46	21	55	50
22	550	98	314	240	145	659	134	56	39	25	39	41
23	261	91	277	230	130	1450	129	54	38	43	31	37
24	174	86	234	220	170	650	144	58	47	26	28	35
25	141	85	201	231	350	496	159	151	53	19	35	34
26	159	85	255	250	430	392	147	375	56	16	43	32
27	145	86	345	220	350	340	124	443	47	14	29	31
28	117	97	342	200	1140	308	113	236	39	13	24	29
29	98	175	278	190	---	290	107	153	35	12	21	27
30	93	630	234	180	---	315	102	114	33	12	18	26
31	111	---	190	170	---	368	---	92	---	11	17	---
TOTAL	5118	3596	12230	14933	5648	25230	7575	3809	1701	1575	1151.9	4544
MEAN	165	120	395	482	202	814	253	123	56.7	50.8	37.2	151
MAX	1530	630	1360	2790	1140	3050	1200	443	99	395	232	2130
MIN	43	73	124	110	105	290	102	54	33	11	8.1	10
CFSM	.38	.28	.92	1.12	.47	1.89	.59	.29	.13	.12	.09	.35
IN.	.44	.31	1.06	1.29	.49	2.18	.66	.33	.15	.14	.10	.39

CAL YR 1976 TOTAL 84943.0 MEAN 232 MAX 4100 MIN 21 CFSM .54 IN 7.35
WTR YR 1977 TOTAL 87110.9 MEAN 239 MAX 3050 MIN 8.1 CFSM .56 IN 7.54

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 mi² (2,012 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 85.9 ft (26.18 m) above mean sea level (levels by North Carolina State Highway Commission).

REMARKS.--Records good. The city of Rocky Mount diverted an average of 13.3 ft³/s (0.38 m³/s) for municipal water supply, most of which was returned as sewage below station. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--5 years, 853 ft³/s (24.16 m³/s), 14.91 in/yr (379 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft³/s (300 m³/s) July 19, 1975, gage height, 20.61 ft (6.282 m); minimum, 46 ft³/s (1.30 m³/s) Oct. 10, 1973, gage height, 3.32 ft (1.012 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,540 ft³/s (129 m³/s) Jan. 17, gage height, 12.45 ft (3.795 m); minimum, 78 ft³/s (2.21 m³/s) Sept. 8, gage height, 3.44 ft (1.049 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	211	694	447	433	2000	822	210	235	160	101	91
2	83	222	541	407	398	2250	747	210	206	150	101	85
3	85	214	384	373	381	1200	619	190	187	127	103	84
4	85	196	512	355	383	829	581	178	169	106	101	83
5	86	184	274	368	410	1040	739	261	158	97	101	83
6	85	180	131	382	400	1730	1040	271	126	129	100	81
7	84	166	291	444	368	2770	1690	270	108	123	100	80
8	84	151	983	542	306	3520	1230	359	126	114	100	87
9	89	144	1620	581	334	3940	822	438	143	103	100	87
10	89	146	1740	1710	340	3130	654	383	134	99	100	100
11	160	137	1200	2720	350	1540	562	286	121	117	101	781
12	234	139	1280	3480	360	1090	678	228	117	121	100	1330
13	192	148	1690	3570	374	1360	739	183	119	126	99	318
14	151	153	2100	1450	420	2880	446	135	125	121	98	187
15	126	185	1510	1350	464	4010	148	141	126	120	97	166
16	107	274	1120	1910	465	2790	259	143	144	122	95	161
17	102	369	990	2700	440	1480	326	141	151	122	94	163
18	104	380	980	1240	420	1070	323	140	150	119	97	153
19	101	298	852	908	410	854	309	128	149	121	95	151
20	120	254	676	804	400	838	295	123	148	123	96	138
21	968	236	628	431	420	846	286	120	146	124	98	120
22	2220	223	612	105	390	1200	264	115	144	123	99	93
23	1490	204	600	105	380	1600	251	114	146	135	98	94
24	690	192	544	134	480	2170	281	122	144	123	99	92
25	436	183	489	372	700	1530	329	273	147	122	99	90
26	315	170	488	496	900	1000	357	556	146	134	98	87
27	286	170	559	523	1000	799	335	792	149	123	97	90
28	282	183	643	546	1400	690	295	763	159	104	96	99
29	240	252	641	544	---	623	243	497	163	103	95	100
30	204	366	544	490	---	739	228	348	162	102	95	101
31	208	---	477	429	---	814	---	275	---	101	94	---
TOTAL	9591	6330	25793	30116	13526	52332	15898	8393	4448	3714	3047	5375
MEAN	309	211	832	971	483	1688	530	271	148	120	98.3	179
MAX	2220	380	2100	3570	1400	4010	1690	792	235	160	103	1330
MIN	83	137	131	105	306	623	148	114	108	97	94	80
CFSM	.40	.27	1.07	1.25	.62	2.17	.68	.35	.19	.15	.13	.23
IN.	.46	.30	1.23	1.44	.65	2.51	.76	.40	.21	.18	.15	.26

CAL YR 1976 TOTAL 173487 MEAN 474 MAX 4540 MIN 75 CFSM .61 IN 8.31
WTR YR 1977 TOTAL 178563 MEAN 489 MAX 4010 MIN 80 CFSM .63 IN 8.55

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 m^2 (2372 km^2).

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

GAGE.--Water-stage recorder. Datum of gage is 53.882 ft (16.423 m) above mean sea level.

REMARKS.--Records good. Some regulation at low flow by mill above station. The City of Rocky Mount diverted an average of 17.5 ft^3/s (0.50 m^3/s) for municipal water supply, most of which was returned as sewage below station.

EXTREMES FOR CURRENT PERIOD.--August to September 1976: Maximum discharge during period, 1280 ft^3/s (36.2 m^3/s) Sept. 17, gage height, 6.63 ft (2.021 m); minimum, 91 ft^3/s (2.58 m^3/s) Aug. 24, 25, gage height, 3.50 ft (1.067 m).

Water year 1977: Maximum discharge, 4750 ft^3/s (135 m^3/s) Mar. 9, gage height, 13.08 ft (3.987 m); minimum, 13 ft^3/s (0.37 m^3/s) July 6, gage height, 3.02 ft (0.920 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR AUGUST 1976 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1											130	99
2											128	100
3											126	99
4											120	101
5											116	101
6											120	101
7											150	101
8											130	101
9											108	98
10											103	108
11											100	96
12											96	96
13											96	96
14											163	103
15											174	277
16											95	271
17											121	837
18											142	1170
19											137	668
20											127	312
21											128	176
22											128	157
23											128	142
24											103	140
25											110	119
26											128	101
27											125	101
28											127	113
29											127	110
30											106	114
31											97	---
TOTAL											3789	6208
MEAN											122	207
MAX											174	1170
MIN											95	96
CFSM											.13	.23
IN.											.15	.25

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	247	785	536	534	2310	1060	241	326	200	99	83
2	109	267	693	487	501	2740	972	223	296	203	96	82
3	109	258	472	432	460	1630	816	220	259	182	108	60
4	110	236	557	412	458	1150	742	189	234	165	134	45
5	114	214	387	420	491	1300	940	271	217	195	145	58
6	109	216	150	444	488	1990	1230	329	196	86	90	112
7	109	200	372	585	448	3510	1840	338	163	148	65	76
8	109	171	1110	691	384	4160	1580	371	163	151	81	251
9	115	158	1760	756	346	4660	1070	539	196	114	86	138
10	113	165	2050	2380	345	3980	852	511	192	79	88	104
11	124	157	1560	3120	392	2020	727	361	170	163	90	549
12	292	164	1630	3970	414	1460	726	270	165	207	91	1470
13	245	165	1880	4140	431	1680	880	228	157	152	96	525
14	196	171	2350	2240	473	2980	668	158	161	134	96	161
15	161	250	1880	1760	548	4350	186	162	164	140	96	190
16	142	330	1460	2070	559	3570	263	162	171	143	95	156
17	139	452	1260	2920	520	1880	379	159	190	142	96	155
18	131	484	1230	1630	463	1340	382	156	194	120	152	157
19	123	379	1080	1240	442	1110	371	149	196	104	124	176
20	260	308	856	1000	445	1080	354	142	192	112	82	122
21	914	280	791	764	452	1110	341	141	184	134	67	140
22	2240	261	764	241	436	1520	333	139	178	152	111	89
23	1810	238	752	207	405	1890	298	139	184	149	110	59
24	994	223	674	206	469	2400	331	180	184	148	74	74
25	573	214	602	386	762	1900	408	712	194	116	93	87
26	417	200	615	624	951	1320	448	1040	202	102	97	89
27	352	193	689	686	1120	1040	443	1310	190	153	89	76
28	349	222	776	711	1560	903	387	1190	193	119	88	69
29	303	312	778	723	---	818	311	734	198	96	105	75
30	258	431	664	669	---	943	268	490	197	97	81	80
31	266	---	586	559	---	1080	---	385	---	97	67	---
TOTAL	11395	7566	31213	37009	15297	63824	19606	11639	5906	4303	2992	5508
MEAN	368	252	1007	1194	546	2059	654	375	197	139	96.5	184
MAX	2240	484	2350	4140	1560	4660	1840	1310	326	207	152	1470
MIN	109	157	150	206	345	818	186	139	157	79	65	45
CFSM	.40	.28	1.10	1.30	.60	2.25	.71	.41	.22	.15	.11	.20
IN.	.46	.31	1.27	1.50	.62	2.59	.80	.47	.24	.17	.12	.22

WTR YR 1977 TOTAL 216258 MEAN 592 MAX 4660 MIN 45 CFSM .65 IN 8.78

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 mi² (422 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 130.42 ft (39.752 m) above mean sea level.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 344 of this report. An average of about 6.4 ft³/s (0.18 m³/s) was diverted above station for Henderson municipal water supply. About 0.4 ft³/s (0.011 m³/s) of sewage effluent was discharged into the Tar River and about 1.9 ft³/s (0.054 m³/s) was diverted into the Roanoke River basin.

AVERAGE DISCHARGE.--14 years, 140 ft³/s (3.965 m³/s), 11.66 in/yr (296 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,800 ft³/s (79.3 m³/s) Feb. 5, 1973, gage height, 12.86 ft (3.920 m); minimum, 0.60 ft³/s (0.017 m³/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.--Peak discharges above base of 1,000 ft³/s (28.3 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)
Jan. 10	1700	1000	28.3	8.40	2.560	Mar. 14	2300	*1110	31.4	*8.93	2.722

Minimum discharge, 2.0 ft³/s (0.057 m³.s) Aug. 17; minimum gage height, 1.89 ft (0.576 m) Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	90	110	102	95	228	140	58	73	34	9.1	9.6
2	34	86	94	96	95	244	121	56	70	30	5.2	8.7
3	34	82	84	92	99	160	116	57	68	27	4.4	7.9
4	32	76	80	95	89	217	131	66	61	24	10	6.1
5	32	74	76	96	91	409	216	78	56	24	8.9	4.9
6	32	72	75	97	89	329	287	165	54	23	8.8	4.2
7	34	70	306	117	86	774	225	91	66	20	6.7	4.1
8	32	69	604	159	85	713	175	106	69	18	6.1	26
9	57	68	411	138	90	523	121	89	65	17	5.7	235
10	86	66	299	782	97	405	104	83	56	15	13	413
11	81	68	211	774	84	252	97	69	50	17	14	502
12	76	68	409	482	84	188	93	62	49	26	8.6	199
13	53	69	436	354	96	504	88	58	47	55	5.6	75
14	44	71	312	254	120	980	84	56	45	61	8.3	54
15	39	82	229	383	108	933	79	53	46	41	5.0	42
16	36	140	259	327	97	581	76	50	45	30	3.0	35
17	34	116	234	220	90	290	73	48	44	23	2.4	32
18	37	101	176	160	85	201	71	47	44	19	7.4	29
19	41	87	139	140	83	168	68	45	45	16	28	60
20	196	80	126	130	85	169	68	44	42	13	70	64
21	916	77	159	120	87	186	67	42	43	11	59	43
22	660	75	144	118	84	339	67	41	41	10	34	34
23	302	72	127	116	81	391	65	40	39	9.4	24	28
24	140	71	116	114	107	306	66	47	39	8.5	19	24
25	100	69	108	107	250	217	74	316	55	7.8	16	22
26	95	68	130	111	159	160	80	492	43	7.3	17	21
27	102	68	169	120	206	142	73	288	45	7.0	31	20
28	94	71	145	118	382	129	65	275	45	6.2	21	19
29	84	116	126	110	---	125	61	153	42	5.8	16	18
30	78	131	111	108	---	139	58	90	37	4.9	13	18
31	77	---	106	94	---	162	---	78	---	13	11	---
TOTAL	3695	2453	6111	6234	3204	10564	3109	3243	1524	623.9	491.2	2058.5
MEAN	119	81.8	197	201	114	341	104	105	50.8	20.1	15.8	68.6
MAX	916	140	604	782	382	980	287	492	73	61	70	502
MIN	32	66	75	92	81	125	58	40	37	4.9	2.4	4.1
CFSM	.73	.50	1.21	1.23	.70	2.09	.64	.64	.31	.12	.10	.42
IN.	.84	.56	1.39	1.42	.73	2.41	.71	.74	.35	.14	.11	.47

CAL YR 1976 TOTAL 46616.0 MEAN 127 MAX 1200 MIN 10 CFSM .78 IN 10.64
WTR YR 1977 TOTAL 43310.6 MEAN 119 MAX 980 MIN 2.4 CFSM .73 IN 9.88

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) above mean sea level. Since Feb. 14, 1962, auxiliary nonrecording gage 3.6 mi (5.8 km) downstream.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 345 of this report.

AVERAGE DISCHARGE.--18 years, 164 ft³/s (4.644 m³/s), 12.73 in/yr (323 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, 0.83 ft³/s (0.024 m³/s) Sept. 26, Oct. 2, 3, 1968.

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)
Oct. 22	0500	1790	50.7	12.08	3.682	Mar. 14	2330	*1840	52.1	*12.27	3.740
Jan. 10	1930	1240	35.1	9.44	2.877						

Minimum discharge, 5.1 ft³/s (0.14 m³/s) July 27, gage height, 1.15 ft (0.351 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	100	127	111	110	555	161	62	57	27	5.8	12
2	32	88	98	97	112	251	141	60	55	58	25	11
3	32	72	90	96	114	183	141	58	50	146	53	9.8
4	30	67	82	99	125	185	158	58	43	66	29	8.9
5	30	66	78	104	121	367	246	82	39	34	32	8.3
6	31	62	76	103	110	391	409	135	38	27	19	8.1
7	30	59	342	131	91	939	227	99	41	24	14	7.9
8	30	58	828	221	93	1100	165	171	50	24	15	45
9	44	56	725	170	108	727	148	135	39	22	20	433
10	67	55	388	932	107	319	134	75	39	18	21	435
11	57	56	235	1090	120	243	129	62	38	20	16	109
12	37	58	398	839	100	209	124	57	33	58	13	51
13	32	63	516	279	95	651	117	53	32	31	9.5	33
14	30	63	321	238	215	1670	112	50	30	23	7.8	26
15	29	87	201	524	148	1820	105	46	29	18	7.0	23
16	28	214	276	536	128	409	100	42	30	16	6.7	22
17	28	154	304	269	118	266	97	39	29	13	6.8	44
18	30	108	205	170	106	218	91	38	28	13	36	97
19	33	92	157	150	105	200	87	37	27	13	144	52
20	280	83	143	148	120	194	86	35	27	10	63	34
21	1440	79	179	140	130	238	82	34	25	9.1	30	27
22	1470	74	164	128	110	485	79	32	22	8.3	21	23
23	276	69	131	128	103	630	77	32	22	7.1	17	20
24	129	65	124	129	126	345	79	38	34	6.5	15	19
25	102	63	111	134	400	229	132	235	47	5.9	139	18
26	101	63	161	150	273	192	127	692	52	5.7	52	17
27	113	64	247	148	266	173	94	417	67	5.4	27	17
28	92	68	169	140	561	164	78	125	38	11	19	16
29	75	152	142	128	---	160	71	84	33	8.2	16	16
30	68	205	124	118	---	173	65	67	30	7.0	14	15
31	73	---	114	108	---	200	---	60	---	6.3	13	---
TOTAL	4882	2563	7256	7758	4315	13886	3862	3210	1124	741.5	906.6	1658.0
MEAN	157	85.4	234	250	154	448	129	104	37.5	23.9	29.2	55.3
MAX	1470	214	828	1090	561	1820	409	692	67	146	144	435
MIN	28	55	76	96	91	160	65	32	22	5.4	5.8	7.9
CFSM	.90	.49	1.34	1.43	.88	2.56	.74	.59	.21	.14	.17	.32
IN.	1.04	.54	1.54	1.65	.92	2.95	.82	.68	.24	.16	.19	.35

CAL YR 1976 TOTAL 51428.4 MEAN 141 MAX 2580 MIN 7.6 CFSM .81 IN 10.93
WTR YR 1977 TOTAL 52162.1 MEAN 143 MAX 1820 MIN 5.4 CFSM .82 IN 11.09

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) above mean sea level. Prior to Oct. 28, 1932, nonrecording gage, at same site and datum.

REMARKS.--Records good. Slight diurnal fluctuation and some regulation at low flow caused by mills above station. Suspended-sediment records for the current year are published on page 345 of this report.

AVERAGE DISCHARGE.--54 years, 487 ft³/s (13.79 m³/s), 12.69 in/yr (322 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, 3,030 ft³/s (85.8 m³/s) Mar. 16, gage height, 13.48 ft (4.109 m); minimum daily, 20 ft³/s (0.57 m³/s) Aug. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	223	477	348	331	1420	555	193	190	93	20	45
2	115	273	355	330	293	1150	469	188	180	91	20	42
3	110	247	289	301	293	745	431	185	174	120	60	39
4	107	216	258	297	337	576	457	186	160	180	114	36
5	104	202	239	316	354	934	577	200	144	121	74	34
6	103	196	226	325	339	1150	899	411	133	88	78	32
7	103	189	266	351	299	1780	928	431	134	74	63	31
8	102	183	1340	489	225	2400	648	419	139	66	51	44
9	105	179	1580	564	212	2430	510	440	160	61	55	276
10	154	175	1360	1260	290	1780	443	303	145	59	104	858
11	215	173	886	2270	312	1040	408	218	134	65	94	775
12	201	177	749	2370	308	735	391	189	128	122	73	433
13	153	181	1160	1830	319	900	372	176	118	146	58	242
14	125	187	1100	1080	477	2290	350	167	111	103	47	134
15	110	202	779	1020	511	2980	332	157	108	78	78	100
16	102	332	647	1360	408	2910	313	147	104	64	73	85
17	99	498	768	1150	358	1430	296	139	103	55	37	85
18	101	399	693	638	329	832	280	133	105	47	70	105
19	103	308	537	524	305	626	266	129	113	43	194	161
20	127	263	455	480	309	581	257	126	103	40	328	163
21	1780	241	466	440	340	631	252	121	97	37	214	131
22	2440	228	511	410	340	872	243	116	93	34	133	97
23	2170	216	452	389	303	1410	235	112	86	32	92	81
24	879	205	396	374	299	1310	234	117	86	30	73	71
25	405	198	368	374	604	866	267	244	105	28	72	66
26	312	194	368	397	867	642	354	1300	144	28	164	63
27	297	194	529	443	644	554	315	1360	147	27	126	61
28	313	198	579	449	1260	507	248	671	148	26	91	59
29	262	248	470	449	---	485	220	394	123	23	70	58
30	221	469	410	364	---	496	204	276	103	23	56	55
31	211	---	369	344	---	570	---	215	---	21	50	---
TOTAL	11750	7194	19082	21736	11266	37032	11754	9463	3818	2025	2832	4462
MEAN	379	240	616	701	402	1195	392	305	127	65.3	91.4	149
MAX	2440	498	1580	2370	1260	2980	928	1360	190	180	328	858
MIN	99	173	226	297	212	485	204	112	86	21	20	31
CFSM	.73	.46	1.18	1.35	.77	2.29	.75	.59	.24	.13	.18	.29
IN.	.84	.51	1.36	1.55	.80	2.64	.84	.68	.27	.14	.20	.32

CAL YR 1976 TOTAL 143435 MEAN 392 MAX 3480 MIN 33 CFSM .75 IN 10.24
WTR YR 1977 TOTAL 142414 MEAN 390 MAX 2980 MIN 20 CFSM .75 IN 10.17

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) above mean sea level. 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 excellent. Some diurnal fluctuation at low flow caused by mills above station. Town of Tarboro diverted 3.3 ft³/s (0.09 m³/s) for municipal water supply.

AVERAGE DISCHARGE.--50 years, 2,218 ft³/s (62.81 m³/s), 14.08 in/yr (358 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, 8,880 ft³/s (251 m³/s) Mar. 11, gage height, 17.54 ft (5.346 m); minimum, 141 ft³/s (3.99 m³/s) Sept. 6, gage height, 1.48 ft (0.451 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	303	689	927	1540	1570	3730	2670	718	1490	375	188	190
2	321	653	1320	1430	1480	4570	2550	667	1200	386	192	181
3	319	668	1260	1330	1390	5110	2330	638	983	436	196	183
4	302	679	1040	1240	1320	4570	2090	635	838	378	215	175
5	291	630	1040	1190	1330	3990	2100	607	729	353	203	153
6	288	587	947	1180	1370	4130	2620	688	656	430	268	144
7	284	569	720	1270	1310	5420	3080	842	614	298	235	175
8	277	541	989	1510	1220	6890	3680	983	554	303	186	283
9	300	518	2150	1670	1130	7660	3430	1010	541	270	194	473
10	299	492	3120	3370	1040	8380	2740	1180	600	258	196	358
11	279	478	3710	5600	1040	8820	2290	1160	551	233	183	530
12	307	470	3870	6340	1110	8340	1980	975	485	424	199	1420
13	477	472	3960	6970	1150	7190	1870	826	445	575	208	1940
14	473	473	4040	7460	1200	6800	1840	718	410	491	201	1060
15	415	519	4390	7580	1290	7050	1550	607	407	427	203	551
16	361	650	4290	6990	1460	7540	1100	541	386	360	196	476
17	328	749	3820	6430	1460	7810	1040	503	378	333	208	454
18	314	971	3400	6110	1390	7340	1070	470	386	303	300	413
19	300	1050	3170	5200	1340	6590	1020	433	395	273	320	355
20	319	908	2750	3800	1330	5310	987	407	389	238	285	345
21	466	793	2330	2600	1310	4130	938	383	378	223	338	363
22	1560	749	2140	1600	1280	3750	889	370	358	303	368	335
23	3180	719	2030	1200	1250	4340	846	358	350	300	340	330
24	3340	686	1910	1300	1220	4740	854	451	358	238	338	253
25	2970	651	1710	1370	1510	5140	1130	1250	355	225	273	233
26	2630	615	1620	1560	1940	4880	1080	2240	370	208	225	223
27	1690	580	1660	1750	2410	3790	1070	2860	383	184	230	215
28	1230	563	1760	1860	3030	3090	1020	3490	395	201	265	205
29	1040	621	1920	1920	---	2590	901	3490	401	205	250	192
30	889	755	1850	1850	---	2410	783	2730	398	177	228	188
31	754	---	1650	1750	---	2660	---	1960	---	175	220	---
TOTAL	26306	19498	71493	96970	39880	168760	51548	34190	16183	9583	7451	12396
MEAN	849	650	2306	3128	1424	5444	1718	1103	539	309	240	413
MAX	3340	1050	4390	7580	3030	8820	3680	3490	1490	575	368	1940
MIN	277	470	720	1180	1040	2410	783	358	350	175	183	144
CFSM	.40	.30	1.08	1.46	.67	2.54	.80	.52	.25	.14	.11	.19
IN.	.46	.34	1.24	1.69	.69	2.93	.90	.59	.28	.17	.13	.22

CAL YR 1976 TOTAL 541617 MEAN 1480 MAX 13200 MIN 170 CFSM .69 IN 9.42
WTR YR 1977 TOTAL 554258 MEAN 1519 MAX 8820 MIN 144 CFSM .71 IN 9.63

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.--Daily records of specific conductance for water years 1954, 1959-64 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, 186 micromhos Oct. 25, 1966, Aug. 3, 1977; 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; minimum daily, 0.0°C on several days in 1963 and 1966, Jan. 18, 19, 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 186 micromhos Aug. 3; minimum daily, 55 micromhos Oct. 25, Dec. 12, Jan. 16.
WATER TEMPERATURES: Maximum daily, 32.0°C July 8, 9, 10, 20, 21, Aug. 7, 8, 12; minimum daily, 0.0°C [illegible]. 18, 19.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	FECAL COLIFORM .7UM-MF (COL./100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
OCT												
06...	1015	285	110	7.0	18.0	6	7.6	B32	B28	23	0	6.0
NOV												
10...	1415	488	98	6.2	8.0	9	9.6	B16	B52	23	5	6.2
DEC												
08...	1045	940	94	6.2	6.0	6	11.0	200	250	21	2	5.2
JAN												
31...	1400	1740	77	6.6	1.5	10	15.2	B16	B40	20	7	4.9
FEB												
28...	1030	2970	74	6.4	10.5	35	9.6	300	B1300	16	4	4.6
MAR												
18...	1115	7350	55	6.6	15.0	40	6.7	--	--	16	5	4.1
APR												
26...	1330	1080	90	6.5	19.5	25	6.6	580	270	27	4	7.0
MAY												
24...	1245	539	118	7.2	23.0	9	--	690	B1600	28	0	7.0
JUN												
28...	1330	404	125	6.9	29.0	1	8.1	B24	B48	27	0	7.0
JUL												
26...	1030	212	144	7.1	26.0	1	5.7	B24	200	29	1	7.4
AUG												
16...	1130	189	150	6.6	27.0	3	6.1	B24	B2700	27	3	7.0
SEP												
13...	1220	2000	75	6.7	22.0	60	5.5	B2400	890	14	0	3.5

B Results based on colony count outside the acceptable range (non-ideal colony count).

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)
OCT												
06...	2.0	11	47	1.0	2.7	28	0	23	4.5	13	8.4	.2
NOV												
10...	1.9	7.9	39	.7	2.6	22	0	18	22	11	7.0	.3
DEC												
08...	2.0	8.0	42	.8	2.3	24	0	20	24	9.1	7.7	.1
JAN												
31...	1.8	6.7	40	.7	1.7	15	0	12	6.0	9.5	6.7	.0
FEB												
28...	1.2	6.5	43	.7	1.9	15	0	12	9.6	9.0	6.2	.1
MAR												
18...	1.5	4.7	35	.5	2.2	14	0	11	5.6	7.8	5.1	.0
APR												
26...	2.2	7.8	36	.7	2.5	28	0	23	14	7.1	7.9	.1
MAY												
24...	2.6	13	48	1.1	2.2	44	0	36	4.4	9.4	11	.1
JUN												
28...	2.4	15	52	1.2	2.3	40	0	33	8.1	8.0	14	.1
JUL												
26...	2.5	15	50	1.2	3.0	34	0	28	4.3	12	14	.2
AUG												
16...	2.4	16	52	1.3	3.3	30	0	25	12	10	17	.2
SEP												
13...	1.3	7.3	47	.8	2.9	21	0	17	6.7	11	6.2	.1

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
OCT											
06...	14	77	71	.10	59.3	.45	.68	1.1	5.0	.10	---
NOV											
10...	17	84	65	.11	111	.19	.63	.82	3.6	.07	1
DEC											
08...	18	75	64	.10	190	.25	.66	.91	4.0	.12	---
JAN											
31...	13	71	52	.10	334	.33	.51	.84	3.7	.08	---
FEB											
28...	12	55	49	.07	441	.25	1.0	1.3	5.5	.12	---
MAR											
18...	8.1	68	41	.09	1350	.13	.57	.70	3.1	.10	1
APR											
26...	12	74	60	.10	216	.29	.82	1.1	4.9	.16	---
MAY											
24...	11	93	79	.13	135	.33	.57	.90	4.0	.22	2
JUN											
28...	13	95	82	.13	104	.31	.76	1.1	4.7	.17	---
JUL											
26...	12	100	83	.14	57.2	.47	.32	.79	3.5	.18	---
AUG											
16...	12	87	83	.12	44.4	.48	.85	1.3	5.9	.18	0
SEP											
13...	12	68	55	.09	367	.27	.79	1.1	4.7	.20	1

DATE	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	SUS-PENDED COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)
NOV											
10...	0	1	0	0	0	30	30	0	0	0	0
MAR											
18...	1	0	0	0	0	10	10	0	0	0	0
MAY											
24...	1	1	0	0	0	10	4	6	0	0	0
AUG											
16...	0	0	0	0	0	<10	<10	0	0	0	0
SEP											
13...	0	1	0	0	0	<10	<6	4	0	0	0

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	SUS-PENDED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
NOV											
10...	3	0	3	1100	510	6	0	10	80	20	60
MAR											
18...	6	0	7	2100	380	9	3	6	30	10	20
MAY											
24...	3	0	7	1700	800	11	7	4	190	30	160
AUG											
16...	3	1	2	670	240	3	3	0	270	100	170
SEP											
13...	7	4	3	3400	310	40	20	20	460	370	90

DATE	TOTAL MERCURY (HG) (UG/L)	SUS-PENDED MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
NOV										
10...	.1	.0	.1	0	0	0	20	10	10	7.2
MAR										
18...	.0	.0	.0	0	0	0	40	40	0	6.1
MAY										
24...	.0	.0	.0	0	0	0	20	20	0	6.3
AUG										
16...	.0	.0	.0	0	0	0	10	10	0	6.7
SEP										
13...	.5	.0	.5	0	0	0	10	0	10	8.1

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Oct. 6	1015	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	24	1	
		Scenedesmus	190	9	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	24	1	
		Melosira	1,000	47	
		Navicula	540	24	
		Neidium	73	3	
		Nitzschia	97	4	
		CYANOPHYTA			
		Myxophyceae			
		Anaystis	240	11	
		TOTAL	2,200		
Nov. 10	1415	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	35	3	
		Crucigenia	69	5	
		Tetrastrum	350	26	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Melosira	760	57	
		Navicula	100	8	
		Pinnularia	17	1	
		TOTAL	1,300		
Dec. 8	1045	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	28	2	
		Chlamydomonas	23	1	
		Crucigenia	37	2	
		Dictyosphaerium	19	1	
		Oocystis	240	14	
		Scenedesmus	33	2	
		Tetrastrum	360	22	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Asterionella	70	4	
		Cyclotella	23	1	
		Melosira	440	27	
		Navicula	75	5	
		Pinnularia	14	1	
		Chrysophyceae			
		Chrysococcus	66	4	
		CYANOPHYTA			
		Myxophyceae			
		Anacystis	140	9	
		Oscillatoria	56	3	
		TOTAL	1,600		
Jan. 31	1400	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	76	50	
		Tetraedron	4	3	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	4	3	
		Melosira	42	28	
		Navicula	4	3	
		Nitzschia	4	3	
		Synedra	15	10	
		CHRYSOPHYCEAE			
		Chrysococcus	4	3	
		TOTAL	150		

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Feb. 28	1030	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	20	3	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Asterionella	200	26	
		Gomphonema	20	3	
		Melosira	120	16	
		Meridion	40	5	
		Navicula	40	5	
		Nitzschia	120	16	
		Surirella	40	5	
		Synedra	160	21	
		TOTAL	770		
May 24	1245	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	36	1	
		Crucigenia	96	3	
		Pediastrum	380	14	
		Scenedesmus	360	13	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	72	3	
		Cymbella	24	1	
		Eunotia	24	1	
		Melosira	810	29	
		Navicula	280	10	
		Nitzschia	440	16	
		Surirella	36	1	
		Synedra	24	1	
		CYANOPHYTA			
		Myxophyceae			
		Oscillatoria	48	2	
		Raphidiopsis	48	2	
		EUGLENOPHYTA			
		Euglenophyceae			
		Euglena	60	2	
		Trachelomonas	24	1	
		TOTAL	2,800		
June 28	1330	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	4,300	12	
		Chodatella	420	1	
		Crucigenia	2,000	6	
		Kirchneriella	2,500	7	
		Pediastrum	1,400	4	
		Scenedesmus	1,900	5	
		Sphaerocystis	1,400	4	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Navicula	420	1	
		Synedra	850	2	
		Xanthophyceae			
		Anacystis	19,000	53	
		Gomphosphaeria	680	2	
		EUGLENOPHYTA			
		Euglenophyceae			
		Euglena	420	1	
		TOTAL	37,000		

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
July 26	1030	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	280	4	
		Chodatella	49	1	
		Coelastrum	490	8	
		Cosmarium	81	1	
		Crucigenia	460	7	
		Kirchneriella	81	1	
		Oocystis	160	3	
		Pediastrum	200	3	
		Selenastrum	300	6	
		Scenedesmus	990	15	
		Tetraedron	65	1	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Diatoma	81	1	
		Melosira	340	5	
		Navicula	160	3	
		Nitzschia	130	2	
		Surirella	65	1	
		Synedra	65	1	
		CYANOPHYTA			
		Cyanophyceae			
		Agmenellum	490	8	
		Anacystis	1,900	29	
		EUGLENOPHYTA			
		Euglenophyceae			
		Trachelomonas	65	1	
		TOTAL	6,500		
Aug. 16	1130	Chlorophyta			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	1,200	19	
		Coelastrum	580	9	
		Cosmarium	370	6	
		Crucigenia	370	6	
		Kirchneriella	1,100	16	
		Oocystis	440	7	
		Scenedesmus	690	10	
		Schroederia	110	2	
		Tetraedron	37	1	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Amphora	73	1	
		Cyclotella	400	6	
		Melosira	73	1	
		Navicula	150	2	
		Synedra	110	2	
		Xanthophyceae			
		Ophioytium	180	3	
		CYANOPHYTA			
		Cyanophyceae			
		Anacystis	730	11	
		TOTAL	6,600		

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Sept. 13	1220	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Elakatothrix	33	1	
		Scenedesmus	560	10	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	280	5	
		Diatoma	99	2	
		Fragilaria	33	1	
		Gomphonema	33	1	
		Melosira	910	17	
		Navicula	650	12	
		Nitzschia	66	1	
		CYANOPHYTA			
		Cyanophyceae			
		Anabaenopsis	200	4	
		Agmenellum	830	15	
		Anacystis	660	12	
		Cylindrospermum	430	8	
		Oscillatoria	600	11	
		EUGLENOPHYTA			
		Euglenophyceae			
		Trachelomonas	66	1	
		TOTAL	5,500		

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PERIPHYTON

Date	Length of exposure (days)	Biomass (mg/m²) Dry weight	Biomass (mg/m²) Ash weight	Chlorophyll a (mg/m²)	Chlorophyll b (mg/m²)	Biomass chlorophyll ratio	Sampling method
Nov. 10	34	27230	22850	5.79	1.36	757	Polyethylene strip
May 24	27	10000	8350	.102	.000	16180	
July 26	27	8660	7090	.113	.005	13890	

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114	77	98	68	77	69	78	103	88	127	152	157
2	112	77	88	71	82	69	80	108	96	137	167	146
3	112	81	82	71	83	66	81	98	96	127	186	146
4	112	85	91	71	88	67	81	98	101	122	147	150
5	117	88	88	75	86	70	81	108	95	118	157	156
6	110	92	85	73	84	68	83	113	105	118	142	153
7	100	95	80	73	82	64	82	103	118	117	142	168
8	121	99	94	73	77	63	79	100	108	107	142	177
9	121	89	71	71	84	63	81	98	114	146	127	133
10	128	90	64	60	93	60	78	88	118	108	142	108
11	122	100	59	57	97	58	80	96	118	118	167	90
12	112	109	55	61	93	57	79	98	120	103	142	110
13	99	112	59	57	88	63	82	101	127	108	147	77
14	91	110	63	59	82	59	83	108	142	108	142	81
15	92	109	62	56	79	58	92	113	129	118	147	88
16	107	91	61	55	82	57	100	122	128	122	152	113
17	105	98	65	57	80	56	108	127	127	142	146	117
18	102	96	63	58	83	62	103	118	130	147	125	113
19	102	91	62	61	80	62	89	122	132	162	139	121
20	95	92	61	65	82	65	98	127	137	147	158	123
21	102	94	62	67	85	73	100	127	143	137	107	98
22	85	86	64	67	79	71	106	130	127	152	103	92
23	65	84	65	70	86	71	108	132	137	155	105	102
24	56	85	69	73	86	70	105	99	137	152	147	103
25	55	87	67	74	92	71	108	94	135	147	137	100
26	57	89	64	83	88	72	96	91	134	147	121	103
27	64	91	67	73	75	71	103	90	147	156	131	135
28	71	100	65	72	71	73	103	79	132	147	137	148
29	75	90	66	69	---	73	103	78	122	176	129	122
30	78	89	67	68	---	79	108	82	127	167	132	107
31	78	---	66	78	---	79	---	84	---	147	143	---
MEAN	95	93	70	67	84	66	92	104	122	135	141	121

WTR YR 1977 MEAN 99 MAX 186 MIN 55

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	12.0	7.0	3.0	1.5	10.5	19.0	20.0	24.0	30.0	30.0	30.0
2	20.0	11.0	7.0	3.0	1.5	10.5	18.0	21.0	25.0	30.0	28.0	29.0
3	20.0	11.0	6.0	4.0	1.5	10.0	19.0	22.0	25.0	29.0	28.0	30.0
4	20.0	11.0	5.0	4.0	4.0	10.5	19.0	23.0	25.0	29.0	28.0	29.0
5	20.0	11.0	5.0	4.0	3.5	12.0	19.0	24.0	25.0	30.0	30.0	29.0
6	21.0	10.0	5.0	4.0	3.0	12.0	18.0	25.0	24.0	29.0	30.0	29.0
7	23.0	10.0	7.0	4.0	2.0	11.5	16.0	25.0	23.0	31.0	32.0	28.0
8	23.0	9.0	7.0	4.0	2.0	11.5	17.0	23.0	23.0	32.0	32.0	25.0
9	23.0	8.0	6.0	4.0	3.0	10.5	16.0	22.0	22.0	32.0	30.0	25.0
10	20.0	10.0	7.0	4.0	4.0	11.0	15.0	20.0	22.0	32.0	31.0	26.0
11	24.0	10.0	7.0	4.0	4.5	11.5	17.0	20.0	24.0	31.0	31.0	25.0
12	23.0	8.0	7.0	3.0	5.5	13.0	19.0	19.0	24.0	30.0	32.0	24.0
13	17.0	8.0	8.0	3.0	7.0	14.5	20.0	20.0	25.0	30.0	31.0	24.0
14	18.0	7.0	7.0	3.0	6.5	15.0	21.0	20.0	24.0	30.0	30.0	25.0
15	17.0	7.0	7.0	2.0	6.5	15.5	21.0	20.0	25.0	30.0	29.0	24.0
16	18.0	8.0	8.0	2.0	6.0	15.5	22.0	23.0	25.0	30.0	29.0	25.0
17	16.0	7.0	8.0	1.0	5.0	17.0	22.0	24.0	25.0	31.0	30.0	25.0
18	15.0	8.0	8.0	0.0	4.0	17.0	21.0	25.0	26.0	31.0	26.0	26.0
19	14.0	9.0	8.0	0.0	4.5	16.0	22.0	25.0	29.0	31.0	26.0	27.0
20	15.0	9.0	8.0	1.0	5.0	15.0	23.0	25.0	29.0	32.0	26.0	27.0
21	15.0	9.0	7.0	1.0	5.5	14.0	22.0	25.0	29.0	32.0	26.0	27.0
22	14.0	8.0	5.0	1.0	6.0	14.0	23.0	25.0	25.0	30.0	27.0	25.0
23	14.0	7.0	5.0	1.0	7.0	14.0	23.0	25.0	24.0	28.0	28.0	24.0
24	13.0	7.0	4.0	1.0	8.0	14.0	23.0	23.0	24.0	27.0	27.0	25.0
25	14.0	7.0	4.0	2.0	10.0	13.0	22.0	22.0	26.0	29.0	27.0	25.0
26	13.0	7.0	5.0	3.0	11.5	13.0	21.0	22.0	28.0	27.0	27.0	25.0
27	13.0	10.0	5.0	3.0	11.5	13.0	20.0	22.0	29.0	28.0	28.0	25.0
28	11.0	11.0	5.0	4.0	11.5	15.0	20.0	22.0	30.0	27.0	28.0	25.0
29	13.0	11.0	5.0	3.0	---	16.0	20.0	23.0	30.0	27.0	28.0	24.0
30	10.0	9.0	4.0	2.0	---	18.0	20.0	24.0	30.0	27.0	29.0	23.0
31	12.0	---	5.0	3.0	---	17.0	---	24.0	---	28.0	29.0	---
MEAN	17.0	9.0	6.0	2.5	5.5	13.5	20.0	22.5	25.5	29.5	29.0	26.0

WTR YR 1977 MEAN 17.5 MAX 32.0 MIN 0.0

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

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE FOR SELECTED DAYS, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT					
06...	1015	285	12	9.2	87
NOV					
10...	1415	488	18	24	72
22...	1230	752	16	32	98
DEC					
08...	1045	940	18	46	100
21...	1040	2330	25	157	100
JAN					
31...	1400	1740	9	42	100
FEB					
28...	1030	2970	28	225	98
APR					
26...	1330	1080	50	146	96
MAY					
24...	1245	539	16	23	100
JUN					
28...	1330	404	5	5.5	100
JUL					
26...	1030	212	9	5.2	100
AUG					
16...	1130	189	10	5.1	94
SEP					
13...	1220	2000	73	394	96

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

WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)
OCT									
14...	---	470	120	6.8	15.0	7.4	14	1.8	760
NOV									
09...	1200	512	150	6.9	11.0	8.3	28	2.7	960
DEC									
01...	---	1320	100	6.8	5.0	8.2	22	.1	2100
JAN									
17...	1540	6340	120	6.8	.0	11.1	13	1.4	---
FEB									
08...	1200	1230	90	6.8	1.0	12.3	19	1.7	40
MAR									
21...	1200	4330	55	---	13.0	9.8	26	1.2	150
APR									
18...	---	1070	60	6.8	23.0	8.4	11	.6	30
MAY									
10...	---	1180	90	7.1	18.0	7.6	26	2.7	130
JUN									
15...	---	407	130	7.1	25.0	6.9	28	1.8	20
JUL									
25...	---	225	160	7.2	29.0	5.8	21	7.7	20
AUG									
09...	---	191	190	8.9	30.0	13.1	32	3.5	20
SEP									
22...	---	335	120	6.1	24.0	5.2	30	2.0	70

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 sq 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. Suspended sediment records for the current year are published on page 345 of this report.

AVERAGE DISCHARGE.--20 years, (1957-77) 84.3 ft³/s (2.387 m³/s), 14.66 in/yr (372 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 daily, 1.3 ft³/s (0.037 m³/s) Nov. 6, 1968.

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)
Jan. 11	0430	*652	18.5	*10.22	3.115	May 25	1330	470	13.3	8.06	2.457
Mar. 14	0330	551	15.6	9.11	2.777						

Minimum discharge, 3.5 ft³/s (0.099 m³/s) Oct. 1, 16, 17, minimum gage height, 0.02 ft (0.006 m) Oct. 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	5.4	8.5	39	56	106	73	21	52	9.3	6.6	18
2	4.0	5.4	8.0	35	52	85	64	20	46	10	61	17
3	4.4	5.4	7.5	33	50	72	61	19	40	7.8	48	16
4	4.3	5.4	7.2	32	51	76	57	18	34	7.2	14	15
5	4.2	5.7	7.0	32	50	160	59	18	31	6.9	10	14
6	3.9	5.4	6.6	31	46	138	72	17	29	6.6	9.0	13
7	3.9	5.4	8.2	45	43	310	59	22	28	6.0	8.7	13
8	3.9	5.7	14	61	40	393	53	20	26	5.5	7.8	87
9	4.5	5.4	17	53	39	232	48	19	26	6.3	7.5	362
10	4.5	5.4	14	437	39	167	43	18	31	6.0	7.2	222
11	4.2	5.7	14	616	38	135	41	17	26	5.5	11	108
12	4.2	5.9	44	347	37	115	38	16	24	31	13	67
13	3.9	5.9	62	185	40	282	36	15	22	16	9.0	49
14	4.2	5.9	43	151	42	499	34	14	19	11	7.2	38
15	3.9	8.8	34	271	40	285	31	13	17	8.4	6.9	31
16	3.9	12	114	228	39	186	30	13	16	7.5	7.2	28
17	4.2	9.2	112	163	39	142	31	12	15	6.9	7.6	26
18	4.2	7.5	76	124	39	119	29	12	14	6.9	107	34
19	3.9	6.6	60	103	39	103	27	11	14	5.4	378	31
20	4.5	6.2	53	89	47	116	26	11	13	5.4	110	26
21	4.8	5.9	55	80	50	139	25	11	14	5.5	55	23
22	4.5	5.7	50	73	44	234	24	10	12	26	38	21
23	4.8	5.4	45	66	41	236	23	9.9	12	20	28	19
24	4.8	5.1	41	64	50	162	24	80	12	12	128	18
25	5.4	5.1	37	74	129	126	35	436	14	9.0	81	17
26	5.7	5.1	55	78	102	105	33	363	17	7.5	49	16
27	5.4	5.1	71	74	84	90	29	219	12	7.5	40	15
28	5.1	5.9	59	73	124	81	26	144	10	7.2	32	14
29	5.1	7.8	52	72	---	75	23	101	9.0	6.6	26	13
30	4.8	9.8	44	64	---	74	22	78	8.4	6.3	22	13
31	5.7	---	41	60	---	84	---	62	---	6.3	20	---
TOTAL	138.3	189.2	1260.0	3853	1490	5127	1176	1839.9	643.4	289.5	1355.7	1384
MEAN	4.46	6.31	40.6	124	53.2	165	39.2	59.4	21.4	9.34	43.7	46.1
MAX	5.7	12	114	616	129	499	73	436	52	31	378	362
MIN	3.5	5.1	6.6	31	37	72	22	9.9	8.4	5.4	6.6	13
CFSM	.06	.08	.52	1.59	.68	2.11	.50	.76	.27	.12	.56	.59
IN.	.07	.09	.60	1.84	.71	2.44	.56	.88	.31	.14	.65	.66

CAL YR 1976 TOTAL 16391.6 MEAN 44.8 MAX 909 MIN 2.9 CFSM .57 IN 7.81
WTR YR 1977 TOTAL 18746.0 MEAN 51.4 MAX 616 MIN 3.5 CFSM .66 IN 8.93

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.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)
NOV											
22...	1300	4.6	261	4.7	9.0	20	5.5	82	80	22	6.6
JAN											
11...	1215	137	149	6.2	3.5	40	11.4	48	33	15	2.6
MAY											
26...	1145	211	70	6.3	20.0	100	4.4	18	15	4.4	1.6
AUG											
24...	1515	276	48	5.6	21.0	130	4.3	10	6	2.8	.7

DATE	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
NOV											
22...	11	21	.5	4.8	3	0	2	96	71	13	.1
JAN											
11...	8.6	27	.5	2.2	19	0	16	19	33	11	.2
MAY											
26...	3.5	27	.4	2.7	3	0	2	2.4	10	6.0	.1
AUG											
24...	2.3	28	.3	2.6	5	0	4	20	8.3	3.4	.0

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE IN BOT. MAT. (MG/KG)
NOV										
22...	13	158	143	.21	1.96	--	--	3.5	3.5	2.2
JAN										
11...	8.0	114	90	.16	42.2	.55	.01	.56	.57	--
MAY										
26...	5.1	66	35	.09	37.6	1.6	.04	1.6	1.6	--
AUG										
24...	4.8	45	28	.06	33.5	.25	.03	.28	.27	--

DATE	TOTAL KJELDAHL NITROGEN (N) (MG/L)	SUSPENDED KJEL. NITROGEN (N) (MG/L)	DISSOLVED KJEL. NITROGEN (N) (MG/L)	TOTAL KJEL. NITROGEN IN BOTTOM MAT. (MG/KG)	TOTAL NITROGEN (N) (MG/L)	TOTAL NITROGEN (NO3) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS IN BOTTOM MATERIAL (MG/KG)	TOTAL ARSENIC (AS) (UG/L)
NOV										
22...	1.5	.00	1.5	25000	5.0	22	.04	.01	270	0
JAN										
11...	.72	.28	.44	--	1.3	5.7	.06	.01	--	1
MAY										
26...	1.7	.10	1.6	--	3.3	15	.13	.08	--	2
AUG										
24...	1.3	.35	.95	--	1.6	7.0	.19	.12	--	1

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL ARSENIC IN BOTTOM MA-TERIAL (UG/G)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL COPPER IN BOTTOM MA-TERIAL (UG/G)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)
NOV 22...	0	0	4	2	0	3	<10	100	90
JAN 11...	1	0	--	5	5	0	--	--	160
MAY 26...	0	2	--	2	0	2	--	620	220
AUG 24...	1	0	--	6	4	2	--	980	210

DATE	TOTAL IRON IN BOTTOM MA-TERIAL (UG/G)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL LEAD IN BOTTOM MA-TERIAL (UG/G)	TOTAL MERCURY (HG) (UG/L)	SUS-PENDED MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL MERCURY IN BOTTOM MA-TERIAL (UG/G)
NOV 22...	3700	7	7	0	<10	.0	.0	.0	.0
JAN 11...	--	20	10	10	--	.0	.0	.0	--
MAY 26...	--	5	0	11	--	.0	.0	.0	--
AUG 24...	--	11	6	5	--	.0	.0	.0	--

DATE	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ZINC IN BOTTOM MA-TERIAL (UG/G)	TOTAL ORGANIC CARBON (C) (MG/L)	DIS-SOL-VED ORGANIC CARBON (C) (MG/L)	ORGANIC CARBON IN BOT-TOM MA-TERIAL (C) (G/KG)	TOTAL PCB (UG/L)	PCB IN BOTTOM MA-TERIAL (UG/KG)
NOV 22...	20	0	20	120	10	10	68	.0	0
JAN 11...	20	20	0	--	13	13	--	--	--
MAY 26...	10	10	0	--	6.5	3.7	--	--	--
AUG 24...	10	10	0	--	20	19	--	--	--

DATE	TOTAL ALDRIN (UG/L)	ALDRIN IN BOTTOM MA-TERIAL (UG/KG)	TOTAL CHLOR-DANE (UG/L)	CHLOR-DANE IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DDD (UG/L)	DDD IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DDE (UG/L)	DDE IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DDT (UG/L)	DDT IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DI-AZINON (UG/L)
NOV 22...	.00	.0	.0	0	.00	9.0	.00	2.5	.00	.0	.00

DATE	DI-AZINON IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DI-ELDRIN (UG/L)	DI-ELDRIN IN BOTTOM MA-TERIAL (UG/KG)	TOTAL ENDRIN (UG/L)	ENDRIN IN BOTTOM MA-TERIAL (UG/KG)	TOTAL ETHION (UG/L)	ETHION IN BOTTOM MA-TERIAL (UG/KG)	TOTAL HEPTA-CHLOR (UG/L)	HEPTA-CHLOR IN BOTTOM MA-TERIAL (UG/KG)	TOTAL HEPTA-CHLOR EPOXIDE (UG/L)	HEPTA-CHLOR EPOXIDE IN BOT-TOM MA-TERIAL (UG/KG)
NOV 22...	.0	.00	1.8	.00	.0	.00	.0	.00	.0	.00	.0

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL LINDANE (UG/L)	LINDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL MALATHION (UG/L)	MALATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHOXYCHLOR (UG/L)	METHOXYCHLOR IN BOTTOM MATERIAL (UG/KG)	TOTAL METHYL PARATHION (UG/L)	METHYL PARATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHYL TRITHION (UG/L)	METHYL TRITHION IN BOTTOM MATERIAL (UG/KG)	TOTAL PARATHION (UG/L)
NOV 22...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00

DATE	PARATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL TOXAPHENE (UG/L)	TOXAPHENE IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION IN BOTTOM MATERIAL (UG/KG)
NOV 22...	.0	0	0	.00	.0

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE FOR SELECTED DAYS, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
NOV				
16...	1225	2.3	23	.14
22...	1300	4.6	3	.04
DEC				
30...	1100	26	3	.21
JAN				
11...	1215	137	15	5.5
FEB				
10...	1540	8.0	2	.04
MAR				
28...	1712	24	2	.13
MAY				
26...	1135	213	27	16
26...	1145	211	40	23
27...	1100	207	23	13
JUN				
13...	1500	4.6	38	.47
AUG				
24...	1515	276	9	6.7
25...	1145	222	46	28

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,

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)
NOV											
22...	1030	2.7	262	6.4	7.0	30	3.9	83	54	27	3.8
JAN											
11...	1330	122	107	5.7	4.0	50	11.0	32	25	10	1.7
MAY											
19...	1145	.25	461	7.0	21.0	40	.8	130	14	41	6.5
26...	1115	185	110	6.3	20.0	160	5.2	35	30	11	1.9
AUG											
24...	1445	404	57	5.8	21.5	100	5.0	16	10	5.0	.9

DATE	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
NOV											
22...	9.1	18	.4	8.1	35	0	29	22	49	17	.2
JAN											
11...	5.4	25	.4	2.9	9	0	7	29	19	10	.3
MAY											
19...	12	14	.5	20	140	0	110	22	2.9	19	.2
26...	4.6	20	.3	3.4	7	0	6	5.6	17	8.3	.1
AUG											
24...	1.8	16	.2	3.9	8	0	7	20	11	3.5	.1

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE IN BOT. MAT. (MG/KG)
NOV										
22...	10	175	142	.24	1.28	--	--	.38	.38	1.0
JAN										
11...	5.1	85	59	.12	28.0	1.4	.02	1.4	1.4	--
MAY										
19...	13	293	184	.40	.20	.33	.04	.37	.38	--
26...	5.4	119	68	.16	59.4	2.8	.05	2.8	2.8	--
AUG										
24...	2.9	48	33	.07	52.4	.43	.02	.45	.44	--

DATE	TOTAL KJELDAHL NITROGEN (N) (MG/L)	SUSPENDED KJEL. NITROGEN (N) (MG/L)	DISSOLVED KJEL. NITROGEN (N) (MG/L)	TOTAL KJEL. NITROGEN IN BOTTOM MAT. (MG/KG)	TOTAL NITROGEN (N) (MG/L)	TOTAL NITROGEN (NO3) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS IN BOTTOM MATERIAL (MG/KG)	TOTAL ARSENIC (AS) (UG/L)
NOV										
22...	2.9	.00	2.9	20000	3.3	15	.62	.51	1100	2
JAN										
11...	1.1	.31	.79	--	2.5	11	.18	.08	--	1
MAY										
19...	25	.00	25	--	25	110	2.6	2.3	--	--
26...	1.4	.00	1.5	--	4.2	19	.27	.18	--	3
AUG										
24...	1.1	.34	.76	--	1.6	6.9	.44	.27	--	2

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL ARSENIC IN BOTTOM MA-TERIAL (UG/G)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL COPPER IN BOTTOM MA-TERIAL (UG/G)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL IRON IN BOTTOM MA-TERIAL (UG/G)
NOV										
22...	0	2	4	2	0	2	<10	760	430	4000
JAN										
11...	1	0	--	2	2	0	--	1700	120	--
MAY										
19...	--	--	--	2	--	--	--	1400	--	--
26...	2	1	--	2	0	4	--	1100	200	--
AUG										
24...	0	2	--	7	3	4	--	1000	270	--

DATE	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL LEAD IN BOTTOM MA-TERIAL (UG/G)	TOTAL MERCURY (HG) (UG/L)	SUS-PENDED MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL MERCURY IN BOTTOM MA-TERIAL (UG/G)	TOTAL ZINC (ZN) (UG/L)
NOV									
22...	6	1	5	<10	.2	.2	.0	.0	20
JAN									
11...	14	6	8	--	.0	.0	.0	--	10
MAY									
19...	4	--	--	--	--	--	--	--	10
26...	13	4	9	--	.0	.0	.0	--	70
AUG									
24...	7	0	7	--	.0	.0	.0	--	10

DATE	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ZINC IN BOTTOM MA-TERIAL (UG/G)	TOTAL ORGANIC CARBON (C) (MG/L)	DIS-SOL-VED ORGANIC CARBON (C) (MG/L)	ORGANIC CARBON IN BOT-TOM MA-TERIAL (C) (G/KG)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	TOTAL PCB (UG/L)	PCB IN BOTTOM MA-TERIAL (UG/KG)
NOV									
22...	10	10	40	13	11	52	--	.0	0
JAN									
11...	0	10	--	14	14	--	--	--	--
MAY									
19...	--	--	--	--	--	--	.00	--	--
26...	40	30	--	7.1	5.1	--	--	--	--
AUG									
24...	10	0	--	21	16	--	--	--	--

DATE	TOTAL ALDRIN (UG/L)	ALDRIN IN BOTTOM MA-TERIAL (UG/KG)	TOTAL CHLOR-DANE (UG/L)	CHLOR-DANE IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DDD (UG/L)	DDD IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DDE (UG/L)	DDE IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DDT (UG/L)	DDT IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DI-AZINON (UG/L)
NOV											
22...	.00	.0	.0	0	.00	5.1	.00	3.5	.00	.0	.00

DATE	DI-AZINON IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DI-ELDRIN (UG/L)	DI-ELDRIN IN BOTTOM MA-TERIAL (UG/KG)	TOTAL ENDRIN (UG/L)	ENDRIN IN BOTTOM MA-TERIAL (UG/KG)	TOTAL ETHION (UG/L)	ETHION IN BOTTOM MA-TERIAL (UG/KG)	TOTAL HEPTA-CHLOR (UG/L)	HEPTA-CHLOR IN BOTTOM MA-TERIAL (UG/KG)	TOTAL HEPTA-CHLOR EPOXIDE (UG/L)	HEPTA-CHLOR EPOXIDE IN BOT-TOM MA-TERIAL (UG/KG)
NOV											
22...	.0	.00	.8	.00	.0	.00	.0	.00	.0	.00	.0

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL LINDANE (UG/L)	LINDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL MALATHION (UG/L)	MALATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHOXYCHLOR (UG/L)	METHOXYCHLOR IN BOTTOM MATERIAL (UG/KG)	TOTAL METHYL PARATHION (UG/L)	METHYL PARATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHYL TRITHION (UG/L)	METHYL TRITHION IN BOTTOM MATERIAL (UG/KG)	TOTAL PARATHION (UG/L)
NOV 22...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00

DATE	PARATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL TOXAPHENE (UG/L)	TOXAPHENE IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION IN BOTTOM MATERIAL (UG/KG)
NOV 22...	.0	0	0	.00	.0

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE FOR SELECTED DAYS, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT 04...	1510	.09	9	.00
NOV 16...	1210	31	41	3.4
22...	1030	2.7	71	.52
DEC 30...	1310	17	6	.28
JAN 11...	1330	122	30	9.9
FEB 10...	1440	5.6	4	.06
MAR 28...	1550	14	7	.26
MAY 09...	1720	1.0	11	.03
26...	1000	198	204	109
26...	1115	185	50	25
27...	0935	194	90	47
JUN 13...	1520	1.1	9	.03
AUG 24...	1445	404	12	13
25...	0945	102	28	7.7

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 at mean sea level (Soil Conservation Service benchmark). Prior to July 25, 1977, at datum 4.92 ft (1.500 m) higher.

REMARKS.--Water-discharge record good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 780 ft³/s (22.1 m³/s) Aug. 24, 1977, gage height, 9.34 ft (2.847 m); no flow July 18 to Sept. 15, Oct. 3-10, 16-19, 1976, July 16-31, Aug. 15, 1977.

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)
Jan. 10	2330	512	14.5	8.78	2.676
Mar. 22	2300	305	8.64	8.25	2.515
May 25	1330	605	17.1	8.99	2.740
Aug. 24	1130	*780	22.1	*9.34	2.847
Sept. 9	0900	412	11.7	8.53	2.600

No flow Oct. 3-10, 16-19, July 16-31, Aug. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	.65	11	37	27	87	29	3.7	57	1.6	12	12
2	.07	.62	9.8	32	24	72	25	2.8	39	1.8	69	8.3
3	.00	.54	8.8	27	22	53	21	2.2	27	5.1	52	6.0
4	.00	.54	7.7	28	21	43	19	1.7	21	14	18	4.1
5	.00	.51	6.6	30	21	42	18	1.3	19	9.6	9.3	2.8
6	.00	.47	5.8	32	19	48	16	1.1	14	5.8	5.3	2.1
7	.00	.44	10	44	17	105	14	.94	13	3.7	2.7	1.6
8	.00	.40	27	69	16	246	12	1.7	10	2.3	1.3	23
9	.00	.38	32	72	15	190	11	2.3	8.4	1.3	.59	310
10	.00	.23	29	255	14	125	8.8	1.4	8.2	.76	.43	176
11	.18	.23	27	426	14	90	7.8	.94	6.4	.47	.35	94
12	.26	.35	38	222	14	68	7.0	.69	4.8	.28	.25	52
13	.23	.47	83	129	14	68	6.6	.55	3.7	.23	.14	32
14	.16	.47	95	93	14	129	5.7	.40	2.6	.23	.03	21
15	.02	4.2	77	157	14	140	4.9	.34	2.1	.14	.00	16
16	.00	20	182	198	13	93	4.2	.28	1.6	.00	.10	12
17	.00	27	261	140	12	66	3.6	.23	1.2	.00	.49	9.7
18	.00	13	162	100	11	52	3.0	.18	1.1	.00	18	7.9
19	.00	8.2	93	70	12	42	2.5	.04	.94	.00	177	6.2
20	.18	6.4	64	55	12	77	7.7	.04	3.4	.00	132	4.9
21	1.2	6.0	55	45	12	237	14	.36	5.6	.00	61	3.9
22	1.2	5.1	47	35	11	270	21	.28	2.2	.00	33	3.1
23	.89	4.5	40	30	10	273	21	.23	1.5	.00	52	2.3
24	.62	3.9	34	29	13	175	16	51	1.8	.00	640	1.8
25	.51	3.6	29	36	32	113	14	565	2.7	.00	465	1.5
26	.47	3.1	50	42	43	82	14	522	23	.00	241	1.1
27	.47	4.4	111	41	45	61	11	438	21	.00	123	.81
28	.40	5.8	95	39	60	50	8.4	334	11	.00	68	.62
29	.44	9.8	71	38	---	42	6.3	182	6.4	.00	40	.43
30	.44	12	53	33	---	37	4.8	135	3.1	.00	24	.32
31	.54	---	44	30	---	34	---	95	---	.00	16	---
TOTAL	8.42	143.30	1858.7	2614	552	3210	357.3	2345.70	322.74	47.31	2261.98	817.48
MEAN	.27	4.78	60.0	84.3	19.7	104	11.9	75.7	10.8	1.53	73.0	27.2
MAX	1.2	27	261	426	60	273	29	565	57	14	640	310
MIN	.00	.23	5.8	27	10	34	2.5	.04	.94	.00	.00	.32
CFSM	.006	.11	1.33	1.87	.44	2.31	.26	1.68	.24	.03	1.62	.60
IN.	.01	.12	1.54	2.16	.46	2.65	.30	1.94	.27	.04	1.87	.68

CAL YR 1976 TOTAL 10706.39 MEAN 29.3 MAX 478 MIN .00 CFSM .65 IN 8.85
WTR YR 1977 TOTAL 14538.93 MEAN 39.8 MAX 640 MIN .00 CFSM .88 IN 12.02

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.--No flow Oct. 3-10, 16-19, July 16-31, Aug. 15. Sediment concentrations estimated for parts of October, November, December, March, and April.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 394 micromhos Nov. 15, 16, 1976; minimum, 58 micromhos Aug. 24, 1977.
WATER TEMPERATURES: Maximum, 31.0°C July 9, 1977; minimum, 0.0°C Dec. 20, 1975, Jan. 10, 11, 18-25, 1976.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 140 mg/L May 24, 1977; minimum daily mean, 0 mg/L during periods of no flow.
SEDIMENT LOADS: Maximum daily, 172 tons (156 tonnes) May 25, 1977; minimum daily, 0.0 tons (0.0 tonnes) during periods of no flow.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 394 micromhos Nov. 15, 16; minimum, 58 micromhos Aug. 24.
WATER TEMPERATURES: Maximum, 31.0°C July 9; minimum, 0.5°C Jan. 13, 17-24, 30, Feb. 1, 8, 9.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 140 mg/L May 24; minimum daily mean, 0 mg/L during periods of no flow.
SEDIMENT LOADS: Maximum daily, 172 tons (156 tonnes) May 25; minimum daily, 0.0 tons (0.0 tonnes) during periods of no flow.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)
NOV											
22...	1100	8.2	263	7.1	8.0	30	6.8	88	70	27	5.1
JAN											
11...	1115	450	100	5.8	2.0	130	13.2	27	20	8.3	1.5
FEB											
14...	1300	15	142	6.6	8.0	5	11.1	50	34	16	2.5
APR											
27...	1000	12	100	6.0	13.0	60	6.6	28	14	8.5	1.7
MAY											
19...	1400	.01	165	6.7	20.0	30	--	56	19	18	2.8
26...	1230	545	91	6.0	20.5	100	5.4	24	19	7.6	1.3
AUG											
24...	1330	785	68	6.0	22.0	100	5.2	17	9	5.2	.9

DATE	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
NOV											
22...	9.3	17	.4	5.8	23	0	19	2.9	66	14	.1
JAN											
11...	5.0	26	.4	3.0	9	0	7	23	16	9.4	.3
FEB											
14...	7.5	23	.5	3.7	19	0	16	7.6	22	11	.1
APR											
27...	6.5	30	.5	3.6	17	0	14	27	10	9.7	.1
MAY											
19...	9.1	23	.5	7.2	46	0	38	15	8.3	14	.1
26...	4.0	23	.4	3.3	7	0	6	11	13	6.5	.1
AUG											
24...	2.0	16	.2	5.2	9	0	7	14	10	3.8	.1

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE IN BOT. MAT. (MG/KG)
NOV										
22...	11	157	150	.21	3.48	--	--	1.4	1.4	.9
JAN										
11...	5.0	76	53	.10	92.3	1.2	.03	1.2	1.2	--
FEB										
14...	2.3	84	79	.11	3.45	1.1	.02	1.1	1.1	--
APR										
27...	8.2	89	64	.12	2.88	1.6	.04	1.6	1.6	--
MAY										
19...	6.9	95	94	.13	.00	1.1	.02	1.1	1.1	--
26...	4.9	93	44	.13	137	1.9	.07	2.0	2.0	--
AUG										
24...	3.0	53	35	.07	112	.59	.04	.63	.63	--

DATE	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	SUS-PENDED KJEL. NITRO-GEN (N) (MG/L)	DIS-SOLVED KJEL. NITRO-GEN (N) (MG/L)	TOTAL KJEL. NITRO-GEN IN BOTTOM MAT. (MG/KG)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED-PHOS-PHORUS (P) (MG/L)	TOTAL PHOS-PHORUS IN BOT-TOM MA-TERIAL (MG/KG)	TOTAL ARSENIC (AS) (UG/L)
NOV										
22...	1.3	.00	1.3	18000	2.7	12	.21	.17	520	0
JAN										
11...	1.1	.37	.73	--	2.3	10	.20	.08	--	1
FEB										
14...	1.1	.00	1.1	--	2.2	9.7	.18	.15	--	1
APR										
27...	1.2	.10	1.1	--	2.8	12	.27	.16	--	2
MAY										
19...	.99	.94	.05	--	2.1	9.3	.16	.13	--	--
26...	1.9	.30	1.6	--	3.9	17	.23	--	--	3
AUG										
24...	1.6	.40	1.2	--	2.2	9.9	.62	.34	--	1

DATE	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL ARSENIC IN BOTTOM MA-TERIAL (UG/G)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL COPPER IN BOTTOM MA-TERIAL (UG/G)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL IRON IN BOTTOM MA-TERIAL (UG/G)
NOV										
22...	0	1	2	2	0	2	<10	300	190	2500
JAN										
11...	1	0	--	2	1	1	--	--	110	--
FEB										
14...	1	0	--	3	0	3	--	200	110	--
APR										
27...	1	1	--	2	0	2	--	1300	600	--
MAY										
19...	--	--	--	2	--	--	--	490	--	--
26...	1	2	--	0	0	4	--	1300	180	--
AUG										
24...	1	0	--	4	0	4	--	1700	200	--

DATE	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL LEAD IN BOTTOM MA-TERIAL (UG/G)	TOTAL MERCURY (HG) (UG/L)	SUS-PENDED MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL MERCURY IN BOTTOM MA-TERIAL (UG/G)	TOTAL ZINC (ZN) (UG/L)
NOV									
22...	7	0	10	<10	.0	.0	.0	.0	10
JAN									
11...	14	6	8	--	.0	.0	.0	--	20
FEB									
14...	12	7	5	--	.0	.0	.0	--	10
APR									
27...	18	10	8	--	.0	.0	.0	--	10
MAY									
19...	0	--	--	--	--	--	--	--	20
26...	10	0	13	--	.0	.0	.0	--	60
AUG									
24...	7	4	3	--	.0	.0	.0	--	10

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ZINC IN BOTTOM MA-TERIAL (UG/G)	TOTAL ORGANIC CARBON (C) (MG/L)	DIS-SOL-VED ORGANIC CARBON (C) (MG/L)	ORGANIC CARBON IN BOT-TOM MA-TERIAL (C) (G/KG)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	TOTAL PCB (UG/L)	PCB IN BOTTOM MA-TERIAL (UG/KG)
NOV 22...	--	--	20	11	11	41	--	.0	0
JAN 11...	20	0	--	16	13	--	--	--	--
FEB 14...	10	0	--	8.2	8.2	--	--	--	--
APR 27...	--	--	--	6.0	5.4	--	--	--	--
MAY 19...	--	--	--	--	--	--	.00	--	--
26...	50	10	--	5.8	2.6	--	--	--	--
AUG 24...	0	10	--	16	13	--	--	--	--

DATE	TOTAL ALDRIN (UG/L)	ALDRIN IN BOTTOM MA-TERIAL (UG/KG)	TOTAL CHLOR-DANE (UG/L)	CHLOR-DANE IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DDD (UG/L)	DDD IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DDE (UG/L)	DDE IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DDT (UG/L)	DDT IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DI-AZINON (UG/L)
NOV 22...	.00	.0	.0	0	.00	44	.00	12	.00	.0	.00

DATE	DI-AZINON IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DI-ELDRIN (UG/L)	DI-ELDRIN IN BOTTOM MA-TERIAL (UG/KG)	TOTAL ENDRIN (UG/L)	ENDRIN IN BOTTOM MA-TERIAL (UG/KG)	TOTAL ETHION (UG/L)	ETHION IN BOTTOM MA-TERIAL (UG/KG)	TOTAL HEPTA-CHLOR (UG/L)	HEPTA-CHLOR IN BOTTOM MA-TERIAL (UG/KG)	TOTAL HEPTA-CHLOR EPOXIDE (UG/L)	HEPTA-CHLOR EPOXIDE IN BOT-TOM MA-TERIAL (UG/KG)
NOV 22...	.0	.00	7.6	.00	.0	.00	.0	.00	.0	.00	.0

DATE	TOTAL LINDANE (UG/L)	LINDANE IN BOTTOM MA-TERIAL (UG/KG)	TOTAL MALA-THION (UG/L)	MALA-THION IN BOTTOM MA-TERIAL (UG/KG)	TOTAL METH-OXY-CHLOR (UG/L)	METHOX-YCHLOR IN BOT-TOM MA-TERIAL (UG/KG)	TOTAL METHYL PARA-THION (UG/L)	METHYL PARA-THION IN BOT-TOM MA-TERIAL (UG/KG)	TOTAL METHYL TRI-THION (UG/L)	METHYL TRI-THION IN BOT-TOM MA-TERIAL (UG/KG)	TOTAL PARA-THION (UG/L)
NOV 22...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00

DATE	PARA-THION IN BOTTOM MA-TERIAL (UG/KG)	TOTAL TOX-APHENE (UG/L)	TOX-APHENE IN BOTTOM MA-TERIAL (UG/KG)	TOTAL TRI-THION (UG/L)	TRI-THION IN BOTTOM MA-TERIAL (UG/KG)
NOV 22...	.0	0	0	.00	.0

PAMLICO RIVER BASIN

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	279	277	264	257	267	256	139	138	129	127	124	113
2	281	279	268	264	256	248	139	139	130	128	113	110
3	---	---	275	268	247	239	140	139	130	128	110	109
4	---	---	286	275	239	235	144	140	131	130	113	110
5	---	---	306	287	236	234	145	143	133	132	116	114
6	---	---	307	302	235	233	144	142	134	132	115	109
7	---	---	302	295	257	224	143	139	134	133	112	109
8	---	---	295	291	240	209	144	137	135	133	113	101
9	---	---	290	287	208	198	136	127	137	133	102	101
10	---	---	287	284	198	194	126	110	138	135	103	102
11	274	270	291	286	194	190	109	103	140	138	105	103
12	271	266	293	289	190	183	107	104	148	140	106	105
13	267	264	294	291	182	170	111	107	147	143	110	104
14	264	262	291	287	170	162	113	110	150	147	111	104
15	263	260	394	262	162	149	116	111	149	148	104	99
16	---	---	394	250	148	135	113	110	149	145	100	91
17	---	---	250	234	134	126	115	110	151	146	100	98
18	---	---	251	239	130	127	119	115	146	145	101	99
19	---	---	261	252	135	130	121	119	148	145	103	101
20	251	243	266	258	138	135	123	120	150	148	106	97
21	290	227	268	265	141	138	123	120	149	147	104	92
22	360	280	274	269	142	141	123	119	150	148	94	89
23	277	270	280	263	143	142	126	121	150	147	94	91
24	271	266	283	278	145	144	124	120	157	143	91	91
25	266	262	284	279	147	145	127	122	166	155	92	91
26	264	259	286	284	146	141	124	120	154	133	94	92
27	260	257	296	279	143	134	120	118	133	120	95	94
28	258	257	306	279	134	133	120	119	129	123	97	95
29	257	257	298	276	135	134	136	121	---	---	101	96
30	257	257	278	268	135	135	135	128	---	---	102	100
31	257	256	---	---	137	135	128	127	---	---	104	102
MONTH	360	227	394	234	267	126	145	103	166	120	124	89
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	103	101	101	96	76	73	99	94	256	101	73	71
2	102	100	102	100	83	75	108	97	152	127	74	73
3	104	101	142	100	128	83	124	105	125	119	76	74
4	119	104	183	147	117	88	104	76	127	122	79	77
5	113	107	181	154	88	84	76	73	129	123	82	78
6	107	105	150	143	84	81	73	71	125	119	85	82
7	105	103	147	139	95	82	72	71	121	118	89	85
8	104	102	150	133	97	93	73	71	124	118	96	75
9	103	103	226	151	93	90	77	73	126	120	86	69
10	104	103	216	192	106	91	79	76	126	121	77	71
11	105	103	195	175	107	101	82	79	127	123	71	69
12	108	105	181	170	102	98	87	82	154	124	70	69
13	110	107	174	166	103	99	89	86	129	124	70	69
14	112	109	172	163	107	103	92	87	129	125	72	70
15	115	112	170	162	116	107	95	91	---	---	74	72
16	115	112	169	161	116	114	---	---	127	124	78	75
17	114	112	168	160	119	117	---	---	132	124	82	78
18	117	113	166	158	121	119	---	---	195	131	87	82
19	117	111	166	158	119	112	---	---	131	85	90	87
20	201	109	166	158	168	112	---	---	84	77	94	90
21	174	139	175	160	157	129	---	---	77	73	96	94
22	153	115	180	171	128	124	---	---	73	71	100	96
23	111	103	181	172	124	121	---	---	230	71	101	99
24	123	101	180	85	140	121	---	---	122	58	103	100
25	122	114	91	79	156	101	---	---	63	59	106	103
26	120	110	89	81	137	107	---	---	68	63	109	106
27	122	98	86	79	127	111	---	---	68	67	113	109
28	97	95	78	71	110	100	---	---	68	67	115	112
29	95	94	74	72	100	97	---	---	69	68	115	114
30	97	94	76	73	98	97	---	---	70	69	117	115
31	---	---	73	72	---	---	---	---	71	70	---	---
MONTH	201	94	226	71	168	73	124	71	256	58	117	69
YEAR	394	58										

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.0	19.0	11.5	11.0	7.5	5.5	5.0	2.5	3.0	0.5	12.0	9.0
2	19.5	18.5	11.0	9.0	6.5	4.5	2.5	1.0	3.0	1.0	11.5	8.5
3	---	---	9.0	8.0	5.5	4.5	2.5	1.5	3.5	1.0	12.0	7.5
4	---	---	8.5	8.0	5.0	3.0	4.0	2.5	6.0	3.5	14.0	11.5
5	---	---	9.5	8.5	6.0	4.0	3.5	3.0	6.0	4.5	15.0	13.0
6	---	---	9.0	8.0	7.5	5.0	3.5	3.0	4.0	2.0	14.5	13.0
7	---	---	8.5	8.0	11.5	7.5	5.0	3.5	2.5	1.0	13.0	10.5
8	---	---	8.5	8.0	11.5	7.5	3.5	2.5	2.0	0.5	11.5	9.0
9	---	---	8.0	6.5	7.0	5.0	3.5	2.0	3.0	0.5	12.5	9.0
10	---	---	8.0	6.5	6.5	4.5	7.0	4.0	4.5	1.0	12.5	9.5
11	17.0	15.5	8.5	7.5	9.0	6.5	6.0	2.5	6.5	3.0	16.0	12.0
12	15.5	14.5	9.0	8.0	11.5	9.0	2.5	1.0	7.5	4.5	16.0	13.5
13	14.5	14.0	8.0	6.5	11.5	10.0	1.5	0.5	10.0	7.5	19.0	16.0
14	15.0	14.5	6.5	6.0	9.5	7.5	4.0	1.0	9.0	7.0	19.0	15.0
15	14.5	14.0	7.5	6.0	8.0	6.5	5.0	4.0	9.5	6.5	18.5	14.5
16	---	---	9.0	7.5	10.0	8.5	5.0	3.5	8.5	5.0	19.5	15.0
17	---	---	9.0	7.5	9.5	8.5	3.0	0.5	5.0	3.0	17.0	14.0
18	---	---	9.5	7.5	9.0	7.5	1.0	0.5	3.5	2.0	17.0	14.0
19	---	---	10.0	8.0	8.5	6.5	1.0	0.5	5.5	3.0	17.0	15.0
20	14.5	13.0	11.0	10.0	10.0	8.0	1.0	0.5	8.0	5.5	15.0	12.5
21	15.0	13.5	11.0	10.0	10.0	4.5	1.0	0.5	7.0	5.0	12.5	11.5
22	13.5	11.5	10.0	7.5	4.5	2.5	1.0	0.5	7.5	4.0	14.0	11.5
23	12.0	10.5	7.5	5.5	4.5	3.0	1.0	0.5	10.0	5.5	13.5	10.5
24	11.5	10.5	6.0	4.5	4.0	3.0	1.5	0.5	11.0	9.0	13.5	10.0
25	13.5	11.5	7.0	4.5	4.5	1.5	2.5	1.0	13.0	9.0	13.5	10.0
26	15.0	13.5	9.0	6.0	7.0	4.5	3.0	1.0	15.0	11.0	14.0	9.5
27	14.0	11.0	12.0	9.0	6.5	4.5	4.0	2.0	16.0	12.5	14.5	10.0
28	11.0	9.0	14.0	11.5	7.0	4.5	6.5	4.0	15.0	11.5	16.5	12.5
29	9.0	8.0	15.5	13.0	7.5	6.0	5.5	2.0	---	---	18.5	15.5
30	8.5	7.5	13.0	8.0	5.5	3.5	2.0	0.5	---	---	19.5	17.0
31	11.0	8.5	---	---	7.5	5.0	3.0	1.0	---	---	20.5	17.5
MONTH	20.0	7.5	15.5	4.5	11.5	1.5	7.0	0.5	16.0	0.5	20.5	7.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	18.5	15.0	16.5	14.0	24.0	21.5	28.5	26.5	27.0	24.5	27.0	24.5
2	19.0	16.0	17.5	15.5	23.0	21.0	27.5	25.5	25.0	23.5	27.0	24.0
3	20.5	18.5	19.5	17.0	23.0	20.5	27.5	25.0	26.0	24.0	28.0	24.5
4	21.0	19.0	20.0	19.0	22.5	20.0	25.5	22.5	26.5	24.0	28.0	25.0
5	20.5	17.5	21.5	20.0	23.5	21.0	27.0	23.5	27.5	24.5	27.0	25.0
6	17.5	15.0	22.0	20.0	24.5	22.0	28.5	25.5	28.5	26.0	27.5	25.0
7	15.0	13.0	23.0	21.5	22.5	19.5	29.5	27.0	30.0	26.5	27.0	25.0
8	16.0	13.0	22.5	20.5	19.5	17.0	30.5	28.0	29.0	27.0	27.0	23.5
9	15.0	13.0	21.0	17.0	19.5	17.5	31.0	28.5	29.5	28.0	25.0	23.5
10	14.0	11.0	16.5	14.0	19.5	17.0	29.0	27.5	29.0	28.0	26.5	23.5
11	16.5	13.0	15.0	13.0	20.0	17.0	29.5	27.5	29.0	27.5	25.5	22.5
12	19.0	15.5	15.5	14.0	20.0	18.5	28.5	27.0	29.0	27.5	22.5	20.0
13	20.0	17.0	16.5	15.0	22.5	19.5	28.5	27.5	28.5	27.0	21.5	18.5
14	20.5	18.0	17.5	16.5	21.5	19.5	28.5	27.0	28.5	27.0	23.0	20.5
15	20.5	18.5	19.0	17.5	22.5	20.5	28.5	27.0	---	---	23.0	22.0
16	19.5	18.5	19.0	17.0	22.5	20.0	---	---	27.5	26.5	24.0	21.0
17	19.0	17.0	18.0	17.0	23.5	20.5	---	---	29.0	26.5	24.5	22.5
18	18.5	16.5	19.5	18.5	25.0	22.5	---	---	28.5	21.5	26.5	23.5
19	19.5	17.0	20.5	19.5	26.5	24.5	---	---	21.5	20.5	27.0	25.0
20	19.5	17.5	20.5	20.0	27.0	24.5	---	---	22.0	20.0	27.5	25.0
21	19.5	18.5	20.0	19.5	26.5	24.5	---	---	22.5	20.0	27.0	25.0
22	20.0	17.5	20.5	20.0	25.5	23.0	---	---	24.0	20.5	25.5	22.5
23	20.0	18.5	21.0	20.5	25.0	21.0	---	---	24.5	22.0	23.5	20.5
24	20.0	19.5	21.0	20.0	21.0	20.0	---	---	22.5	21.0	22.5	20.0
25	19.5	18.0	21.0	20.5	23.5	21.0	---	---	24.5	22.0	24.5	21.0
26	18.0	16.0	22.0	20.5	24.5	22.0	---	---	24.0	22.0	25.0	23.5
27	16.0	14.5	22.0	20.5	26.5	23.0	---	---	25.0	22.0	25.5	24.0
28	17.5	15.0	22.5	20.5	27.5	24.5	---	---	25.5	22.5	25.5	23.5
29	17.0	16.0	23.0	21.0	28.0	26.0	---	---	25.5	23.0	23.0	19.5
30	16.0	13.5	23.0	21.0	28.5	26.5	---	---	27.0	23.5	20.0	19.0
31	---	---	23.0	21.5	---	---	---	---	27.0	24.5	---	---
MONTH	21.0	11.0	23.0	13.0	28.5	17.0	31.0	22.5	30.0	20.0	28.0	18.5
YEAR	31.0	0.5										

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

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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	5	.00	9	0.02	12	0.36	4	0.40	4	0.29	14	3.3
2	4	.00	9	0.02	11	0.29	3	0.26	4	0.26	9	1.7
3	0	.00	9	0.01	10	0.24	3	0.22	3	0.18	10	1.4
4	0	.00	9	0.01	10	0.21	4	0.30	3	0.17	12	1.4
5	0	.00	9	0.01	9	0.16	3	0.24	3	0.17	11	1.2
6	0	.00	9	0.01	9	0.14	2	0.17	3	0.15	11	1.4
7	0	.00	10	0.01	11	0.30	4	0.48	3	0.14	10	2.8
8	0	.00	10	0.01	14	1.0	5	0.93	4	0.17	9	6.0
9	0	.00	10	0.01	10	0.86	7	1.4	4	0.16	9	4.6
10	0	.00	12	0.01	7	0.55	43	37	5	0.19	8	2.7
11	10	.00	12	0.01	8	0.58	47	54	5	0.19	6	1.5
12	11	0.01	10	0.01	15	1.5	18	11	5	0.19	6	1.1
13	12	0.01	9	0.01	16	3.6	6	2.1	6	0.23	7	1.3
14	12	0.01	9	0.01	11	2.8	5	1.3	4	0.15	12	4.2
15	5	.00	9	0.10	9	1.9	11	4.7	4	0.15	14	5.3
16	0	.00	15	0.81	27	16	11	5.9	4	0.14	12	3.0
17	0	.00	15	1.1	22	16	5	1.9	5	0.16	10	1.8
18	0	.00	12	0.42	11	4.8	5	1.4	5	0.15	8	1.1
19	0	.00	10	0.22	6	1.5	4	0.76	4	0.13	7	0.79
20	10	.00	10	0.17	6	1.0	4	0.59	5	0.16	14	2.9
21	9	0.03	10	0.16	5	0.74	6	0.73	6	0.19	20	13
22	9	0.03	9	0.12	5	0.63	9	0.85	5	0.15	20	15
23	8	0.02	9	0.11	3	0.32	5	0.41	3	0.08	13	9.6
24	9	0.02	8	0.08	5	0.46	7	0.55	11	0.39	8	3.8
25	9	0.01	8	0.08	5	0.39	5	0.49	13	1.1	9	2.7
26	9	0.01	9	0.08	18	2.4	4	0.45	15	1.7	9	2.0
27	9	0.01	9	0.11	22	6.6	4	0.44	15	1.8	10	1.6
28	10	0.01	9	0.14	10	2.6	4	0.42	20	3.2	10	1.4
29	10	0.01	11	0.29	7	1.3	2	0.21	---	---	8	0.91
30	10	0.01	12	0.39	6	0.86	2	0.18	---	---	6	0.60
31	9	0.01	---	---	5	0.59	3	0.24	---	---	---	---
TOTAL	---	0.20	---	4.54	---	70.68	---	130.02	---	12.14	---	100.10
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9	0.70	11	0.11	14	2.2	13	0.06	55	2.8	9	0.29
2	11	0.74	13	0.10	14	1.5	15	0.07	30	5.6	10	0.22
3	11	0.62	12	0.07	14	1.0	13	0.18	14	2.0	10	0.16
4	13	0.67	7	0.03	9	0.51	21	0.79	12	0.58	8	0.09
5	13	0.63	7	0.02	8	0.41	15	0.39	9	0.23	8	0.06
6	13	0.56	7	0.02	8	0.30	13	0.20	8	0.11	9	0.05
7	12	0.45	6	0.02	10	0.35	12	0.12	9	0.07	8	0.03
8	12	0.39	8	0.04	10	0.27	12	0.07	10	0.04	17	3.1
9	12	0.36	9	0.06	9	0.20	11	0.04	10	0.02	44	39
10	10	0.24	8	0.03	12	0.27	12	0.02	9	0.01	14	6.7
11	10	0.21	8	0.02	9	0.16	13	0.02	9	0.01	10	2.5
12	9	0.17	7	0.01	10	0.13	15	0.01	9	0.01	10	1.4
13	9	0.16	6	0.01	9	0.09	16	0.01	10	.00	9	0.78
14	9	0.14	5	0.01	9	0.06	18	0.01	10	.00	9	0.51
15	9	0.12	6	0.01	13	0.07	14	0.01	0	.00	9	0.39
16	9	0.10	9	0.01	9	0.04	0	.00	9	.00	7	0.23
17	9	0.09	7	.00	8	0.03	0	.00	9	0.01	7	0.18
18	9	0.07	6	.00	6	0.02	0	.00	35	2.7	7	0.15
19	8	0.05	5	.00	9	0.02	0	.00	44	20	8	0.13
20	10	0.21	6	.00	12	0.11	0	.00	23	8.2	8	0.11
21	12	0.45	6	0.01	13	0.20	0	.00	12	2.0	9	0.09
22	14	0.79	5	.00	11	0.07	0	.00	11	0.98	8	0.07
23	14	0.79	5	.00	9	0.04	0	.00	37	17	8	0.05
24	13	0.56	140	66	11	0.05	0	.00	94	150	8	0.04
25	12	0.45	113	172	11	0.08	0	.00	22	28	8	0.03
26	12	0.45	40	56	38	2.4	0	.00	11	7.2	9	0.03
27	10	0.30	45	53	34	1.9	0	.00	8	2.7	7	0.02
28	11	0.25	25	23	19	0.56	0	.00	7	1.3	7	0.01
29	11	0.19	15	7.4	16	0.28	0	.00	7	0.76	7	0.01
30	11	0.14	19	6.9	14	0.12	0	.00	6	0.39	7	0.01
31	---	---	16	4.1	---	---	0	.00	9	0.39	---	---
TOTAL	---	11.05	---	388.98	---	13.44	---	2.00	---	253.11	---	56.44

TOTAL LOAD FOR YEAR: 1042.70 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 at mean sea level (Soil Conservation Service, bench mark). Prior to July 25, 1977, at datum 11.41 ft (3.478 m) higher.

REMARKS.--Water-discharge record good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 98 ft³/s (2.77 m³/s) May 24, 1977, gage height, 14.70 ft (4.481 m), present datum; no flow at times each year.

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)
Dec. 16	1915	30	0.85	13.59	4.142
Jan. 10	1915	74	2.10	14.35	4.374
May 24	2215	*98	2.77	*14.70	4.481
Aug. 24	0200	76	2.15	14.38	4.383
Sept. 9	0515	73	2.07	14.34	4.371

No flow July 9-13, 17-31 and Aug. 9-17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	1.3	2.6	9.5	5.1	12	6.3	1.4	6.9	.40	.72	.68
2	.15	.98	2.1	8.6	4.8	8.4	5.9	1.3	8.9	.51	6.4	.62
3	.15	.99	2.0	8.3	4.4	7.0	5.7	1.1	6.0	.49	2.1	.51
4	.16	.78	1.8	8.9	4.6	6.9	5.3	1.1	4.2	.34	.98	.36
5	.19	.76	1.8	8.6	4.5	7.5	5.3	1.0	3.1	.20	.52	.28
6	.17	.68	1.8	8.9	4.0	7.4	4.7	1.2	2.5	.11	.22	.25
7	.15	.68	3.9	13	3.8	17	3.8	1.0	4.3	.05	.05	.25
8	.17	.66	6.8	14	3.8	21	3.5	3.8	2.4	.01	.01	11
9	.70	.61	5.4	12	3.7	14	3.3	1.8	1.9	.00	.00	45
10	.60	.68	3.9	47	3.6	11	3.1	1.2	1.8	.00	.00	11
11	.45	.76	3.6	40	3.5	9.4	2.9	.98	1.4	.00	.00	4.2
12	.33	1.1	10	19	3.4	8.5	2.7	.83	1.2	.00	.00	2.4
13	.30	1.2	13	13	3.8	11	2.6	.66	1.2	.00	.00	1.7
14	.22	1.2	9.7	12	3.7	13	2.2	.53	.91	.25	.00	1.3
15	.15	6.8	8.8	23	3.3	9.9	2.0	.44	.87	.10	.00	1.1
16	.11	9.6	26	20	3.2	8.7	1.6	.32	.82	.02	.00	1.0
17	.27	4.9	24	13	3.2	7.8	1.4	.25	.68	.00	.00	1.2
18	.54	3.0	15	8.0	3.0	7.3	1.2	.22	.57	.00	12	1.4
19	.49	2.3	11	6.2	3.2	6.9	1.4	.44	.54	.00	14	1.1
20	1.1	1.8	9.6	5.3	3.4	17	9.2	1.2	.60	.00	3.5	.86
21	2.3	1.7	9.5	4.7	3.1	22	5.6	.64	.59	.00	1.4	.75
22	1.3	1.6	7.5	4.4	2.7	24	4.4	.53	.45	.00	.74	.65
23	.86	1.5	7.1	4.1	2.7	23	2.7	.49	.70	.00	5.6	.58
24	.68	1.5	6.6	6.5	5.0	15	3.5	30	1.3	.00	55	.55
25	.68	1.5	6.1	8.6	9.6	11	4.4	81	3.3	.00	13	.52
26	.82	1.5	15	7.5	6.0	9.3	4.1	60	13	.00	4.4	.44
27	.77	2.5	19	6.7	6.5	8.4	2.9	58	3.6	.00	2.4	.37
28	.65	3.1	14	6.8	18	7.7	2.4	27	1.3	.00	1.6	.28
29	.59	4.8	12	6.5	---	7.9	1.8	15	.74	.00	1.2	.20
30	.59	3.5	10	5.8	---	7.6	1.7	10	.51	.00	1.0	.16
31	1.2	---	10	5.5	---	7.2	---	7.8	---	.00	.83	---
TOTAL	16.96	63.98	279.6	365.4	129.6	354.8	107.6	311.23	76.28	2.48	127.67	90.71
MEAN	.55	2.13	9.02	11.8	4.63	11.4	3.59	10.0	2.54	.080	4.12	3.02
MAX	2.3	9.6	26	47	18	24	9.2	81	13	.51	55	45
MIN	.11	.61	1.8	4.1	2.7	6.9	1.2	.22	.45	.00	.00	.16
CFSM	.07	.28	1.20	1.57	.62	1.52	.48	1.33	.34	.01	.55	.40
IN.	.08	.32	1.39	1.81	.64	1.76	.53	1.54	.38	.01	.63	.45

CAL YR 1976 TOTAL 1609.50 MEAN 4.40 MAX 59 MIN .00 CFSM .59 IN 7.98
WTR YR 1977 TOTAL 1926.31 MEAN 5.28 MAX 81 MIN .00 CFSM .70 IN 9.55

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

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)
NOV											
22...	1300	1.6	188	6.7	8.0	45	7.5	64	43	20	3.3
JAN											
11...	1200	36	120	5.7	1.5	50	14.8	37	32	11	2.2
MAY											
19...	1210	.13	137	6.6	20.0	50	3.8	52	22	17	2.3
26...	1030	64	135	6.4	20.0	60	5.7	45	38	14	2.4
AUG											
24...	1400	56	119	5.7	21.5	75	4.6	30	24	9.4	1.6

DATE	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
NOV											
22...	7.5	19	.4	3.7	25	0	21	8.0	36	15	.2
JAN											
11...	5.8	24	.4	2.9	6	0	5	19	21	11	.2
MAY											
19...	7.0	22	.4	2.6	37	0	30	15	13	12	.2
26...	5.7	20	.4	3.3	8	0	7	5.1	21	10	.1
AUG											
24...	4.1	21	.3	3.3	7	0	6	22	24	7.0	.1

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE IN BOT. MAT. (MG/KG)
NOV										
22...	12	136	110	.19	.59	--	--	.41	.44	.3
JAN										
11...	5.5	94	63	.13	9.14	2.9	.02	2.9	2.9	--
MAY										
19...	9.2	90	82	.12	.03	.37	.01	.38	.38	--
26...	6.0	130	67	.18	22.5	4.8	.03	4.8	4.9	--
AUG										
24...	5.7	80	59	.11	12.1	.64	.02	.66	.65	--

DATE	TOTAL KJELDAHL NITROGEN (N) (MG/L)	SUSPENDED KJEL. NITROGEN (N) (MG/L)	DISSOLVED KJEL. NITROGEN (N) (MG/L)	TOTAL KJEL. NITROGEN IN BOTTOM MAT. (MG/KG)	TOTAL NITROGEN (N) (MG/L)	TOTAL NITROGEN (NO3) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS IN BOTTOM MATERIAL (MG/KG)	TOTAL ARSENIC (AS) (UG/L)
NOV										
22...	1.1	.16	.94	1500	1.5	6.7	.07	.03	96	2
JAN										
11...	.82	.29	.53	--	3.7	16	.11	.04	--	1
MAY										
19...	.54	.54	.00	--	.92	4.1	.20	.14	--	--
26...	1.4	.10	1.3	--	6.2	27	.16	.22	--	1
AUG										
24...	1.1	.33	.77	--	1.8	7.8	.28	.15	--	2

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL ARSENIC IN BOTTOM MA-TERIAL (UG/G)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL COPPER IN BOTTOM MA-TERIAL (UG/G)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL IRON IN BOTTOM MA-TERIAL (UG/G)
NOV										
22...	0	2	2	0	0	0	<10	780	390	760
JAN										
11...	1	0	--	1	0	1	--	650	100	--
MAY										
19...	--	--	--	2	--	--	--	1400	--	--
26...	0	1	--	0	0	4	--	1000	170	--
AUG										
24...	0	2	--	6	3	3	--	1000	270	--

DATE	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL LEAD IN BOTTOM MA-TERIAL (UG/G)	TOTAL MERCURY (HG) (UG/L)	SUS-PENDED MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL MERCURY IN BOTTOM MA-TERIAL (UG/G)	TOTAL ZINC (ZN) (UG/L)
NOV									
22...	17	0	17	<10	.2	.1	.1	.0	20
JAN									
11...	14	6	8	--	.0	.0	.0	--	20
MAY									
19...	5	--	--	--	--	--	--	--	10
26...	6	1	5	--	.0	.0	.0	--	50
AUG									
24...	7	2	5	--	.0	.0	.0	--	20

DATE	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ZINC IN BOTTOM MA-TERIAL (UG/G)	TOTAL ORGANIC CARBON (C) (MG/L)	DIS-SOL-VED ORGANIC CARBON (C) (MG/L)	ORGANIC CARBON IN BOT-TOM MA-TERIAL (C) (G/KG)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	TOTAL PCB (UG/L)	PCB IN BOTTOM MA-TERIAL (UG/KG)
NOV									
22...	0	40	<10	10	10	6.1	--	.0	0
JAN									
11...	10	10	--	15	12	--	--	--	--
MAY									
19...	--	--	--	--	--	--	.00	--	--
26...	30	20	--	6.2	3.4	--	--	--	--
AUG									
24...	20	0	--	21	20	--	--	--	--

DATE	TOTAL ALDRIN (UG/L)	ALDRIN IN BOTTOM MA-TERIAL (UG/KG)	TOTAL CHLOR-DANE (UG/L)	CHLOR-DANE IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DDD (UG/L)	DDD IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DDE (UG/L)	DDE IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DDT (UG/L)	DDT IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DI-AZINON (UG/L)
NOV											
22...	.00	.0	.0	0	.00	3.7	.00	4.2	.00	2.8	.00

DATE	DI-AZINON IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DI-ELDRIN (UG/L)	DI-ELDRIN IN BOTTOM MA-TERIAL (UG/KG)	TOTAL ENDRIN (UG/L)	ENDRIN IN BOTTOM MA-TERIAL (UG/KG)	TOTAL ETHION (UG/L)	ETHION IN BOTTOM MA-TERIAL (UG/KG)	TOTAL HEPTA-CHLOR (UG/L)	HEPTA-CHLOR IN BOTTOM MA-TERIAL (UG/KG)	TOTAL HEPTA-CHLOR EPOXIDE (UG/L)	HEPTA-CHLOR EPOXIDE IN BOT-TOM MA-TERIAL (UG/KG)
NOV											
22...	.0	.00	1.0	.00	.0	.00	.0	.00	.0	.00	.0

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL LINDANE (UG/L)	LINDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL MALATHION (UG/L)	MALATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHOXYCHLOR (UG/L)	METHOXYCHLOR IN BOTTOM MATERIAL (UG/KG)	TOTAL METHYL PARATHION (UG/L)	METHYL PARATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHYL TRITHION (UG/L)	METHYL TRITHION IN BOTTOM MATERIAL (UG/KG)	TOTAL PARATHION (UG/L)
NOV 22...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00

DATE	PARATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL TOXAPHENE (UG/L)	TOXAPHENE IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION IN BOTTOM MATERIAL (UG/KG)
NOV 22...	.0	0	0	.00	.0

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE FOR SELECTED DAYS, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT 04...	1434	.33	3	.00
NOV 16...	1030	9.5	25	.64
22...	1300	1.6	7	.03
DEC 30...	1435	8.6	4	.09
JAN 11...	1200	36	39	3.8
FEB 10...	1400	4.4	4	.05
MAR 28...	1420	8.0	11	.24
MAY 09...	1600	1.5	14	.06
26...	0850	68	18	3.3
26...	1030	64	12	2.1
27...	0820	64	40	6.9
JUN 13...	1549	1.5	19	.08
AUG 24...	1400	56	54	8.2
25...	1447	9.2	67	1.7

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 current year.

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. Suspended-sediment records for the current year are published on page 345 of this report.

AVERAGE DISCHARGE.--27 years, 10.4 ft³/s (0.295 m³/s), 9.42 in/yr (239 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, 0.60 ft³/s (0.017 m³/s) July 5-8, 1964.

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)
May 24	1530	255	7.22	11.42	3.481
July 31	1630	137	3.88	9.54	2.908
Aug. 18	1230	172	4.87	10.17	3.100
Aug. 23	2130	*314	8.89	*12.16	3.706
Sept. 8	1900	136	3.85	9.53	2.905

Minimum discharge, 0.74 ft³/s (0.021 m³/s) part of each day July 23-31, gage height, 5.10 ft (1.554 m); minimum gage height, 5.09 ft (1.551 m) Oct. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	.99	5.8	7.8	5.4	14	8.6	1.8	13	2.3	12	5.3
2	1.0	.94	4.8	6.6	5.0	11	7.5	1.6	11	7.5	8.8	4.0
3	1.0	.90	4.2	6.2	4.7	8.6	6.9	1.5	9.3	3.1	14	3.1
4	.96	.90	3.7	8.9	4.9	9.4	6.3	1.5	7.1	2.1	11	2.3
5	.96	.87	3.3	9.5	4.7	17	6.6	1.4	5.7	1.6	4.6	1.8
6	.96	.86	3.0	9.6	4.3	17	6.2	1.3	4.8	1.4	2.7	1.5
7	.95	.88	4.0	20	3.9	41	5.5	1.3	4.1	1.2	1.8	1.3
8	.93	.93	12	20	3.6	35	5.1	1.5	3.6	1.1	1.4	39
9	1.3	1.2	12	16	3.5	27	4.6	1.3	3.0	1.0	1.3	48
10	1.1	1.2	9.2	76	3.4	23	4.1	1.3	2.6	.94	1.2	28
11	1.1	1.5	7.5	43	3.3	19	3.7	1.2	2.2	.96	1.1	20
12	1.0	1.8	19	31	3.2	16	3.3	1.1	1.9	.94	1.1	15
13	.98	2.0	24	25	3.3	31	3.0	1.1	1.7	.93	1.0	10
14	.94	2.3	18	23	3.4	36	2.7	1.0	1.5	.94	.97	8.1
15	.90	14	16	33	3.3	28	2.4	.99	1.5	.89	2.2	5.9
16	.90	17	47	27	3.2	23	3.0	.94	1.4	.87	6.3	4.6
17	.96	8.8	33	22	3.0	18	3.1	.93	1.3	.86	5.6	3.7
18	.91	6.3	26	17	2.9	14	2.8	.93	1.2	.83	99	3.2
19	.90	5.0	21	13	2.9	11	2.5	.93	1.2	.82	38	2.7
20	2.5	4.2	17	11	3.1	26	2.9	.98	1.6	.82	23	2.2
21	3.6	3.6	16	8.9	3.1	27	3.3	.97	1.7	.81	16	1.9
22	2.5	3.1	13	7.4	2.9	40	2.9	1.2	1.3	.81	11	1.8
23	1.8	2.6	11	6.3	2.8	31	2.5	1.0	2.9	.78	52	1.6
24	1.6	2.2	9.9	6.4	6.5	25	2.6	88	2.3	.78	124	1.5
25	1.3	2.0	8.5	9.4	16	21	2.7	86	4.9	.78	58	1.4
26	1.3	1.9	21	9.4	13	17	2.8	49	8.5	.79	35	1.3
27	1.1	2.2	23	8.6	11	15	2.7	35	4.2	.77	25	1.3
28	1.0	3.7	18	8.1	17	14	2.5	26	3.0	.75	19	1.2
29	.97	8.0	14	7.6	---	13	2.2	18	2.1	.75	14	1.2
30	.96	7.4	10	6.6	---	11	2.0	19	1.6	.76	10	1.2
31	1.0	---	9.0	6.1	---	10	---	17	---	25	7.4	---
TOTAL	38.38	109.27	443.9	510.4	147.3	649.0	117.0	365.77	112.2	63.88	608.47	224.1
MEAN	1.24	3.64	14.3	16.5	5.26	20.9	3.90	11.8	3.74	2.06	19.6	7.47
MAX	3.6	17	47	76	17	41	8.6	88	13	25	124	48
MIN	.90	.86	3.0	6.1	2.8	8.6	2.0	.93	1.2	.75	.97	1.2

CAL YR 1976 TOTAL 2640.92 MEAN 7.22 MAX 68 MIN .82
WTR YR 1977 TOTAL 3389.67 MEAN 9.29 MAX 124 MIN .75

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.

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

GAGE.--Water-stage recorder. Datum of gage is 0.19 ft (0.058 m) above mean sea level.

REMARKS.--Records fair. Runoff affected by ditches and canals above station. Suspended sediment records for the current year are published on page 346 of this report.

AVERAGE DISCHARGE.--12 years, 39.8 ft³/s (1.127 m³/s), 25.74 in/yr (654 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, 270 ft³/s (7.65 m³/s) Mar. 22. Maximum gage height, 7.94 ft (2.420 m) Dec. 16. No flow July 25, 31, Aug. 1-4, 8-18, Sept. 1-7, 19-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	14	45	50	32	34	30	8.6	37	6.0	.06	.11
2	16	14	40	41	29	30	25	7.6	30	15	.05	.07
3	14	12	35	35	28	27	22	6.6	25	22	.06	.04
4	11	11	30	36	28	26	19	5.7	21	42	.12	.03
5	9.9	10	27	36	26	29	18	4.9	19	39	.28	.00
6	9.0	9.6	23	36	24	30	17	4.4	19	28	.28	.00
7	8.9	9.2	25	48	21	81	15	4.2	20	21	.17	.00
8	8.5	8.2	37	67	19	166	13	4.2	19	16	.11	2.0
9	8.8	7.2	47	60	18	151	11	3.9	17	12	.06	10
10	9.8	6.9	45	150	19	117	9.8	3.4	15	9.8	.04	6.1
11	9.8	6.5	42	235	18	95	8.9	2.9	14	8.5	.02	3.4
12	9.0	6.5	61	180	18	77	8.1	2.6	12	8.0	.00	2.1
13	8.4	6.5	113	130	18	100	7.4	2.2	11	6.0	.00	1.4
14	7.8	6.4	117	110	18	204	6.7	1.9	10	4.5	.02	.92
15	7.2	15	100	144	17	160	6.0	1.5	17	3.7	.04	.49
16	6.7	40	197	152	17	117	6.8	1.2	26	3.0	.04	.30
17	6.7	41	258	130	15	88	5.9	.90	20	2.4	.03	.23
18	7.8	38	204	110	15	67	4.7	.64	14	1.8	.06	.19
19	8.3	34	149	88	15	54	4.2	.32	13	1.4	.13	.15
20	11	30	112	70	15	88	4.0	.29	11	.92	2.5	.12
21	31	27	89	56	14	179	6.6	.39	11	.71	2.4	.09
22	35	23	71	54	13	208	11	.47	9.3	.48	1.8	.06
23	32	20	57	48	13	216	8.5	.28	8.3	.29	1.3	.05
24	28	17	48	45	15	164	8.4	15	8.0	.19	1.2	.06
25	24	15	40	53	37	121	11	112	7.6	.12	1.6	.09
26	21	14	59	58	37	93	19	112	9.9	.14	1.8	.07
27	19	17	108	55	32	71	18	89	9.9	.22	1.3	.06
28	16	24	99	51	36	57	14	66	8.8	.25	.78	.05
29	14	42	83	46	---	48	11	56	7.6	.21	.36	.04
30	12	49	69	40	---	42	9.8	53	6.6	.14	.23	.03
31	13	---	59	37	---	36	---	47	---	.10	.16	---
TOTAL	439.6	574.0	2489	2451	607	2976	359.8	619.09	457.0	253.87	17.00	28.25
MEAN	14.2	19.1	80.3	79.1	21.7	96.0	12.0	20.0	15.2	8.19	.55	.94
MAX	35	49	258	235	37	216	30	112	37	42	2.5	10
MIN	6.7	6.4	23	35	13	26	4.0	.28	6.6	.10	.00	.00

CAL YR 1976 TOTAL 18133.45 MEAN 49.5 MAX 626 MIN .11
WTR YR 1977 TOTAL 11271.61 MEAN 30.9 MAX 258 MIN .00

02084556 NORTH LAKE CANAL, ABOVE PUNGO LAKE, NEAR WENONA, N. C.

LOCATION.--Lat 35°43'35", long 76°31'01", Washington County, Hydrologic Unit 03020104, at confluence with Allen Canal, and 6.9 mi (11.1 km) east of Wenona.

DRAINAGE AREA.--0.29 mi² (0.75 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 8 ft (2.4 m), from topographic map.

REMARKS.--Water-discharge record fair. Recording rain gage at station.

EXTREMES FOR CURRENT PERIOD.--May to September 1976: Maximum discharge during period, 2.6 ft³/s (0.074 m³/s) June 3, gage height, 9.32 ft (2.841 m); no flow Aug. 30 to Sept. 15, 28-30.

Water year 1977: Maximum discharge, 7.2 ft³/s (0.20 m³/s) May 25, gage height, 11.67 ft (3.557 m); no flow Oct. 3-20, 22-31, Nov. 1-14, July 19 to Aug. 17, Sept. 1-7, 14-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR MAY 1976 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								.02	.07	.13	.07	.00
2								.04	.15	1.2	.05	.00
3								.04	1.4	.73	.05	.00
4								.03	2.0	.53	.05	.00
5								.03	1.1	.40	.05	.00
6								.02	.73	.32	.04	.00
7								.02	.53	.40	.04	.00
8								.03	.43	.43	.05	.00
9								.03	.35	.38	.10	.00
10								.02	.26	.32	.08	.00
11								.02	.24	.26	.06	.00
12								.02	.20	.24	.06	.00
13								.03	.17	.22	.05	.00
14								.04	.15	.17	.05	.00
15								.03	.14	.15	.04	.00
16								.02	.13	.15	.03	.02
17								.03	.11	.12	.03	.02
18								.04	.09	.14	.02	.02
19								.04	.09	.12	.02	.02
20								.02	.11	.10	.02	.02
21								.02	.17	.09	.02	.02
22								.02	.43	.07	.02	.02
23								.02	.53	.08	.02	.02
24								.02	.40	.07	.02	.01
25								.02	.26	.06	.01	.01
26								.02	.15	.05	.01	.01
27								.01	.13	.05	.01	.01
28								.01	.12	.05	.01	.00
29								.08	.10	.05	.01	.00
30								.12	.09	.05	.00	.00
31								.09	---	.11	.00	---
TOTAL								1.00	10.83	7.24	1.09	.20
MEAN								.032	.36	.23	.035	.007
MAX								.12	2.0	1.2	.10	.02
MIN								.01	.07	.05	.00	.00
CFSM								.11	1.24	.79	.12	.02
IN.								.13	1.38	.93	.14	.03

PAMLICO RIVER BASIN

02084556 NORTH LAKE CANAL, ABOVE PUNGO LAKE, NEAR WENONA, N. C.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.00	.06	.17	.21	.16	.21	.05	2.2	.05	.00	.00
2	.01	.00	.05	.15	.24	.15	.20	.04	1.8	.07	.00	.00
3	.00	.00	.05	.15	.23	.13	.19	.40	1.4	.06	.00	.00
4	.00	.00	.05	.15	.23	.15	.18	1.4	1.1	.05	.00	.00
5	.00	.00	.05	.14	.22	.17	.19	.81	.83	.04	.00	.00
6	.00	.00	.05	.13	.18	.19	.16	.58	.71	.04	.00	.00
7	.00	.00	.06	.19	.18	.81	.14	.84	.61	.04	.00	.00
8	.00	.00	.09	.20	.16	1.1	.14	4.0	.46	.03	.00	.02
9	.00	.00	.09	.22	.15	.81	.12	3.2	.44	.03	.00	.05
10	.00	.00	.07	3.4	.15	.64	.12	2.4	.39	.02	.00	.03
11	.00	.00	.07	3.1	.15	.51	.11	1.8	.31	.02	.00	.02
12	.00	.00	.13	2.0	.14	.43	.11	1.3	.27	.03	.00	.01
13	.00	.00	.17	1.4	.14	.79	.11	1.0	.22	.02	.00	.01
14	.00	.00	.15	1.2	.12	1.2	.10	.78	.19	.02	.00	.00
15	.00	.02	.16	1.5	.11	.92	.09	.65	.19	.01	.00	.00
16	.00	.04	.64	1.3	.11	.72	.09	.52	.17	.01	.00	.00
17	.00	.04	.78	.99	.10	.57	.08	.43	.15	.01	.00	.00
18	.00	.05	.56	.83	.10	.50	.08	.38	.14	.01	.03	.00
19	.00	.04	.43	.68	.10	.44	.07	.32	.12	.00	.06	.00
20	.00	.04	.35	.56	.10	.56	.07	.27	.11	.00	.06	.00
21	.01	.04	.32	.56	.09	.61	.07	.23	.10	.00	.05	.00
22	.00	.04	.22	.50	.08	.97	.07	.23	.08	.00	.04	.00
23	.00	.03	.20	.43	.08	.86	.07	.21	.11	.00	.03	.00
24	.00	.03	.19	.43	.16	.72	.09	3.7	.12	.00	.04	.00
25	.00	.03	.15	.40	.29	.57	.08	6.0	.11	.00	.03	.00
26	.00	.03	.28	.35	.22	.48	.09	5.8	.10	.00	.02	.00
27	.00	.05	.38	.32	.20	.41	.07	4.4	.08	.00	.02	.00
28	.00	.06	.32	.30	.20	.36	.06	3.7	.07	.00	.01	.00
29	.00	.08	.26	.26	---	.33	.06	3.2	.06	.00	.01	.00
30	.00	.06	.20	.24	---	.29	.05	3.1	.05	.00	.01	.00
31	.00	---	.20	.24	---	.27	---	2.6	---	.00	.01	---
TOTAL	.03	.68	6.78	22.49	4.44	16.82	3.27	54.34	12.69	.56	.42	.14
MEAN	.001	.023	.22	.73	.16	.54	.11	1.75	.42	.018	.014	.005
MAX	.01	.08	.78	3.4	.29	1.2	.21	6.0	2.2	.07	.06	.05
MIN	.00	.00	.05	.13	.08	.13	.05	.04	.05	.00	.00	.00
CFSM	.003	.08	.76	2.52	.55	1.86	.38	6.03	1.45	.06	.05	.02
IN.	.00	.09	.87	2.88	.57	2.15	.42	6.95	1.62	.07	.05	.02

WTR YR 1977 TOTAL 122.66 MEAN .34 MAX 6.0 MIN .00 CFSM 1.17 IN 15.68

02084556 NORTH LAKE CANAL ABOVE PUNGO LAKE NEAR WENONA, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1976 to September 1977.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1976 to September 1977.
WATER TEMPERATURES: June 1976 to September 1977.

INSTRUMENTATION.--Water-quality monitor since June 1976.

REMARKS.--No flow from Aug. 30 to Sept. 15, Oct. 3-20, Oct 22 to Nov. 14, 1976, July 19 to Aug. 17, Sept. 1-7, 14-30, 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 192 micromhos May 26, 27, 1977; minimum, 42 micromhos Nov. 17, 1976.
WATER TEMPERATURES: Maximum, 39.0°C July 9, 1977; minimum, 0.0°C Nov. 24, Dec. 3, 4, 1976

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 192 micromhos May 26, 27; minimum, 42 micromhos Nov. 17.
WATER TEMPERATURES: Maximum, 39.0°C July 9; minimum, 0.0°C Nov. 24, Dec. 3, 4.

WATER QUALITY DATA, JUNE TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)
JUN											
01...	1400	.08	67	5.3	31.0	200	6.9	150	1200	450	350
14...	1115	.16	82	3.6	26.0	450	3.2	180	290	72	150
JUL											
06...	1630	.32	78	4.0	28.0	500	3.8	120	250	20	24
27...	1200	.05	72	4.9	28.0	450	1.2	62	2900	--	48
AUG											
17...	1530	.03	68	5.4	31.0	150	3.4	110	1600	74	78

DATE	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS H+ (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
JUN											
01...	22	16	--	--	7.1	1.0	4.4	30	.4	.3	7
14...	11	11	.8	40	3.0	.8	4.3	46	.6	.2	--
JUL											
06...	15	15	.7	35	4.7	.9	4.0	36	.4	.2	--
27...	20	19	--	--	6.1	1.1	5.7	38	.6	.6	1
AUG											
17...	18	10	--	--	6.2	.5	5.7	41	.6	.5	9

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)
JUN										
01...	0	6	56	12	5.3	.4	30	138	65	.19
14...	0	--	--	17	7.3	.3	20	155	--	.21
JUL										
06...	0	--	--	21	7.3	.6	18	160	--	.22
27...	0	1	20	15	8.1	.4	30	169	69	.23
AUG										
17...	0	7	57	11	7.3	.4	34	147	71	.20

02084556 NORTH LAKE CANAL ABOVE PUNGO LAKE NEAR WENONA, N. C.--Continued

WATER QUALITY DATA, JUNE TO SEPTEMBER 1976

DATE	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	SUS-PENDED KJEL. NITRO-GEN (N) (MG/L)	DIS-SOLVED KJEL. NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)
JUN										
01...	.03	.00	.01	.01	.00	.98	.04	.94	.99	4.4
14...	.07	.00	.02	.02	.01	1.4	.30	1.1	1.4	6.3
JUL										
06...	.14	.00	.02	.02	.01	1.2	.00	1.2	1.2	5.4
27...	.02	.00	.02	.01	.00	2.1	1.0	1.1	2.1	9.3
AUG										
17...	.01	.00	.01	.01	.01	1.5	.30	1.2	1.5	6.7

DATE	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	DIS-SOL-VED ORGANIC CARBON (C) (MG/L)	TOTAL PCB (UG/L)
JUN										
01...	.02	.01	0	1500	--	--	0	7.9	7.5	.0
14...	.03	.01	5	2800	--	--	0	40	--	.0
JUL										
06...	.26	.20	0	2900	--	--	9	39	36	--
27...	.07	.14	10	1800	--	--	5	22	20	.0
AUG										
17...	.04	.03	11	1300	16	8	8	7.8	5.3	--

DATE	TOTAL ALDRIN (UG/L)	TOTAL CHLOR-DANE (UG/L)	TOTAL DDD (UG/L)	TOTAL DDE (UG/L)	TOTAL DDT (UG/L)	TOTAL DI-AZINON (UG/L)	TOTAL DI-ELDRIN (UG/L)	TOTAL ENDRIN (UG/L)
JUN								
01...	.00	.0	.00	.00	.00	.00	.00	.00
14...	.00	.0	.00	.00	.00	.00	.00	.00
JUL								
27...	.00	.0	.00	.00	.00	.00	.00	.00

DATE	TOTAL ETHION (UG/L)	TOTAL HEPTA-CHLOR (UG/L)	TOTAL HEPTA-CHLOR EPOXIDE (UG/L)	TOTAL LINDANE (UG/L)	TOTAL MALA-THION (UG/L)	TOTAL METH-OXY-CHLOR (UG/L)	TOTAL METHYL PARA-THION (UG/L)	TOTAL METHYL TRI-THION (UG/L)
JUN								
01...	.00	.00	.00	.00	.00	.00	.00	.00
14...	.00	.00	.00	.00	.00	.00	.00	.00
JUL								
27...	.00	.00	.00	.00	.00	.00	.00	.00

DATE	TOTAL PARA-THION (UG/L)	TOTAL TOX-APHENE (UG/L)	TOTAL TRI-THION (UG/L)	TOTAL 2,4-D (UG/L)	TOTAL 2,4,5-T (UG/L)	TOTAL SILVEX (UG/L)
JUN						
01...	.00	0	.00	.00	.00	.00
14...	.00	0	.00	.00	.00	.00
JUL						
27...	.00	0	.00	.00	.00	.00

02084556 NORTH LAKE CANAL ABOVE PUNGO LAKE NEAR WENONA, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM .7UM-MF (COL./ 100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)
DEC											
02...	1340	.05	104	5.9	7.0	150	7.4	71	400	56	120
JAN											
04...	1400	.16	87	4.6	5.0	300	4.1	120	<1	<1	<1
FEB											
01...	1510	.21	105	3.4	6.0	300	3.8	120	B4	<1	<1
15...	1015	.13	88	3.8	7.0	300	2.8	140	<1	<1	<1
MAR											
22...	1300	1.2	115	3.4	15.0	350	6.3	--	52	B24	B10
APR											
20...	1745	.08	72	4.8	23.5	400	4.9	140	62	B9	--
MAY											
03...	1030	.05	70	4.7	21.0	400	4.6	120	40	B2	B1000
17...	1445	.42	108	3.6	24.5	400	4.3	170	--	B12	B12
JUN											
14...	1045	.20	102	3.5	22.5	600	4.0	180	74	B10	28
AUG											
30...	1130	.01	63	4.6	28.0	400	5.6	100	B1100	B19	B230

DATE	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS H+ (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
DEC											
02...	40	16	--	--	12	2.4	5.5	23	.4	.8	29
JAN											
04...	24	24	--	--	6.7	1.7	4.8	30	.4	.3	--
FEB											
01...	17	17	1.1	55	4.4	1.4	4.9	39	.5	.2	--
15...	24	24	.7	35	6.7	1.8	5.0	31	.4	.4	--
MAR											
22...	16	16	.9	45	4.0	1.4	4.6	38	.5	.2	--
APR											
20...	26	25	--	--	6.6	2.4	4.6	27	.4	.2	2
MAY											
03...	29	28	--	--	5.9	3.4	4.3	24	.4	.2	1
17...	9	9	--	--	1.7	1.1	4.5	52	.7	.1	--
JUN											
14...	12	12	1.0	50	3.2	1.0	4.3	43	.5	.1	--
AUG											
30...	12	12	.6	30	2.9	1.1	5.8	51	.7	.3	0

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)
DEC										
02...	0	24	58	13	6.2	.3	38	149	94	.20
JAN										
04...	0	--	--	21	7.6	.4	21	144	--	.20
FEB										
01...	0	--	--	23	7.8	.4	21	158	--	.21
15...	0	--	--	20	7.6	.1	25	154	--	.21
MAR										
22...	0	--	--	21	7.8	.0	16	147	--	.20
APR										
20...	0	2	51	14	7.2	.1	30	152	68	.21
MAY										
03...	0	1	32	14	6.8	.0	35	153	72	.21
17...	0	--	--	21	7.7	.0	15	153	--	.21
JUN										
14...	0	--	--	19	7.6	.0	16	142	--	.19
AUG										
30...	0	0	.0	--	--	--	--	--	--	--

PAMLICO RIVER BASIN

02084556 NORTH LAKE CANAL ABOVE PUNGO LAKE NEAR WENONA, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	SUS-PENDED KJEL. NITRO-GEN (N) (MG/L)	DIS-SOLVED KJEL. NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)
DEC										
02...	.02	.01	.00	.01	.00	.74	.05	.69	.75	3.3
JAN										
04...	.06	.01	.00	.01	.01	.99	.16	.83	1.0	4.4
FEB										
01...	.09	.01	.00	.01	.00	1.2	.29	.91	1.2	5.4
15...	.05	.01	.00	.01	.01	1.1	.17	.93	1.1	4.9
MAR										
22...	.48	.01	.00	.01	.01	1.3	.20	1.1	1.3	5.8
APR										
20...	.03	.00	.00	.00	.00	1.3	.37	.93	1.3	5.8
MAY										
03...	.02	.01	.00	.01	.00	1.2	.20	1.0	1.2	5.4
17...	.17	.00	.00	.00	--	1.3	--	--	1.3	5.8
JUN										
14...	.08	.01	.00	.01	.00	1.4	.30	1.1	1.4	6.2
AUG										
30...	--	.01	.00	.01	.01	1.2	.25	.95	1.2	5.4

DATE	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	DIS-SOL-VED ORGANIC CARBON (C) (MG/L)	TOTAL PCB (UG/L)
DEC										
02...	.03	.02	2	1800	--	--	0	9.2	8.1	--
JAN										
04...	.01	.00	1	1400	30	28	2	41	41	--
FEB										
01...	.02	.00	0	3000	0	0	2	48	44	--
15...	.02	.01	7	3200	4	0	10	40	32	--
MAR										
22...	.01	.00	0	1500	0	0	0	6.8	2.9	--
APR										
20...	.03	.00	0	1600	0	0	0	37	37	--
MAY										
03...	.04	.02	0	1900	0	0	20	8.1	4.2	--
17...	.07	--	3	2100	3	0	4	13	6.2	--
JUN										
14...	.02	.01	2	2500	--	--	7	9.2	4.1	.0
AUG										
30...	.03	.02	0	1500	8	2	6	46	42	--

DATE	TOTAL ALDRIN (UG/L)	TOTAL CHLOR-DANE (UG/L)	TOTAL DDD (UG/L)	TOTAL DDE (UG/L)	TOTAL DDT (UG/L)	TOTAL DI-AZINON (UG/L)	TOTAL DI-ELDRIN (UG/L)	TOTAL ENDO-SULFAN (UG/L)	TOTAL ENDRIN (UG/L)
JUN									
14...	.00	.0	.00	.00	.00	.00	.00	.00	.00

DATE	TOTAL ETHION (UG/L)	TOTAL HEPTA-CHLOR (UG/L)	TOTAL HEPTA-CHLOR EPOXIDE (UG/L)	TOTAL LINDANE (UG/L)	TOTAL MALA-THION (UG/L)	TOTAL METH-OXY-CHLOR (UG/L)	TOTAL METHYL PARA-THION (UG/L)	TOTAL METHYL TRI-THION (UG/L)
JUN								
14...	.00	.00	.00	.00	.00	.00	.00	.00

DATE	TOTAL PARA-THION (UG/L)	TOTAL TOX-APHENE (UG/L)	TOTAL TRI-THION (UG/L)	TOTAL 2,4-D (UG/L)	TOTAL 2,4,5-T (UG/L)	TOTAL SILVEX (UG/L)
JUN						
14...	.00	0	.00	.00	.00	.00

PAMLICO RIVER BASIN

02084556 NORTH LAKE CANAL ABOVE PUNGO LAKE NEAR WENONA, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), JUNE TO SEPTEMBER 1976

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	JUNE		JULY		AUGUST		SEPTEMBER	
1	70	66	70	55	79	70	---	---
2	68	47	72	62	74	72	---	---
3	72	65	77	72	72	64	---	---
4	93	73	76	74	75	65	---	---
5	92	88	76	74	75	68	---	---
6	89	86	78	74	77	69	---	---
7	90	86	74	71	80	69	---	---
8	90	85	77	73	80	61	---	---
9	89	82	81	77	69	54	---	---
10	86	84	84	79	78	70	---	---
11	85	83	83	81	82	75	---	---
12	84	80	84	79	84	76	---	---
13	80	77	81	78	83	76	---	---
14	79	75	81	77	83	76	---	---
15	76	73	82	75	85	75	---	---
16	75	71	80	75	87	71	64	47
17	73	70	80	71	84	69	48	46
18	72	68	73	68	71	67	50	46
19	71	67	74	69	69	66	50	46
20	67	59	75	68	68	64	51	47
21	61	57	77	69	67	63	53	47
22	61	49	77	70	69	65	50	46
23	67	61	76	68	71	65	50	46
24	69	66	76	69	78	68	50	47
25	69	66	75	70	83	69	52	49
26	69	67	76	69	80	63	54	49
27	69	66	73	70	79	62	61	52
28	71	66	75	69	74	64	---	---
29	71	67	77	71	77	64	---	---
30	71	68	78	55	---	---	---	---
31	---	---	72	62	---	---	---	---
MONTH	93	47	84	55	87	54	64	46
YEAR	93	46						

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	51	46	---	---	88	84	80	77	102	98	82	81
2	49	46	---	---	93	88	78	77	103	98	81	80
3	---	---	---	---	98	93	79	76	101	96	80	79
4	---	---	---	---	102	97	77	77	98	95	79	77
5	---	---	---	---	102	97	76	75	95	91	78	77
6	---	---	---	---	99	97	75	75	92	85	83	79
7	---	---	---	---	100	90	75	72	84	81	95	82
8	---	---	---	---	98	85	75	72	85	81	114	97
9	---	---	---	---	104	98	73	71	86	83	119	115
10	---	---	---	---	106	104	145	72	85	83	122	118
11	---	---	---	---	106	99	153	144	84	81	122	118
12	---	---	---	---	99	83	162	154	82	79	121	115
13	---	---	---	---	82	78	163	161	81	79	116	112
14	---	---	---	---	80	78	162	151	80	78	130	117
15	---	---	54	45	79	69	161	153	78	76	134	125
16	---	---	45	43	78	66	162	159	76	74	132	124
17	---	---	45	42	84	79	160	158	75	73	131	123
18	---	---	45	44	83	81	159	157	75	72	124	116
19	---	---	47	44	81	80	157	155	73	71	116	113
20	---	---	48	46	82	80	155	150	72	69	115	111
21	64	58	50	48	81	76	151	144	70	69	114	109
22	---	---	51	50	77	75	146	140	72	69	127	110
23	---	---	55	51	76	75	142	134	74	70	132	124
24	---	---	59	53	75	74	135	125	73	61	134	128
25	---	---	58	55	77	75	126	119	72	68	133	126
26	---	---	58	55	75	71	117	113	78	73	130	124
27	---	---	58	50	77	75	115	113	82	78	127	122
28	---	---	65	53	81	78	113	107	83	81	123	121
29	---	---	80	66	81	81	108	100	---	---	124	120
30	---	---	84	78	81	79	102	99	---	---	127	124
31	---	---	---	---	81	80	102	99	---	---	128	120
MONTH	---	---	84	42	106	66	163	71	103	61	134	77

PAMLICO RIVER BASIN

02084556 NORTH LAKE CANAL ABOVE PUNGO LAKE NEAR WENONA, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	122	111	69	62	157	150	74	64	---	---	---	---
2	111	101	64	59	150	148	68	62	---	---	---	---
3	101	99	63	50	149	143	69	62	---	---	---	---
4	104	101	67	58	146	139	69	61	---	---	---	---
5	105	98	71	67	142	135	70	62	---	---	---	---
6	98	89	76	70	137	129	72	64	---	---	---	---
7	89	84	100	73	129	125	73	64	---	---	---	---
8	86	82	130	106	124	120	72	64	---	---	55	45
9	83	80	135	130	122	112	73	64	---	---	63	56
10	83	79	138	133	115	111	71	62	---	---	63	57
11	83	78	135	130	112	108	68	61	---	---	62	57
12	82	76	130	127	109	105	68	59	---	---	61	55
13	82	76	128	122	108	105	67	61	---	---	58	54
14	83	77	124	118	106	104	68	61	---	---	---	---
15	81	77	119	115	104	100	68	59	---	---	---	---
16	78	75	116	111	102	98	69	59	---	---	---	---
17	79	74	111	108	100	95	71	62	---	---	---	---
18	76	72	109	105	95	92	74	68	95	72	---	---
19	76	71	109	106	96	92	---	---	70	55	---	---
20	74	70	108	104	95	91	---	---	62	52	---	---
21	73	69	105	101	91	87	---	---	71	61	---	---
22	73	67	100	96	88	82	---	---	77	70	---	---
23	72	66	97	94	82	75	---	---	73	67	---	---
24	68	62	136	80	76	73	---	---	68	63	---	---
25	66	60	189	135	72	65	---	---	68	61	---	---
26	66	62	192	190	70	65	---	---	68	61	---	---
27	67	62	192	184	69	65	---	---	67	61	---	---
28	69	63	183	174	72	66	---	---	65	60	---	---
29	67	62	174	160	73	66	---	---	64	59	---	---
30	67	62	169	162	73	66	---	---	66	59	---	---
31	---	---	161	157	---	---	---	---	63	57	---	---
MONTH	122	60	192	50	157	65	74	59	95	52	63	45
YEAR	192	42										

TEMPERATURE (DEC. C) OF WATER, JUNE TO SEPTEMBER 1976

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	JUNE		JULY		AUGUST		SEPTEMBER	
1	34.0	25.5	30.5	23.0	34.5	25.5	---	---
2	31.5	22.5	27.5	22.5	29.0	23.0	---	---
3	22.5	19.5	27.0	22.0	25.0	22.0	---	---
4	20.0	18.0	26.5	23.0	32.5	21.0	---	---
5	22.0	17.0	25.5	22.0	33.0	18.5	---	---
6	24.5	17.0	28.5	22.5	35.0	20.0	---	---
7	22.5	17.0	25.0	23.0	36.0	20.5	---	---
8	25.0	18.5	28.5	22.5	29.0	24.5	---	---
9	27.0	19.5	30.0	23.0	28.0	23.5	---	---
10	24.5	20.5	31.0	23.0	33.0	22.0	---	---
11	26.0	20.5	29.0	24.5	34.0	22.5	---	---
12	30.5	21.5	32.0	25.0	35.0	23.5	---	---
13	23.5	21.0	31.5	23.5	36.0	24.0	---	---
14	29.0	20.0	29.5	21.5	34.5	24.5	---	---
15	28.0	20.0	33.0	22.5	35.0	24.5	---	---
16	31.0	21.5	34.0	25.0	31.5	24.5	28.5	20.5
17	29.5	23.0	33.0	25.0	32.0	21.0	29.0	20.0
18	31.5	22.0	29.0	24.5	31.0	18.5	28.0	19.0
19	32.5	23.0	31.5	22.0	29.0	19.5	28.0	17.0
20	30.0	23.5	32.5	20.5	24.0	20.0	27.5	16.0
21	27.5	24.0	34.0	23.0	28.0	22.0	24.5	20.0
22	25.0	22.5	35.0	25.0	33.0	24.0	25.5	14.0
23	27.0	22.0	32.0	25.5	34.5	22.5	24.0	11.5
24	28.5	22.0	36.5	24.5	33.0	23.0	23.0	13.5
25	30.5	23.5	34.5	24.5	32.0	22.5	22.5	15.0
26	31.0	24.5	33.0	20.5	31.0	20.5	24.0	15.0
27	31.0	24.5	30.5	21.5	30.0	20.0	26.0	20.5
28	32.5	23.0	35.5	25.0	31.5	20.0	---	---
29	32.5	23.5	36.0	25.0	32.0	24.5	---	---
30	32.5	24.5	38.0	26.5	---	---	---	---
31	---	---	33.5	25.5	---	---	---	---
MONTH	34.0	17.0	38.0	20.5	36.0	18.5	29.0	11.5
YEAR	38.0	11.5						

02084556 NORTH LAKE CANAL ABOVE PUNGO LAKE NEAR WENONA, N. C.--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.5	16.0	---	---	6.0	1.0	4.5	2.0	6.0	2.0	14.5	7.5
2	22.0	15.0	---	---	7.0	0.5	4.5	1.5	6.5	1.5	13.5	7.5
3	---	---	---	---	3.5	0.0	4.0	2.0	7.0	1.5	14.5	6.0
4	---	---	---	---	5.5	0.0	6.0	3.5	9.0	4.5	15.0	10.5
5	---	---	---	---	7.5	0.5	5.5	3.5	8.0	3.0	17.5	13.5
6	---	---	---	---	10.0	1.5	6.5	4.0	6.5	1.5	15.0	13.0
7	---	---	---	---	15.0	7.5	7.5	4.0	6.0	1.5	13.0	11.0
8	---	---	---	---	11.0	3.0	5.0	2.5	6.0	1.5	14.0	9.0
9	---	---	---	---	5.0	1.0	6.0	2.5	7.0	1.5	15.5	9.0
10	---	---	---	---	7.5	1.0	11.0	6.0	9.0	2.0	14.5	9.5
11	---	---	---	---	9.0	4.5	8.0	5.5	10.5	2.5	18.0	12.0
12	---	---	---	---	12.0	8.5	6.5	4.5	11.0	3.5	17.5	13.5
13	---	---	---	---	11.5	6.0	6.0	4.0	13.0	8.0	17.5	16.0
14	---	---	---	---	6.5	4.0	9.0	5.0	12.0	4.5	19.0	13.5
15	---	---	7.0	3.0	7.5	3.5	10.0	8.0	12.5	5.0	19.0	12.5
16	---	---	9.5	4.0	10.5	8.0	9.0	5.5	7.0	2.5	20.0	13.5
17	---	---	9.5	2.5	9.5	8.0	5.0	2.5	8.0	1.5	17.5	12.0
18	---	---	10.0	3.0	8.0	5.5	4.5	2.5	6.5	1.5	17.0	13.5
19	---	---	12.5	2.5	8.5	5.0	4.5	2.0	9.5	2.5	18.5	13.5
20	---	---	11.0	6.5	10.0	6.5	5.5	2.5	12.0	6.5	14.0	12.5
21	16.0	9.5	11.0	5.5	9.5	1.5	5.5	2.5	10.0	3.5	13.0	11.0
22	---	---	7.0	1.5	3.5	1.0	4.5	2.5	12.0	2.5	16.0	11.5
23	---	---	3.5	0.5	5.0	1.5	5.0	2.0	15.0	4.0	15.0	10.0
24	---	---	3.5	0.0	3.5	1.0	6.5	3.0	14.0	8.0	16.0	10.0
25	---	---	6.0	0.5	5.5	1.0	8.0	5.5	15.5	9.5	15.5	10.0
26	---	---	10.5	1.0	7.5	5.0	7.0	4.5	19.0	11.0	16.0	9.5
27	---	---	16.0	10.0	5.5	3.0	7.5	4.5	19.5	12.0	16.5	9.0
28	---	---	15.0	11.0	8.0	3.5	9.5	6.0	16.0	10.5	17.5	12.5
29	---	---	17.0	10.0	8.5	5.5	7.5	2.5	---	---	21.5	15.0
30	---	---	9.5	3.5	5.5	3.0	5.0	2.0	---	---	22.0	17.0
31	---	---	---	---	9.0	4.5	6.0	2.5	---	---	24.5	16.0
MONTH	---	---	17.0	0.0	15.0	0.0	11.0	1.5	19.5	1.5	24.5	6.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	21.0	13.0	28.5	11.0	24.0	19.5	38.0	25.5	---	---	---	---
2	20.0	14.5	28.0	13.0	24.5	20.0	32.0	24.5	---	---	---	---
3	23.0	17.5	28.5	17.0	25.0	19.5	34.0	22.5	---	---	---	---
4	23.0	17.5	23.5	18.0	25.0	19.0	35.0	20.5	---	---	---	---
5	22.5	15.0	26.5	20.0	26.5	20.5	37.0	23.0	---	---	---	---
6	20.5	12.5	28.5	20.5	27.0	22.0	38.0	25.5	---	---	---	---
7	20.0	10.5	27.5	20.0	24.5	19.0	38.5	27.0	---	---	---	---
8	24.0	12.5	22.0	17.5	24.0	16.5	38.5	27.0	---	---	25.0	23.0
9	20.5	10.5	20.0	16.5	22.0	18.5	39.0	27.5	---	---	31.5	23.0
10	21.5	8.5	19.0	14.5	24.0	16.5	35.0	26.0	---	---	32.5	23.0
11	25.0	12.0	20.0	14.0	25.0	17.0	32.5	25.5	---	---	29.5	21.0
12	27.0	14.5	22.0	15.0	23.0	19.0	33.5	23.5	---	---	27.0	15.5
13	28.5	16.5	23.5	16.5	26.5	19.0	34.0	25.0	---	---	25.5	14.0
14	28.5	17.0	25.0	18.0	26.5	19.0	35.5	25.0	---	---	---	---
15	27.0	17.5	25.0	19.0	23.5	20.5	35.0	22.5	---	---	---	---
16	24.0	15.5	23.0	15.5	27.0	19.0	33.5	21.0	---	---	---	---
17	27.0	13.5	24.5	16.0	27.5	20.0	33.0	22.5	---	---	---	---
18	24.5	13.5	26.0	19.0	29.5	21.0	33.5	25.0	24.0	21.0	---	---
19	27.5	15.5	27.5	20.0	32.0	23.0	---	---	23.0	20.0	---	---
20	29.0	18.0	23.0	20.0	32.5	23.0	---	---	31.0	20.0	---	---
21	28.5	17.5	26.0	19.0	32.0	23.5	---	---	28.5	19.5	---	---
22	28.5	16.0	25.0	20.0	31.5	21.0	---	---	32.0	20.0	---	---
23	28.5	16.5	26.0	20.0	24.0	20.5	---	---	31.5	20.5	---	---
24	23.5	19.5	21.0	19.0	24.5	20.0	---	---	31.5	21.5	---	---
25	25.5	17.0	19.5	18.0	29.0	21.5	---	---	32.0	21.0	---	---
26	25.0	15.5	20.5	18.0	32.5	22.5	---	---	31.0	18.5	---	---
27	25.0	12.5	22.5	18.5	31.5	23.0	---	---	31.0	19.0	---	---
28	28.0	14.0	23.0	18.5	35.5	24.0	---	---	29.5	19.5	---	---
29	25.5	14.5	22.5	19.0	36.0	25.0	---	---	30.5	19.0	---	---
30	25.0	10.0	24.5	19.0	36.5	25.0	---	---	32.5	20.5	---	---
31	---	---	24.0	20.0	---	---	---	---	31.0	21.5	---	---
MONTH	29.0	8.5	28.5	11.0	36.5	16.5	39.0	20.5	32.5	18.5	32.5	14.0
YEAR	39.0	0.0										

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 except those for period of no gage-height record, Jan. 10 to Feb. 12, which are fair. Suspended-sediment records for the current year are published on page 346 of this report.

AVERAGE DISCHARGE.--14 years, 122 ft³/s (3.455 m³/s), 11.75 in/yr (298 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,080 ft³/s (257 m³/s) Feb. 7, 1965, gage height, 15.18 ft (4.627 m), site and datum then in use; minimum, 0.06 ft³/s (0.002 m³/s) Aug. 14, 15, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,340 ft³/s (37.9 m³/s) Sept. 8, gage height, 6.04 ft (1.841 m), no peak above base of 2,300 ft³/s (65.1 m³/s); minimum, 0.06 ft³/s (0.002 m³/s) Aug. 14, 15, gage height, 0.63 ft (0.192 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	9.8	43	41	47	208	138	28	21	12	.47	1.1
2	5.0	8.5	30	40	43	141	112	28	21	9.2	.36	1.0
3	8.5	8.7	25	36	42	104	114	28	24	7.0	.36	.85
4	7.9	8.8	21	37	39	194	143	28	24	5.2	.34	.72
5	6.1	8.5	20	37	38	506	438	29	18	3.9	.36	.61
6	4.4	8.7	19	38	38	538	371	31	16	3.4	.34	.49
7	4.1	8.8	75	43	38	818	198	30	15	3.2	.29	.55
8	4.1	8.4	257	50	37	411	152	38	14	2.9	.29	463
9	21	9.1	199	55	38	246	122	41	18	2.5	.29	409
10	41	5.8	90	677	40	185	101	32	16	6.2	.25	74
11	26	6.9	69	343	40	153	93	27	13	15	.21	40
12	17	9.3	264	100	40	136	79	23	11	22	.17	24
13	12	9.4	253	65	48	488	68	22	9.1	23	.13	16
14	8.0	9.7	124	91	68	343	64	21	8.3	18	.08	9.6
15	5.9	21	81	292	68	204	59	21	8.0	15	1.7	6.2
16	4.4	24	145	172	60	161	55	19	7.7	12	7.2	7.1
17	3.9	22	151	80	55	128	52	18	7.4	7.0	3.9	24
18	3.8	18	88	50	50	113	48	17	25	5.3	39	25
19	3.4	16	66	40	49	105	45	16	52	4.1	17	21
20	93	14	59	37	54	128	44	18	30	3.3	6.4	16
21	170	13	67	33	55	162	41	16	22	2.9	3.8	12
22	48	11	71	30	52	455	40	15	18	2.6	3.3	7.2
23	28	9.3	56	27	50	386	38	13	16	2.2	2.6	5.2
24	20	8.8	50	26	69	218	41	14	15	2.2	2.2	3.7
25	17	8.8	45	24	154	164	47	25	15	2.2	1.8	2.9
26	15	8.8	57	23	114	134	41	144	15	1.4	1.7	2.4
27	13	10	92	21	210	114	36	89	16	.75	2.2	2.2
28	12	16	71	24	432	104	33	48	16	.58	2.1	2.2
29	11	125	62	50	---	97	31	34	15	.51	1.7	2.0
30	8.1	105	50	60	---	163	30	27	14	.62	1.5	1.7
31	11	---	44	50	---	195	---	23	---	.60	1.4	---
TOTAL	637.9	551.1	2744	2692	2068	7502	2874	963	520.5	196.76	103.44	1181.72
MEAN	20.6	18.4	88.5	86.8	73.9	242	95.8	31.1	17.4	6.35	3.34	39.4
MAX	170	125	264	677	432	818	438	144	52	23	39	463
MIN	3.4	5.8	19	21	37	97	30	13	7.4	.51	.08	.49
CFSM	.15	.13	.63	.62	.52	1.72	.68	.22	.12	.05	.02	.28
IN.	.17	.15	.72	.71	.55	1.98	.76	.25	.14	.05	.03	.31

CAL YR 1976 TOTAL 20842.31 MEAN 56.9 MAX 873 MIN .20 CFSM .40 IN 5.50
WTR YR 1977 TOTAL 22034.42 MEAN 60.4 MAX 818 MIN .08 CFSM .43 IN 5.81

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) above mean sea level (levels by North Carolina State Highway Commission).

REMARKS.--Records good except those for period of no gage-height record, June 16 to July 22, which are poor. Suspended-sediment records for the current year are published on page 346 of this report.

AVERAGE DISCHARGE.--16 years, 69.4 ft³/s (1.965 m³/s), 11.55 in/yr (293 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 (0.0003 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.--Maximum discharge, 920 ft³/s (26.1 m³/s) Jan. 10, gage height, 3.60 ft (1.097 m), no peak above base of 1,600 ft³/s (45.3 m³/s); minimum, 0.01 ft³/s (0.0003 m³/s) Sept. 3-7; minimum gage height, 0.28 ft (0.085 m) Sept. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	3.8	27	22	36	78	46	16	12	4.0	.29	.02
2	3.3	3.6	20	22	31	51	37	15	12	3.0	.28	.02
3	3.1	4.2	17	20	29	37	35	17	12	2.5	.35	.01
4	2.5	4.5	15	20	26	70	38	17	11	2.0	.26	.01
5	2.0	3.7	14	20	24	215	152	17	9.5	1.8	.21	.01
6	1.6	3.3	13	20	23	260	127	17	10	1.7	.19	.01
7	1.1	3.4	87	22	22	358	57	18	13	1.5	.15	.01
8	1.1	3.8	158	28	22	160	43	32	11	1.3	.12	258
9	30	3.9	93	35	21	91	34	20	11	1.1	.10	158
10	21	3.5	49	644	20	66	30	15	9.9	3.0	.09	16
11	8.3	4.0	39	227	20	54	28	14	9.6	5.0	.08	6.5
12	4.2	4.5	150	65	20	51	24	13	9.0	10	.06	2.9
13	2.8	6.0	110	56	22	178	23	13	8.3	7.0	.07	1.8
14	2.2	7.0	58	49	30	127	22	12	8.0	5.0	.14	1.2
15	2.1	9.5	44	159	24	72	22	12	7.6	4.0	.32	1.0
16	1.7	10	108	87	21	57	21	11	7.7	3.0	.23	1.4
17	2.2	9.5	69	55	20	48	21	11	9.1	2.0	.14	16
18	3.0	8.2	47	44	18	43	21	10	10	1.5	.34	5.9
19	2.1	6.6	37	37	18	40	21	10	30	1.1	.22	2.7
20	78	5.9	34	32	20	52	21	9.9	22	.95	.16	2.0
21	75	5.6	49	30	21	61	21	9.5	18	.80	.15	1.3
22	16	5.9	42	27	19	236	21	9.4	14	.70	.15	1.1
23	9.2	5.7	33	24	18	169	21	9.1	12	1.2	.13	1.1
24	6.2	5.3	30	20	28	84	27	9.5	12	.90	.15	.99
25	4.9	5.2	30	19	78	61	22	15	10	.77	.14	.93
26	4.4	5.2	41	18	43	49	21	62	10	.64	.20	.91
27	4.8	5.4	55	18	101	41	18	36	12	.50	.15	.84
28	4.3	9.3	44	19	181	37	17	19	10	.41	.11	.78
29	4.3	132	33	49	---	35	17	14	8.0	.36	.08	.66
30	3.9	55	28	53	---	60	16	12	6.0	.31	.06	.62
31	3.9	---	23	40	---	67	---	12	---	.27	.05	---
TOTAL	312.3	343.5	1597	1981	956	3008	1024	507.4	344.7	68.31	5.17	482.72
MEAN	10.1	11.5	51.5	63.9	34.1	97.0	34.1	16.4	11.5	2.20	.17	16.1
MAX	78	132	158	644	181	358	152	62	30	10	.35	258
MIN	1.1	3.3	13	18	18	35	16	9.1	6.0	.27	.05	.01
CFSM	.12	.14	.63	.78	.42	1.19	.42	.20	.14	.03	.002	.20
IN.	.14	.16	.73	.90	.44	1.37	.47	.23	.16	.03	.00	.22

CAL YR 1976 TOTAL 10872.12 MEAN 29.7 MAX 531 MIN .18 CFSM .36 IN 4.96
WTR YR 1977 TOTAL 10630.10 MEAN 29.1 MAX 644 MIN .01 CFSM .36 IN 4.85

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) above mean sea level. Prior to Oct. 22, 1925, nonrecording gage at same site at datum 0.58 ft (0.177 m) lower.

REMARKS.--Records good. Prior to December 1962, some diurnal fluctuation and infrequent regulation at low flow caused by small mill 5 mi (8 km) upstream. Suspended sediment records for the current year are published on page 346 of this report.

AVERAGE DISCHARGE.--52 years, 141 ft³/s (3.993 m³/s), 12.77 in/yr (324 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.--Maximum discharge, 1,530 ft³/s (43.3 m³/s) Jan. 10, gage height, 4.39 ft (1.338 m), no peak above base of 4,500 ft³/s (127 m³/s); minimum, 0.50 ft³/s (0.014 m³/s), Aug. 12, 13, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	6.1	53	40	28	185	83	24	17	5.2	.81	1.7
2	9.2	5.5	36	33	26	118	70	24	17	4.4	.86	1.4
3	7.5	5.5	28	34	26	87	69	24	16	3.9	1.6	1.3
4	5.2	6.3	23	32	25	158	71	32	14	3.7	2.7	1.0
5	4.2	5.9	20	32	27	582	240	35	12	3.5	3.2	.91
6	3.4	6.6	19	32	24	633	283	38	12	3.4	3.6	.63
7	2.8	8.9	206	36	25	817	127	47	19	2.7	3.9	.73
8	2.4	8.5	370	43	25	394	95	52	23	2.4	4.5	37
9	109	7.7	227	49	26	215	79	46	14	2.2	4.9	136
10	100	7.8	98	985	27	155	69	30	11	2.0	5.2	38
11	30	7.6	72	574	29	125	64	24	11	105	3.5	17
12	14	8.2	315	183	32	107	59	22	11	74	.57	8.1
13	8.2	9.2	262	136	47	310	55	21	10	28	.55	4.3
14	5.6	9.1	117	103	70	288	52	19	9.5	15	.60	3.0
15	4.0	11	79	443	56	152	49	18	8.6	9.6	.65	2.3
16	3.1	13	265	284	48	116	45	17	7.8	7.1	1.8	1.9
17	2.7	17	163	139	43	94	42	16	7.6	5.2	1.6	1.5
18	3.4	15	94	85	38	83	40	15	12	3.8	3.0	.81
19	4.1	15	67	65	39	76	39	14	10	2.6	3.2	.73
20	128	14	58	56	47	88	37	13	8.0	2.2	4.9	.81
21	250	13	85	54	53	125	34	13	7.0	2.1	6.3	.81
22	55	12	77	51	45	416	34	13	6.0	1.9	3.9	.73
23	28	12	56	45	40	358	32	13	6.3	1.6	3.2	.63
24	17	11	50	40	54	170	34	13	5.7	1.7	3.6	.73
25	13	11	44	43	229	122	35	17	5.5	1.5	2.6	.91
26	10	11	61	46	115	98	32	102	7.1	1.1	2.7	.91
27	7.8	11	106	39	164	85	29	65	12	.94	3.8	.81
28	7.7	33	71	36	487	77	26	42	11	.80	4.0	.81
29	7.7	314	58	33	---	73	25	29	8.0	.69	3.7	.73
30	7.9	122	49	31	---	96	24	22	6.4	.63	3.1	.73
31	7.6	---	43	30	---	116	---	19	---	.68	2.2	---
TOTAL	867.2	737.9	3272	3832	1895	6519	1973	879	325.5	299.54	90.74	266.92
MEAN	28.0	24.6	106	124	67.7	210	65.8	28.4	10.9	9.66	2.93	8.90
MAX	250	314	370	985	487	817	283	102	23	105	6.3	136
MIN	2.4	5.5	19	30	24	73	24	13	5.5	.63	.55	.63
CFSM	.19	.16	.71	.83	.45	1.40	.44	.19	.07	.06	.02	.06
IN.	.22	.18	.81	.95	.47	1.62	.49	.22	.08	.07	.02	.07

CAL YR 1976 TOTAL 22865.45 MEAN 62.5 MAX 1210 MIN .53 CFSM .42 IN 5.67
WTR YR 1977 TOTAL 20957.80 MEAN 57.4 MAX 985 MIN .55 CFSM .38 IN 5.20

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 current year.

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) above mean sea level. 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. Slight diurnal fluctuation caused by water plants above station. Flow regulated by Lake Michie (see p. 257). An average of 27.9 ft³/s (0.79 m³/s) was diverted from Flat River, an upstream tributary, for Durham municipal water supply, and an average of 2.7 ft³/s (0.076 m³/s) from Knap of Reeds Creek, an upstream tributary for Butner municipal water supply. Sewage effluent from Durham, about 11.2 ft³/s (0.32 m³/s) and Butner (2.6 ft³/s (0.074 m³/s) was returned to Neuse River 3 mi (5 km) upstream from station, the remainder, about 9.8 ft³/s (0.28 m³/s) was diverted into the Cape Fear River basin. Suspended sediment records for the current year are published on page 346 of this report.

AVERAGE DISCHARGE.--50 years, 512 ft³/s (14.50 m³/s), 13.22 in/yr (336 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.--Maximum discharge, 3,440 ft³/s (97.4 m³/s) Mar. 8, gage height, 14.93 ft (4.551 m), no peak above base of 4,500 ft³/s (127 m³/s); minimum, 9.0 ft³/s (0.255 m³/s) Aug. 8, 9, gage height, 1.14 ft (0.347 m); minimum gage height, 1.11 ft Sept. 5, 6, (0.338 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	17	215	145	150	1070	450	57	65	37	10	20
2	32	19	117	113	206	603	353	55	57	33	26	20
3	27	20	78	116	194	433	295	57	51	28	31	19
4	23	20	61	129	172	414	362	59	51	24	27	16
5	27	19	48	126	169	1500	835	65	46	23	19	12
6	27	19	42	144	152	1630	1480	71	39	25	18	12
7	26	17	166	185	143	2930	832	68	66	25	14	15
8	24	14	578	240	146	3110	544	99	47	24	10	418
9	82	16	674	199	130	1520	406	141	45	23	13	1580
10	116	21	358	1680	148	771	322	174	52	22	15	460
11	96	21	216	3140	153	584	292	120	42	69	17	133
12	55	24	578	1810	145	497	277	146	35	93	18	65
13	40	25	835	658	169	1060	244	110	33	113	18	41
14	32	20	461	471	230	1670	240	61	36	66	16	32
15	27	72	267	1000	221	904	214	46	36	45	34	27
16	23	109	300	1070	184	582	204	42	34	35	60	23
17	19	57	451	658	176	431	198	43	34	27	38	61
18	30	50	300	471	162	368	207	42	39	22	152	56
19	21	41	223	400	156	305	179	41	53	24	132	46
20	177	33	196	330	158	323	127	40	64	24	41	36
21	549	27	245	270	158	435	105	40	49	22	27	29
22	255	23	255	228	152	1020	100	37	42	22	20	25
23	100	24	219	210	107	1710	96	33	37	21	21	21
24	52	23	185	195	146	943	101	37	36	16	49	20
25	35	22	144	183	353	609	116	103	38	13	27	16
26	41	18	197	282	352	468	134	470	36	17	21	12
27	34	20	261	294	332	383	98	388	31	19	20	14
28	27	22	274	303	1410	348	78	209	35	19	17	16
29	23	191	217	208	---	325	70	142	37	19	15	16
30	22	449	185	194	---	428	64	114	37	18	15	15
31	21	---	168	208	---	573	---	102	---	14	21	---
TOTAL	2109	1453	8514	15660	6374	27947	9023	3212	1303	982	962	3276
MEAN	68.0	48.4	275	505	228	902	301	104	43.4	31.7	31.0	109
MAX	549	449	835	3140	1410	3110	1480	470	66	113	152	1580
MIN	19	14	42	113	107	305	64	33	31	13	10	12
CFSM	.13	.09	.52	.96	.43	1.72	.57	.20	.08	.06	.06	.21
IN.	.15	.10	.60	1.11	.45	1.98	.64	.23	.09	.07	.07	.23

CAL YR 1976 TOTAL 81178 MEAN 222 MAX 4130 MIN 14 CFSM .42 IN 5.74
WTR YR 1977 TOTAL 80815 MEAN 221 MAX 3140 MIN 10 CFSM .42 IN 5.72

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 Honeycutt Creek.

DRAINAGE AREA.--770 mi² (1,994 km²).

PERIOD OF RECORD.--July 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 182.62 ft (55.663 m) above mean sea level.

REMARKS.--Records good. Diversions for municipal water supply for cities of Durham and Butner (see sta 02087000). The city of Raleigh diverted an average of 22 ft³/s (0.62 m³/s) 1.2 mi (1.9 km) upstream from station for municipal water supply, most of which was returned downstream as sewage effluent. Suspended sediment records for the current year are published on page 346 of this report. Gage height telemeter at station.

AVERAGE DISCHARGE.--7 years, 826 ft³/s (23.39 m³/s), 14.57 in/yr (370 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, 7.2 ft³/s (0.20 m³/s) Oct. 12, 13, 1970, gage height, 1.62 ft (0.494 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)
Mar. 8	1900	*4460	126	*14.35	4.374

Minimum discharge, 8.7 ft³/s (0.246 m³/s) July 9, Aug. 1; minimum gage height, 1.90 ft (0.579 m) Aug. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	44	356	188	226	2130	627	90	98	25	11	28
2	22	26	193	166	194	1200	461	84	81	20	19	30
3	33	27	126	147	252	683	382	78	72	15	34	25
4	24	34	87	150	214	636	426	87	66	34	30	21
5	24	37	79	149	213	1660	877	92	63	32	24	22
6	24	31	71	155	205	2370	2240	97	63	27	17	26
7	22	22	202	198	182	3550	1780	103	56	17	12	24
8	24	26	621	279	171	4380	877	119	64	11	20	401
9	102	27	1000	279	162	4090	577	117	67	11	27	1650
10	95	26	606	2150	162	1960	435	139	69	37	22	1270
11	114	26	338	3610	182	961	356	139	52	60	16	284
12	82	34	925	3790	185	710	325	116	44	61	11	121
13	61	35	1390	1950	208	2520	293	126	39	72	18	76
14	44	25	911	757	257	3340	254	102	35	86	39	59
15	30	66	467	1170	280	2200	248	67	40	61	68	48
16	31	155	432	1770	245	1120	216	52	41	46	48	38
17	28	142	517	1600	219	680	206	54	40	38	44	44
18	31	98	453	1000	205	507	191	57	38	30	123	62
19	26	79	301	600	198	438	192	55	37	23	190	65
20	235	57	263	500	201	399	162	53	40	13	105	56
21	508	59	287	420	200	480	138	51	48	19	55	40
22	496	52	308	370	194	1170	137	43	45	35	41	36
23	211	45	284	310	175	2370	125	42	45	36	35	32
24	113	42	241	280	184	2020	129	49	45	29	30	28
25	83	42	204	220	424	1030	133	113	42	16	24	22
26	86	38	219	265	488	656	128	247	42	13	26	15
27	68	30	324	331	485	485	129	447	43	27	23	13
28	52	44	328	341	1880	410	106	263	39	36	19	18
29	52	100	280	325	---	384	99	159	31	33	16	30
30	44	334	227	229	---	449	93	126	28	24	16	37
31	54	---	207	224	---	689	---	105	---	16	23	---
TOTAL	2840	1803	12247	23923	8191	45677	12342	3472	1513	1003	1186	4621
MEAN	91.6	60.1	395	772	293	1473	411	112	50.4	32.4	38.3	154
MAX	508	334	1390	3790	1880	4380	2240	447	98	86	190	1650
MIN	21	22	71	147	162	384	93	42	28	11	11	13
CFSM	.12	.08	.51	1.00	.38	1.91	.53	.15	.07	.04	.05	.20
IN.	.14	.09	.59	1.16	.40	2.21	.60	.17	.07	.05	.06	.22

CAL YR 1976 TOTAL 114897 MEAN 314 MAX 4600 MIN 10 CFSM .41 IN 5.55
WTR YR 1977 TOTAL 118818 MEAN 326 MAX 4380 MIN 11 CFSM .42 IN 5.74

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.

WATER-DISCHARGE RECORDS

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) above mean sea level. Prior to Mar. 18, 1942, at site 1,100 ft (335 m) upstream at same datum.

REMARKS.--Water-discharge record 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. 259), a downstream tributary, an average of 4.9 ft³/s (0.14 m³/s), and from the Neuse River upstream from station an average of 29 ft³/s (0.82 m³/s), most of which was returned as sewage effluent upstream from station.

AVERAGE DISCHARGE.--50 years, 1,174 ft³/s (33.25 m³/s), 13.98 in/yr (355 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 (0.085m), 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 flood-mark at former site, discharge, 21,200 ft³/s (600 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,100 ft³/s (201 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar. 14	2000	*7490	212	*11.46	3.493

Minimum discharge, 50 ft³/s (14.2 m³/s) Aug. 14, 15, gage height, 0.73 ft (0.223 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	269	644	456	461	2520	1270	279	287	108	81	76
2	122	215	549	411	461	2040	1030	271	275	132	214	80
3	115	183	389	386	433	1280	860	263	239	100	124	82
4	123	175	306	390	505	956	872	255	209	84	139	78
5	122	179	262	392	461	2150	1350	283	195	87	106	70
6	117	176	247	380	442	2620	2670	307	188	98	84	72
7	116	171	664	498	415	3900	2670	291	295	93	71	77
8	114	168	1600	584	388	4900	1830	374	216	85	63	1420
9	337	170	1760	624	383	4580	1210	356	192	78	92	2820
10	569	173	1370	2760	383	4050	938	311	213	80	82	2070
11	285	177	973	4580	388	2000	788	329	192	71	79	1040
12	245	189	2230	3930	397	1320	695	320	171	107	78	447
13	200	227	2770	3680	420	2640	645	283	164	146	64	282
14	172	202	1970	1930	471	6860	600	291	157	149	57	215
15	151	262	1310	1810	510	5570	555	247	157	150	89	185
16	132	524	1170	2100	505	2550	525	199	157	125	240	166
17	133	431	1140	2010	456	1530	485	174	151	96	142	211
18	188	353	1000	1300	428	1150	466	174	148	83	388	202
19	155	285	789	870	433	968	447	171	145	78	561	191
20	461	253	628	800	437	980	461	255	133	73	366	179
21	2560	223	699	700	424	1020	480	213	142	67	234	167
22	1250	212	672	600	415	1680	397	174	136	75	152	137
23	718	199	617	560	406	2710	370	160	133	72	125	124
24	409	187	565	530	437	2760	365	209	139	73	115	119
25	299	179	496	545	788	1970	433	992	151	70	111	115
26	359	177	562	545	872	1310	410	1280	148	73	101	109
27	360	179	680	580	816	1020	365	1000	127	69	94	105
28	260	186	700	635	1630	849	352	766	124	62	90	101
29	212	517	655	695	---	783	311	545	117	65	84	95
30	200	535	569	565	---	1150	295	392	108	79	84	96
31	254	---	502	485	---	1500	---	329	---	72	80	---
TOTAL	10870	7376	28488	36331	14565	71316	24145	11493	5209	2800	4390	11131
MEAN	351	246	919	1172	520	2301	805	371	174	90.3	142	371
MAX	2560	535	2770	4580	1630	6860	2670	1280	295	150	561	2820
MIN	114	168	247	380	383	783	295	160	108	62	57	70
CFSM	.31	.22	.81	1.03	.46	2.02	.71	.33	.15	.08	.13	.33
IN.	.35	.24	.93	1.19	.48	2.33	.79	.38	.17	.09	.14	.36

CAL YR 1976 TOTAL 214884 MEAN 587 MAX 4920 MIN 66 CFSM .52 IN 7.01
WTR YR 1977 TOTAL 228114 MEAN 625 MAX 6860 MIN 57 CFSM .55 IN 7.44

02087500 NEUSE RIVER NEAR CLAYTON, N. C. --Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1944, 1956-58, 1964 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1973 to current year.
WATER TEMPERATURES: October 1943 to September 1944, October 1955 to September 1958, July 1973 to current year.

REMARKS.--Miscellaneous chemical data published for water years 1947, 1949, 1955, 1958-63. Daily records of specific conductance for the period October 1955 to September 1958 are available in the district office in Raleigh. During period March 1956 to September 1958, data were collected at bridge on U.S. Highway 70A located 9.9 miles (15.9 km) downstream and published as Neuse River near Selma.

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, 315 micromhos July 29, 1977; minimum daily, 43 micromhos Mar. 19, 20, 1975.
WATER TEMPERATURES: Maximum daily, 32.0°C Aug. 16, 1957, July 8, Aug. 12, 1977; minimum daily, 0.0°C on Dec. 19, 1943, Feb. 15, 17, 18, 19, 1958.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 315 micromhos July 29; minimum daily, 57 micromhos Mar. 13.
WATER TEMPERATURES: Maximum daily, 32.0°C July 8, Aug. 12; minimum daily, 1.0°C Jan. 18-24.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
NOV										
30...	1445	490	123	6.4	8.0	25	10.2	26	2	6.5
FEB										
10...	0915	374	130	7.1	1.0	20	12.4	26	0	6.6
MAR										
14...	1100	6960	57	6.6	15.0	300	8.5	15	6	3.8
MAY										
25...	0700	884	115	6.3	20.0	40	6.2	25	0	6.6
JUL										
08...	1030	89	245	6.2	28.5	20	2.0	41	0	11
28...	1630	59	274	6.3	28.5	30	7.3	44	7	12

DATE	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
NOV										
30...	2.3	12	46	1.0	3.7	29	0	24	18	11
FEB										
10...	2.4	15	52	1.3	3.0	40	0	33	5.1	13
MAR										
14...	1.3	4.6	36	.5	2.5	11	0	9	4.4	8.5
MAY										
25...	2.0	12	48	1.1	3.1	31	0	25	25	8.9
JUL										
08...	3.2	30	58	2.0	5.8	52	0	43	52	16
28...	3.3	33	58	2.2	6.4	45	0	37	36	24

DATE	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)
NOV										
30...	11	.2	15	87	76	.12	115	.70	.01	.71
FEB										
10...	13	.2	17	95	98	.13	95.9	.93	.03	.96
MAR										
14...	4.4	.1	7.5	56	40	.08	1050	.33	.01	.34
MAY										
25...	9.8	.2	14	102	77	.14	243	.48	.02	.50
JUL										
08...	26	.4	17	165	152	.22	39.6	.84	.66	1.5
28...	33	.4	15	188	167	.26	29.9	2.1	.04	2.1

02087500 NEUSE RIVER NEAR CLAYTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE IN BOT. MAT. (MG/KG)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA (NH4) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	DIS-SOLVED ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	SUS-PENDED KJEL. NITRO-GEN (N) (MG/L)	DIS-SOLVED KJEL. NITRO-GEN (N) (MG/L)
NOV										
30...	.71	--	.14	.09	.12	.72	.48	.86	.29	.57
FEB										
10...	.96	.0	1.6	1.6	2.1	.70	.70	2.3	.00	2.3
MAR										
14...	.32	--	.16	.06	.08	1.2	.33	1.4	1.0	.39
MAY										
25...	.47	--	.31	.45	.58	1.2	.29	1.5	.76	.74
JUL										
08...	1.5	1.1	1.9	1.4	1.8	.20	.60	2.1	.10	2.0
28...	2.2	--	.43	.32	.41	.67	.59	1.1	.19	.91

DATE	TOTAL KJEL. NITRO-GEN IN BOTTOM MAT. (MG/KG)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED-PHOS-PHORUS (P) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (P04) (MG/L)	TOTAL PHOS-PHORUS IN BOT-TOM MA-TERIAL (MG/KG)
NOV									
30...	--	1.6	7.0	.62	.49	.52	.46	1.4	--
FEB									
10...	1700	3.3	14	.69	.62	.61	.57	1.7	140
MAR									
14...	--	1.7	7.7	.37	.05	.10	.00	.00	--
MAY									
25...	--	2.0	8.9	.90	.55	.48	.62	1.9	--
JUL									
08...	1900	3.6	16	2.7	2.7	2.5	2.5	7.7	190
28...	--	3.2	14	--	2.9	2.7	2.6	8.0	--

DATE	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL CHRO-MIUM IN BOTTOM MA-TERIAL (UG/G)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL COPPER IN BOTTOM MA-TERIAL (UG/G)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL IRON IN BOTTOM MA-TERIAL (UG/G)	TOTAL LEAD (PB) (UG/L)
NOV												
30...	10	8	2	--	8	0	8	--	1200	250	--	9
FEB												
10...	<10	<8	2	20	12	0	12	<10	690	270	7200	2
MAR												
14...	20	20	0	--	15	3	12	--	11000	260	--	65
MAY												
25...	30	28	2	--	20	14	6	--	6200	290	--	30
JUL												
08...	10	9	1	10	6	2	4	10	680	370	<1200	12
28...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL LEAD IN BOTTOM MA-TERIAL (UG/G)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ZINC IN BOTTOM MA-TERIAL (UG/G)	TOTAL ORGANIC CARBON (C) (MG/L)	DIS-SOL-VED ORGANIC CARBON (C) (MG/L)	ORGANIC CARBON IN BOT-TOM MA-TERIAL (C) (G/KG)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
NOV											
30...	7	2	--	40	30	10	--	6.8	5.7	--	.10
FEB											
10...	2	0	90	10	0	20	30	9.7	5.4	7.6	.00
MAR											
14...	55	10	--	50	40	10	--	8.7	6.2	--	.00
MAY											
25...	19	11	--	90	80	10	--	7.1	3.4	--	.10
JUL											
08...	12	0	<10	20	20	0	40	8.1	3.8	9.9	.10
28...	--	--	--	--	--	--	--	5.0	4.1	--	.10

02087500 NEUSE RIVER NEAR CLAYTON, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Nov. 30	1445	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	64	8	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Achnanthes	16	2	
		Cyclotella	24	3	
		Cymbella	8	1	
		Melosira	56	7	
		Navicula	24	3	
		Nitzschia	190	24	
		Pinnularia	24	3	
		Surirella	72	9	
		Synedra	40	5	
		CYANOPHYTA			
		Myxophyceae			
		Oscillatoria	240	30	
		EUGLENOPHYTA			
		Euglenophyceae			
		Trachelomonas	24	3	
		PYRRHOPHYTA			
		Dinophyceae			
		Peridinium	8	1	
		TOTAL	790		
Feb. 10	0915	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	12	1	
		Chlamydomonas	12	1	
		Oocystis	36	2	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Amphora	24	1	
		Cocconeis	24	1	
		Cyclotella	12	1	
		Fragilaria	24	1	
		Gomphonema	36	2	
		Melosira	230	10	
		Navicula	61	3	
		Nitzschia	36	2	
		CYANOPHYTA			
		Myxophyceae			
		Anacystis	840	30	
		Lyngbya	120	5	
		Oscillatoria	790	35	
		TOTAL	2,300		
May 25	0700	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	190	3	
		Crucigenia	190	3	
		Dictyosphaerium	740	10	
		Scenedesmus	190	3	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Achnanthes	93	1	
		Cyclotella	510	7	
		Fragilaria	46	1	
		Gomphonema	46	1	
		Melosira	1,800	25	
		Navicula	1,600	23	
		Neidium	93	1	
		Nitzschia	1,300	18	
		Pinnularia	230	3	
		Synedra	140	2	
		EUGLENOPHYTA			
		Euglenophyceae			
		Trachelomonas	46	1	
		TOTAL	7,200		

02087500 NEUSE RIVER NEAR CLAYTON, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
July 8	1030	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	700	6	
		Coelastrum	120	1	
		Crucigenia	540	4	
		Dictyosphaerium	270	2	
		Kirchneriella	1,100	9	
		Oocystis	140	1	
		Scenedesmus	2,400	19	
		Selenastrum	250	2	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	270	2	
		CYANOPHYTA			
		Cyanophyceae			
		Agmenellum	390	3	
		Anacystis	1,500	12	
		Oscillatoria	4,500	36	
		TOTAL	12,000		

02087500 NEUSE RIVER NEAR CLAYTON, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	209	138	168	113	122	97	96	137	149	230	281	283
2	183	158	168	117	128	90	93	142	152	235	208	301
3	207	153	203	122	131	94	98	147	160	230	195	291
4	204	173	173	117	134	97	98	139	163	223	210	291
5	205	163	158	117	136	78	84	145	161	213	197	294
6	214	158	158	128	138	78	84	137	168	235	233	264
7	214	163	98	117	138	78	98	137	142	250	230	279
8	214	168	96	112	133	76	98	135	149	250	247	81
9	184	179	122	108	133	78	86	127	158	245	242	102
10	143	165	122	86	134	82	90	137	160	246	220	119
11	148	153	85	80	133	84	98	137	160	227	230	118
12	184	118	85	73	128	84	98	147	160	236	242	123
13	189	163	86	87	128	57	98	147	175	202	284	154
14	204	158	96	100	122	61	108	157	173	223	240	168
15	204	163	98	88	117	76	108	157	178	214	236	179
16	202	138	100	91	128	84	108	162	170	218	168	196
17	202	138	102	84	134	82	113	167	178	228	200	177
18	189	143	103	89	141	86	108	167	183	235	215	161
19	163	168	103	94	138	86	108	162	177	250	125	177
20	94	173	104	100	133	92	118	162	186	260	158	185
21	96	173	105	103	128	96	118	147	207	268	239	198
22	98	184	108	107	122	78	118	147	189	278	231	209
23	132	179	102	107	133	79	125	167	202	250	220	192
24	128	163	112	107	123	78	108	82	202	249	242	215
25	153	163	110	102	112	92	108	82	194	272	256	208
26	132	163	107	112	112	92	108	88	202	257	269	217
27	122	163	104	122	112	88	127	113	207	269	270	229
28	133	163	104	122	102	90	147	132	205	284	272	240
29	153	112	122	122	---	94	137	132	235	315	260	249
30	143	112	122	112	---	88	137	132	234	299	286	250
31	143	---	128	112	---	82	---	132	---	313	279	---
MEAN	167	157	118	105	128	84	107	139	179	249	232	205

WTR YR 1977 MEAN 156 MAX 315 MIN 57

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	12.0	8.0	3.0	3.0	11.5	18.0	20.0	25.0	29.5	29.0	30.0
2	20.0	11.0	6.0	3.0	3.0	10.5	18.0	21.0	25.0	29.0	26.0	30.0
3	20.0	11.0	6.0	2.0	4.0	10.5	18.0	21.0	25.5	29.0	27.5	30.0
4	20.0	11.5	6.0	4.0	5.0	11.5	18.0	23.0	26.0	29.0	28.0	30.0
5	20.0	10.0	6.0	4.0	4.0	11.5	17.0	24.0	26.0	29.0	28.0	29.0
6	20.0	9.0	6.0	4.0	4.0	11.5	17.0	24.5	26.5	30.5	29.0	28.5
7	21.0	9.0	7.0	5.0	4.0	11.5	16.0	23.0	24.0	31.5	29.0	27.0
8	22.5	9.0	8.0	4.0	4.0	10.5	15.0	22.0	23.0	32.0	30.0	23.0
9	22.0	8.0	7.0	4.0	5.0	11.0	15.0	21.0	23.0	31.0	30.0	23.0
10	20.0	8.0	6.0	4.0	6.0	11.0	16.0	19.5	23.0	31.0	31.0	24.0
11	17.0	8.0	7.0	3.0	6.0	12.5	17.0	19.5	24.0	30.5	31.0	24.0
12	17.0	8.0	8.0	2.0	6.0	12.0	18.0	20.0	26.0	30.5	32.0	24.0
13	16.0	9.0	9.0	2.0	6.0	12.0	20.0	20.5	26.0	29.5	31.0	24.0
14	16.0	8.0	8.0	3.0	8.0	11.0	20.0	21.0	26.0	30.0	31.0	24.5
15	16.0	7.0	8.0	3.0	7.5	15.5	22.0	22.0	26.0	31.0	30.0	24.5
16	17.0	7.0	9.0	3.0	7.0	15.0	21.0	22.5	26.0	31.0	29.0	25.0
17	17.0	7.0	9.0	1.5	6.5	15.0	20.0	24.0	26.0	30.0	30.0	26.0
18	15.0	9.0	9.0	1.0	4.0	15.5	20.5	25.0	26.0	31.0	26.0	27.0
19	15.0	10.0	9.0	1.0	4.0	15.0	22.5	26.0	27.0	30.0	26.0	27.0
20	14.0	10.0	8.0	1.0	5.0	14.0	22.5	25.0	28.5	31.0	26.0	27.0
21	13.0	9.0	6.0	1.0	1.5	13.0	22.5	25.0	27.0	30.0	27.0	26.5
22	12.5	8.5	4.5	1.0	6.0	13.0	22.5	25.0	26.0	30.0	27.0	25.5
23	12.0	7.5	5.0	1.0	9.0	13.0	22.5	24.0	23.5	30.0	27.0	24.5
24	12.0	8.5	5.0	1.0	11.0	12.5	22.0	21.0	23.5	29.0	28.0	24.0
25	14.0	9.0	5.0	3.0	11.5	13.0	21.0	21.0	25.0	29.0	28.0	24.0
26	15.0	10.0	5.0	3.0	12.0	13.0	20.0	21.5	27.0	27.0	27.0	25.0
27	13.0	11.0	6.0	4.0	12.5	14.0	19.0	23.0	28.0	28.0	25.0	25.0
28	11.5	12.0	6.0	4.0	13.0	15.0	19.0	23.0	28.0	27.0	28.0	26.0
29	11.0	12.0	5.0	3.0	---	16.0	19.0	23.0	29.0	27.0	29.0	23.0
30	11.0	9.0	5.0	3.0	---	17.0	20.0	23.0	29.5	27.0	29.0	23.0
31	12.0	---	4.0	3.0	---	18.0	---	25.0	---	28.0	30.0	---
MEAN	16.0	9.5	6.5	2.5	6.5	13.0	19.5	22.5	26.0	29.5	28.5	26.0

WTR YR 1977 MEAN 17.0 MAX 32.0 MIN 1.0

02087500 NEUSE RIVER NEAR CLAYTON, N. C.--Continued

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE FOR SELECTED DAYS, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
NOV				
30...	1445	490	22	29
FEB				
10...	0915	374	8	8.1
MAR				
14...	1100	6960	376	7070
MAY				
25...	0700	884	189	451
JUL				
08...	1030	89	3	.72
28...	1630	59	9	1.4

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)
OCT									
12...	1400	240	130	7.1	14.0	7.4	19	2.1	190
NOV									
16...	1300	515	160	7.1	8.0	10.4	28	6.2	660
DEC									
02...	1230	530	130	7.2	5.0	8.2	27	1.8	100
JAN									
18...	1200	1340	115	6.8	1.0	9.5	14	.7	--
FEB									
09...	1030	380	110	6.7	2.0	11.5	--	1.2	20
MAR									
08...	1100	5020	50	6.4	10.0	--	40	2.3	990
APR									
14...	--	610	80	6.8	22.0	7.5	15	2.0	40
MAY									
04...	--	263	130	7.0	20.0	6.7	28	2.3	40
JUN									
13...	--	171	160	6.9	25.0	9.2	18	1.8	50
JUL									
20...	--	72	290	6.3	29.0	3.2	32	2.0	20
AUG									
04...	--	139	210	6.2	25.0	4.8	22	2.8	100
SEP									
13...	--	279	125	6.4	20.0	6.6	24	.9	330

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) above mean sea level. 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. 259), a downstream tributary, an average of 4.9 ft³/s (0.14 m³/s), and from Neuse River upstream from station an average of 29 ft³/s (0.82 m³/s), most of which was returned as sewage effluent upstream from station. The city of Smithfield diverted an average of 2.1 ft³/s (0.059 m³/s) 0.2 mi (0.3 km) upstream from station for municipal water supply, most of which was returned downstream as sewage effluent. Suspended sediment records for the current year are published on page 347 of this report.

AVERAGE DISCHARGE.--5 years, 1,365 ft³/s (38.66 m³/s), 15.45 in/yr (392 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)
Mar. 15	1530	*7610	216	*18.01	5.489

Minimum discharge, 61 ft³/s (1.73 m³/s) July 29, gage height, 2.47 ft (0.753 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	340	677	607	593	2550	1400	328	357	117	75	75
2	134	274	735	552	579	2500	1100	319	352	268	155	74
3	123	226	534	509	542	1730	1050	307	305	144	195	75
4	119	205	415	500	603	1230	900	289	251	100	129	74
5	125	203	339	514	596	1870	1380	309	226	90	123	71
6	123	201	301	494	560	2650	2450	335	208	99	98	68
7	119	193	541	587	530	3770	3030	340	273	99	82	72
8	120	186	1630	765	491	5110	2200	345	300	93	73	2190
9	210	179	2180	780	472	5600	1250	435	212	85	77	5330
10	707	188	1900	2750	472	5000	980	352	222	86	92	3700
11	426	180	1380	4970	478	3230	900	345	214	110	78	2500
12	284	188	2140	5350	485	1650	850	367	194	128	84	950
13	246	219	3350	4500	506	1500	840	319	175	135	75	398
14	194	213	2600	3200	558	5390	790	314	171	153	69	269
15	169	266	1800	2200	601	7310	716	291	164	149	107	210
16	146	565	1400	2000	627	4600	680	237	166	137	225	182
17	141	561	1200	1950	581	3000	625	198	160	109	209	188
18	165	480	1050	1400	527	1700	588	187	153	90	270	240
19	189	381	900	1100	525	1100	563	187	159	83	736	197
20	257	324	878	1000	556	1720	560	202	144	78	480	183
21	2250	284	901	900	534	1880	602	286	143	77	324	175
22	1600	256	893	820	511	2250	513	200	143	74	179	152
23	1030	246	824	750	494	3230	465	179	138	73	131	130
24	603	233	754	700	569	3460	438	216	137	73	125	124
25	411	220	669	702	934	2850	503	888	150	74	122	118
26	379	216	689	721	1100	1600	513	1530	153	75	100	113
27	483	216	863	709	1040	1070	459	1240	141	72	90	111
28	359	228	899	803	1450	950	425	1010	129	69	84	104
29	275	440	850	849	---	900	382	722	122	65	81	100
30	241	720	762	792	---	1250	350	511	116	71	80	97
31	250	---	668	630	---	1900	---	394	---	76	78	---
TOTAL	12007	8631	34722	44104	17514	84550	27502	13182	5778	3152	4826	18270
MEAN	387	288	1120	1423	626	2727	917	425	193	102	156	609
MAX	2250	720	3350	5350	1450	7310	3030	1530	357	268	736	5330
MIN	119	179	301	494	472	900	350	179	116	65	69	68
CFSM	.32	.24	.93	1.19	.52	2.27	.76	.35	.16	.09	.13	.51
IN.	.37	.27	1.08	1.37	.54	2.62	.85	.41	.18	.10	.15	.57

CAL YR 1976 TOTAL 260831 MEAN 713 MAX 5720 MIN 84 CFSM .59 IN 8.09
WTR YR 1977 TOTAL 274238 MEAN 751 MAX 7310 MIN 65 CFSM .63 IN 8.50

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 mi^2 (209 km^2).

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) above mean sea level. Nov. 1-20, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good. Suspended sediment records for the current year are published on page 347 of this report.

AVERAGE DISCHARGE.--38 years, 91.8 ft^3/s (2.600 m^3/s), 15.45 in/yr (392 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,510 ft^3/s (241 m^3/s) Feb. 3, 1973, gage height, 13.42 ft (4.090), result of dam failure; no flow Oct. 11-13, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft^3/s (17.0 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 15	0630	782	22.1	7.43	2.265	Sept. 8	Unknown	*983	27.8	*8.16	2.487

Minimum discharge, 0.10 ft^3/s (0.003 m^3/s) Sept. 6, gage height, 0.92 ft (0.280 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	32	62	59	56	109	255	25	22	2.6	2.0	.53
2	4.0	26	46	56	54	75	119	24	29	2.5	50	.50
3	4.1	23	39	53	53	62	102	23	26	2.4	45	.30
4	3.8	20	35	55	55	65	102	22	17	2.3	40	.22
5	3.7	17	32	56	56	117	147	20	14	2.2	30	.15
6	3.5	16	31	56	52	131	278	18	12	2.1	20	.11
7	3.4	16	85	87	47	326	185	16	16	1.9	15	.47
8	3.4	15	237	102	48	392	101	18	14	1.7	10	673
9	28	15	263	80	50	261	83	17	12	2.0	8.0	350
10	37	14	131	409	47	126	74	14	9.3	8.0	7.0	54
11	15	14	99	518	47	101	70	12	9.0	7.0	12	25
12	8.4	19	335	422	47	89	66	11	8.4	3.8	7.0	14
13	6.3	23	438	146	51	333	61	11	7.9	3.4	5.0	11
14	10	22	363	124	52	555	57	9.5	7.3	2.1	3.0	9.0
15	18	31	145	255	48	683	52	8.7	7.9	1.6	2.0	19
16	27	71	194	217	45	261	49	8.7	7.4	1.4	1.4	18
17	35	55	200	126	43	126	45	7.9	6.1	.86	1.3	16
18	53	40	134	99	42	102	42	6.7	5.3	.87	4.1	17
19	58	33	100	90	47	91	40	6.3	4.8	.77	11	9.0
20	82	30	90	75	58	186	40	5.8	4.2	.65	5.4	6.7
21	257	27	118	70	54	222	42	5.6	4.0	.56	2.5	6.1
22	116	25	102	65	47	307	39	5.5	3.2	.64	1.8	7.4
23	47	22	83	60	45	378	35	5.2	3.2	.90	1.4	8.2
24	32	21	74	65	59	214	35	14	3.8	.80	1.5	7.0
25	26	20	66	71	121	119	49	61	4.3	.70	1.6	6.7
26	29	20	97	77	82	97	45	94	5.4	.60	1.7	6.0
27	38	21	125	73	72	86	38	67	5.1	.56	1.4	5.2
28	29	25	94	73	154	80	32	52	3.9	.54	.65	4.8
29	23	96	78	72	---	77	29	53	3.1	.52	.64	4.0
30	20	113	66	62	---	196	27	29	2.7	.52	.64	4.0
31	26	---	62	59	---	374	---	23	---	.54	.69	---
TOTAL	1050.2	922	4024	3832	1632	6341	2339	693.9	278.3	57.03	293.72	1283.38
MEAN	33.9	30.7	130	124	58.3	205	78.0	22.4	9.28	1.84	9.47	42.8
MAX	257	113	438	518	154	683	278	94	29	8.0	50	673
MIN	3.4	14	31	53	42	62	27	5.2	2.7	.52	.64	.11
CFSM	.42	.38	1.61	1.54	.72	2.54	.97	.28	.12	.02	.12	.53
IN.	.48	.43	1.85	1.77	.75	2.92	1.08	.32	.13	.03	.14	.59

CAL YR 1976 TOTAL 21208.70 MEAN 57.9 MAX 567 MIN 1.6 CFSM .72 IN 9.78
WTR YR 1977 TOTAL 22746.53 MEAN 62.3 MAX 683 MIN .11 CFSM .77 IN 10.49

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. Altitude of gage is 140 ft (43 m), by barometer.

REMARKS.--Records good except those for period of no gage-height record, Feb. 19 to Mar. 21, which are fair. Some diurnal fluctuation and some regulation during periods of low flow caused by mill 10 mi (16 km) upstream. Suspended sediment records for the current year are published on page 347 of this report.

AVERAGE DISCHARGE.--13 years, 179 ft³/s (5.069 m³/s), 12.79 in/yr (325 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.--Peak discharges above base of 1,000 ft³/s (28.3 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)
Jan. 11	1500	1160	32.9	11.88	3.621	Sept. 9	1130	*1710	48.4	*12.92	3.938

Minimum discharge, 5.2 ft³/s (0.15 m³/s) Sept. 6, 7, gage height, 3.10 ft (0.945 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	51	129	143	120	410	423	46	101	11	18	7.0
2	15	53	115	128	115	340	346	41	79	30	225	6.6
3	15	50	107	116	110	290	280	38	59	31	95	6.6
4	15	50	90	115	105	270	239	35	45	15	59	6.4
5	16	46	72	117	100	310	280	40	36	11	32	5.6
6	15	41	65	119	95	360	390	40	31	9.9	17	5.4
7	15	38	79	162	93	450	363	43	36	9.2	12	5.2
8	14	34	289	233	91	800	320	39	49	8.8	9.0	475
9	15	32	467	221	90	700	284	50	41	8.4	7.8	1600
10	39	31	508	678	89	600	226	48	36	8.9	7.0	1150
11	74	29	438	1120	91	540	184	59	30	239	6.5	672
12	46	28	547	1010	95	470	159	45	26	72	6.9	359
13	34	35	700	754	100	560	141	33	24	24	6.0	112
14	27	41	702	592	109	800	130	29	21	17	6.1	61
15	22	48	616	601	106	760	113	26	20	38	17	43
16	19	98	570	554	101	650	100	23	19	20	51	32
17	17	115	514	465	97	580	88	21	19	12	15	30
18	19	99	416	390	86	500	80	19	18	9.3	54	32
19	19	91	325	315	95	400	73	18	17	8.0	115	31
20	24	84	274	275	105	430	69	17	16	7.6	121	28
21	106	71	267	230	115	500	65	18	28	7.3	81	25
22	261	59	255	200	105	578	61	26	19	7.1	44	20
23	301	52	231	175	100	617	56	24	15	6.9	27	17
24	293	46	203	160	120	505	55	28	14	6.6	18	15
25	196	42	176	149	150	405	62	224	13	6.2	17	14
26	112	41	190	170	350	343	92	384	14	6.2	17	13
27	80	41	229	169	270	278	98	410	14	5.8	13	12
28	66	43	219	168	350	247	85	319	14	5.5	11	13
29	55	75	200	165	---	221	64	222	13	5.5	9.4	19
30	54	117	179	140	---	280	52	132	12	5.5	8.2	12
31	52	---	158	130	---	426	---	93	---	5.6	7.4	---
TOTAL	2051	1681	9330	9964	3553	14620	4978	2590	879	658.3	1133.3	4827.8
MEAN	66.2	56.0	301	321	127	472	166	83.5	29.3	21.2	36.6	161
MAX	301	117	702	1120	350	800	423	410	101	239	225	1600
MIN	14	28	65	115	86	221	52	17	12	5.5	6.0	5.2
CFSM	.35	.30	1.58	1.69	.67	2.48	.87	.44	.15	.11	.19	.85
IN.	.40	.33	1.83	1.95	.70	2.86	.97	.51	.17	.13	.22	.95

CAL YR 1976 TOTAL 51286.6 MEAN 140 MAX 1040 MIN 3.8 CFSM .74 IN 10.04
WTR YR 1977 TOTAL 56265.4 MEAN 154 MAX 1600 MIN 5.2 CFSM .81 IN 11.02

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) above mean sea level. Prior to Nov. 17, 1934, nonrecording gage at same site and datum.

REMARKS.--Records good. Slight diurnal fluctuation and occasional regulation for short periods, caused by mills above station. Suspended sediment records for the current year are published on page 347 of this report.

AVERAGE DISCHARGE.--47 years, 250 ft³/s (7.080 m³/s), 14.83 in/yr (377 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, 1.0 ft³/s (0.028 m³/s) several times in September and October 1932, Oct. 10, 11, 1968.

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)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 11	2100	1700	48.1	8.99	2.740	Mar. 14	1500	1460	41.3	8.17	2.490
Mar. 8	1800	1240	35.1	7.28	2.219	Sept. 9	2000	*2330	66.0	*10.92	3.328

Minimum discharge, 5.4 ft³/s (0.15 m³/s) Sept. 23, 24, gage height, 1.10 ft (0.335 m); minimum gage height, 1.03 ft (0.314 m) July 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	56	119	144	143	626	489	55	93	26	11	20
2	16	56	108	127	130	473	387	50	104	52	128	29
3	16	57	100	113	119	335	307	49	72	51	146	21
4	16	55	88	109	130	283	254	45	58	52	75	12
5	16	55	75	111	128	381	296	44	50	54	52	9.3
6	16	52	69	113	126	427	479	49	45	51	29	7.5
7	16	50	71	146	125	797	427	50	47	49	18	8.8
8	16	48	193	241	100	1190	339	49	53	44	16	723
9	18	44	454	246	93	1160	292	49	56	40	16	2190
10	17	43	545	900	98	941	237	54	50	41	15	2110
11	44	43	497	1600	95	714	185	55	44	131	14	1150
12	56	43	607	1590	100	536	153	57	37	210	14	512
13	41	41	816	1190	104	816	131	45	34	73	13	191
14	32	49	864	811	116	1420	118	36	28	45	13	95
15	26	56	755	837	116	1260	105	31	26	41	17	73
16	23	79	718	813	111	987	93	27	25	52	51	58
17	21	104	672	639	108	968	83	26	24	38	64	49
18	21	97	534	420	101	709	78	24	24	41	60	47
19	20	85	401	330	97	423	73	21	29	38	183	45
20	24	81	310	300	118	654	69	19	36	34	144	45
21	55	74	290	250	144	871	67	18	35	28	109	38
22	168	66	280	210	122	982	65	22	44	27	68	32
23	275	60	247	185	105	1110	62	31	37	21	48	8.8
24	283	57	216	180	133	861	61	38	32	10	30	5.7
25	215	54	187	204	419	603	62	229	31	9.8	24	6.7
26	113	52	199	229	441	462	74	443	29	9.8	22	16
27	78	51	246	229	375	346	88	445	27	8.8	20	18
28	67	53	244	223	569	273	82	352	26	7.9	18	16
29	60	66	218	224	---	237	69	252	25	7.1	18	19
30	57	96	193	201	---	299	60	144	24	6.4	18	21
31	58	---	167	163	---	477	---	91	---	7.9	15	---
TOTAL	1900	1823	10483	13078	4566	21621	5285	2900	1245	1306.7	1469	7576.8
MEAN	61.3	60.8	338	422	163	697	176	93.5	41.5	42.2	47.4	253
MAX	283	104	864	1600	569	1420	489	445	104	210	183	2190
MIN	16	41	69	109	93	237	60	18	24	6.4	11	5.7
CFSM	.27	.27	1.48	1.84	.71	3.04	.77	.41	.18	.18	.21	1.11
IN.	.31	.30	1.70	2.12	.74	3.51	.86	.47	.20	.21	.24	1.23

CAL YR 1976 TOTAL 59518.6 MEAN 163 MAX 1710 MIN 4.3 CFSM .71 IN 9.67
WTR YR 1977 TOTAL 73253.5 MEAN 201 MAX 2190 MIN 5.7 CFSM .88 IN 11.90

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) above mean sea level. 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 excellent. Diversions for municipal water supply for cities of Durham and Butner (see sta 02087000). Suspended sediment records for the current year are published on page 347 of this report. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--47 years, 2,503 ft³/s (70.88 m³/s), 14.22 in/yr (361 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, 8,690 ft³/s (246 m³/s) Mar. 20, gage height, 17.37 ft (5.294 m); minimum, 98 ft³/s (2.78 m³/s) July 31, Aug. 1, gage height, 2.11 ft (0.643 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	257	435	938	1680	1690	3410	3540	735	1100	212	113	136
2	252	437	1120	1500	1520	4140	3910	671	1410	223	187	130
3	237	474	1170	1370	1430	4470	3900	626	1470	247	160	126
4	237	447	1040	1240	1370	4300	3430	589	1170	400	313	123
5	235	407	886	1200	1350	3370	2880	558	969	289	343	123
6	222	386	764	1190	1370	3280	2870	531	807	220	268	126
7	222	375	748	1290	1310	4440	3450	536	718	190	229	158
8	218	358	826	1420	1240	5040	3940	545	629	185	188	934
9	255	348	1930	1720	1160	5630	4140	525	622	185	156	2900
10	236	332	2690	4000	1100	6210	4140	546	591	213	143	4820
11	402	324	3080	5360	1080	6780	3160	562	505	192	136	5610
12	634	358	3410	5990	1080	7170	2230	516	466	201	150	6110
13	500	359	3530	6730	1090	7520	1910	509	428	340	138	6230
14	400	356	4010	7360	1120	8110	1700	496	390	394	138	4610
15	340	593	4540	7910	1160	8340	1550	454	363	304	158	1940
16	307	660	5390	8150	1210	8330	1400	440	349	262	174	1030
17	298	806	5660	8200	1230	8340	1290	411	328	241	150	732
18	287	1040	5550	8000	1210	8420	1190	371	322	220	699	633
19	261	993	4990	6900	1140	8570	1100	332	337	182	1060	615
20	309	877	3110	5400	1130	8600	1040	324	307	168	807	574
21	359	747	2820	3200	1170	8070	989	316	286	145	873	512
22	1190	654	2440	2570	1220	7590	967	344	274	136	736	458
23	2030	582	2250	2210	1180	7470	941	395	259	130	540	418
24	1820	529	2050	1980	1210	7450	917	623	259	128	375	365
25	1250	502	1850	1950	1460	7480	921	1620	256	119	289	322
26	920	478	1850	1980	2080	7370	923	2300	274	223	238	289
27	698	475	1890	2020	2550	7040	959	3150	268	130	227	262
28	629	494	2070	2010	2910	6400	953	3220	268	118	185	247
29	611	558	2160	2010	---	4580	882	2640	247	113	162	229
30	528	628	2060	2000	---	3160	812	1910	229	108	148	220
31	477	---	1890	1920	---	2960	---	1410	---	100	146	---
TOTAL	16621	16012	78712	110460	38770	194040	62034	28205	15901	6318	9629	40982
MEAN	536	534	2539	3563	1385	6259	2068	910	530	204	311	1366
MAX	2030	1040	5660	8200	2910	8600	4140	3220	1470	400	1060	6230
MIN	218	324	748	1190	1080	2960	812	316	229	100	113	123
CFSM	.22	.22	1.06	1.49	.58	2.62	.87	.38	.22	.09	.13	.57
IN.	.26	.25	1.23	1.72	.60	3.02	.97	.44	.25	.10	.15	.64

CAL YR 1976 TOTAL 547237 MEAN 1495 MAX 9280 MIN 138 CFSM .63 IN 8.52
WTR YR 1977 TOTAL 617684 MEAN 1692 MAX 8600 MIN 100 CFSM .71 IN 9.61

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) above mean sea level. 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.--47 years, 2,872 ft³/s (81.34 m³/s), 14.50 in/yr (368 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, 9,720 ft³/s (275 m³/s) Mar. 22, gage height, 15.88 ft (4.840 m); minimum, 195 ft³/s (5.52 m³/s) Aug. 1, gage height, 2.22 ft (0.677 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	348	726	908	2540	2440	3050	4790	967	1920	366	200	262
2	354	674	1080	2330	2270	3300	4230	894	1620	356	208	250
3	347	646	1330	2130	2080	3640	4060	829	1790	357	298	238
4	335	670	1410	1970	1960	4050	4140	779	1850	348	299	230
5	326	667	1360	1850	1880	4390	4100	741	1540	447	311	222
6	324	635	1220	1770	1830	4470	3760	712	1270	439	402	221
7	315	604	1130	1790	1810	4350	3400	684	1100	366	360	225
8	304	583	1180	1910	1770	4410	3360	670	981	320	318	348
9	323	569	1260	2010	1700	4860	3620	670	876	300	278	1020
10	369	555	1820	2580	1620	5310	3920	658	839	315	250	2170
11	370	544	2490	3840	1550	5740	4140	653	816	322	220	1130
12	375	534	2990	4890	1510	6150	4100	675	735	326	210	2340
13	602	548	3440	5490	1490	6670	3280	648	682	342	230	3090
14	598	569	3760	6130	1500	7180	2480	627	641	367	220	4960
15	503	670	3980	6790	1500	7610	2090	619	598	469	215	5440
16	450	1100	4440	7410	1520	8000	1830	584	563	432	260	4850
17	417	1220	5040	7950	1560	8300	1650	560	535	374	262	2720
18	408	1130	5620	8280	1590	8450	1510	536	506	348	333	1300
19	408	1290	5940	8390	1580	8530	1390	502	487	327	734	921
20	389	1310	6010	8280	1540	8870	1310	461	509	290	1190	823
21	399	1220	5750	7930	1510	9270	1260	440	491	269	1050	764
22	456	1080	5030	7120	1520	9660	1190	437	450	249	966	695
23	816	972	3840	5330	1550	9550	1130	445	430	230	894	631
24	1650	884	3340	3940	1600	8930	1130	649	416	220	741	580
25	1910	820	2890	3050	1750	8590	1120	1300	420	214	615	533
26	1580	786	2720	2870	1910	8220	1120	2420	417	221	491	489
27	1240	772	2740	2680	2260	8000	1100	2780	421	214	405	448
28	992	783	2710	2630	2740	7840	1090	3140	408	216	370	409
29	860	836	2710	2590	---	7630	1090	3380	399	209	320	383
30	828	892	2730	2550	---	7210	1030	3330	381	202	290	363
31	783	---	2680	2510	---	6040	---	2630	---	198	277	---
TOTAL	19379	24289	93548	131530	49540	208270	74420	34420	24091	9653	13217	38055
MEAN	625	810	3018	4243	1769	6718	2481	1110	803	311	426	1269
MAX	1910	1310	6010	8390	2740	9660	4790	3380	1920	469	1190	5440
MIN	304	534	908	1770	1490	3050	1030	437	381	198	200	221
CFSM	.23	.30	1.12	1.58	.66	2.50	.92	.41	.30	.12	.16	.47
IN.	.27	.34	1.29	1.82	.69	2.88	1.03	.48	.33	.13	.18	.53

CAL YR 1976 TOTAL 683108 MEAN 1866 MAX 10000 MIN 243 CFSM .69 IN 9.45
WTR YR 1977 TOTAL 720412 MEAN 1974 MAX 9660 MIN 198 CFSM .73 IN 9.96

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued
(National stream-quality accounting network 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.--Daily records of specific conductance for January 1955 to September 1956 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, 185 micromhos Nov. 30, 1973; minimum daily, 43 micromhos Mar. 28, 1975.
WATER TEMPERATURES: Maximum daily, 33.5°C July 3, 1956; minimum daily, 0.5°C Jan. 18-23, 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 171 micromhos Aug. 13; minimum daily, 61 micromhos Mar. 14, 21.
WATER TEMPERATURES: Maximum daily, 30.0°C July 4, 7, 8, 9; minimum daily, 0.5°C Jan. 18-23.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	FECAL COLIFORM .7UM-MF (COL./100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
OCT												
06...	1325	325	140	7.7	20.0	5	10.2	160	B68	26	3	7.0
NOV												
10...	0950	555	123	6.3	8.5	7	11.2	B48	750	28	8	8.0
DEC												
08...	1245	1190	116	6.1	7.5	10	10.7	640	290	24	7	6.1
20...	1100	6030	82	6.4	8.0	15	11.0	80	350	20	14	5.0
FEB												
22...	0930	1530	99	6.6	5.5	7	6.5	B16	370	24	11	6.0
MAR												
22...	1200	9700	60	7.3	13.0	10	7.5	400	1100	16	8	3.8
APR												
26...	1000	1130	90	6.9	20.0	15	9.8	200	1400	--	--	--
MAY												
24...	0945	676	105	5.9	23.0	30	--	B6400	B9300	26	0	7.4
JUN												
28...	1000	409	125	8.1	29.0	1	10.6	280	1500	28	0	7.3
JUL												
26...	1230	238	135	6.4	26.5	1	5.6	B8500	7500	31	1	8.8
AUG												
16...	0915	260	141	7.2	27.0	10	5.6	B2800	1000	29	0	7.9
SEP												
13...	0910	4200	65	6.5	21.5	30	5.1	840	B2200	15	5	3.8

B 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 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)
OCT												
06...	2.0	15	52	1.3	3.7	28	0	23	.9	15	13	.2
NOV												
10...	2.0	11	42	.9	3.5	25	0	21	20	13	10	.3
DEC												
08...	2.1	11	46	1.0	3.1	20	0	16	25	15	11	.2
20...	1.9	6.3	37	.6	2.6	8	0	7	5.1	14	7.9	.2
FEB												
22...	2.3	9.3	42	.8	2.4	16	0	13	6.4	13	9.7	.1
MAR												
22...	1.7	5.0	36	.5	2.3	10	0	8	.8	9.7	6.7	.1
APR												
26...	--	--	--	--	--	23	0	19	4.6	--	--	--
MAY												
24...	1.8	9.7	42	.8	2.7	36	0	30	73	11	8.8	.1
JUN												
28...	2.3	13	47	1.1	3.0	38	0	31	.5	12	12	.2
JUL												
26...	2.3	13	44	1.0	3.4	37	0	30	24	12	12	.2
AUG												
16...	2.3	13	45	1.0	4.0	35	0	29	3.5	12	12	.2
SEP												
13...	1.3	4.6	35	.5	2.9	12	0	10	6.1	12	5.3	.1

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
OCT											
06...	8.6	70	78	.10	61.4	.80	.66	1.7	7.3	.26	--
NOV											
10...	13	87	73	.12	130	.92	.78	1.7	7.5	.31	1
DEC											
08...	12	81	70	.11	260	.80	.68	1.5	6.6	.32	--
20...	9.6	69	52	.09	1120	.53	.48	1.0	4.5	.13	2
FEB											
22...	9.9	68	61	.09	281	.51	.40	.91	4.0	.07	--
MAR											
22...	7.2	70	42	.10	1830	.21	.59	.80	3.5	.11	0
APR											
26...	--	--	--	--	--	.59	.97	1.6	6.9	.25	--
MAY											
24...	7.4	94	67	.13	172	.12	1.2	1.3	5.8	.36	--
JUN											
28...	6.3	87	75	.12	96.1	.00	1.4	1.4	6.2	.36	--
JUL											
26...	8.1	99	78	.13	63.6	.07	1.3	1.4	6.1	.34	--
AUG											
16...	8.1	82	77	.11	57.6	.40	1.1	1.5	6.6	.34	1
SEP											
13...	6.4	60	43	.08	680	.32	.91	1.2	5.4	.22	0

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	SUS-PENDED COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)
NOV 10...	0	1	0	0	0	30	30	0	0	0	0
DEC 20...	1	1	2	0	3	10	3	7	0	0	0
MAR 22...	0	0	0	0	0	10	10	0	0	0	0
AUG 16...	0	1	0	0	0	10	10	0	0	0	0
SEP 13...	0	0	0	0	0	<10	<9	1	0	0	0

DATE	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	SUS-PENDED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
NOV 10...	2	2	0	880	140	5	0	12	70	20	50
DEC 20...	10	5	5	970	240	32	--	--	80	40	40
MAR 22...	6	0	6	980	330	8	1	7	20	10	10
AUG 16...	3	3	0	1000	90	3	3	0	450	420	30
SEP 13...	8	4	4	1700	240	31	22	9	310	50	260

DATE	TOTAL MERCURY (HG) (UG/L)	SUS-PENDED MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
NOV 10...	.1	.0	.1	0	0	0	10	10	0	4.6
DEC 20...	.0	.0	.0	0	0	0	20	0	20	12
MAR 22...	.0	.0	.0	0	0	0	30	20	10	5.6
AUG 16...	.0	.0	.0	0	0	0	10	10	0	7.1
SEP 13...	.5	.0	.5	0	0	0	20	10	10	7.9

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ALDRIN (UG/L)	ALDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL CHLORDANE (UG/L)	CHLORDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDD (UG/L)	DDD IN BOTTOM MATERIAL (UG/KG)	TOTAL DDE (UG/L)	DDE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDT (UG/L)
NOV										
10...	0950	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB										
22...	0930	ND	--	ND	--	ND	--	ND	--	ND
MAY										
24...	0945	ND	ND	.0	1	ND	ND	ND	ND	ND
AUG										
16...	0915	ND	--	ND	--	ND	--	ND	--	ND

DATE	DDT IN BOTTOM MATERIAL (UG/KG)	TOTAL DIAZINON (UG/L)	DIAZINON IN BOTTOM MATERIAL (UG/KG)	TOTAL DIELDRIN (UG/L)	DIELDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ENDRIN (UG/L)	ENDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ETHION (UG/L)	ETHION IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR (UG/L)
NOV										
10...	ND	ND	ND	ND	.2	ND	ND	ND	ND	ND
FEB										
22...	--	ND	--	ND	--	ND	--	ND	--	ND
MAY										
24...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG										
16...	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	HEPTACHLOR IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR EPOXIDE (UG/L)	HEPTACHLOR EPOXIDE IN BOTTOM MATERIAL (UG/KG)	TOTAL LINDANE (UG/L)	LINDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL MALATHION (UG/L)	MALATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHOXYCHLOR (UG/L)	METHOXYCHLOR IN BOTTOM MATERIAL (UG/KG)
NOV									
10...	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB									
22...	--	ND	--	ND	--	ND	--	ND	--
MAY									
24...	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG									
16...	--	ND	--	ND	--	ND	--	ND	--

DATE	TOTAL METHYL PARATHION (UG/L)	METHYL PARATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHYL TRITHION (UG/L)	METHYL TRITHION IN BOTTOM MATERIAL (UG/KG)	TOTAL PARATHION (UG/L)	PARATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL TOXAPHENE (UG/L)	TOXAPHENE IN BOTTOM MATERIAL (UG/KG)
NOV								
10...	ND	ND	ND	ND	ND	ND	ND	ND
FEB								
22...	ND	--	ND	--	ND	--	ND	--
MAY								
24...	ND	ND	ND	ND	ND	ND	ND	ND
AUG								
16...	ND	--	ND	--	ND	--	ND	--

DATE	TOTAL TRITHION (UG/L)	TRITHION IN BOTTOM MATERIAL (UG/KG)	TOTAL 2,4-D (UG/L)	2,4-D IN BOTTOM MATERIAL (UG/KG)	TOTAL 2,4,5-T (UG/L)	2,4,5-T IN BOTTOM MATERIAL (UG/KG)	TOTAL SILVEX (UG/L)	SILVEX IN BOTTOM MATERIAL (UG/KG)
NOV								
10...	ND	ND	ND	ND	ND	ND	ND	ND
FEB								
22...	ND	--	ND	--	ND	--	ND	--
MAY								
24...	ND	ND	ND	ND	ND	ND	ND	ND
AUG								
16...	ND	--	ND	--	ND	--	ND	--

ND Not detected.

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Oct. 6	1325	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Crucigenia	1,600	2	
		Dictyosphaerium	2,400	3	
		Kirchneriella	2,400	3	
		Oocystis	800	1	
		Westella	1,600	2	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	36,000	38	
		Melosira	8,500	9	
		NITZSCHIA	1,600	2	
		CYANOPHYTA			
		Myxophyceae			
		Anacystis	14,000	15	
		Anacystis Inerta	24,000	25	
		TOTAL	94,000		
Nov. 10	0950	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	61	5	
		Dictyasphaerium	49	4	
		Kirchneriella	12	1	
		Oocystis	24	2	
		Scenedesmus	73	5	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Achnanthes	24	2	
		Cyclotella	430	32	
		Gomphonema	12	1	
		Melosira	330	24	
		Navicula	37	3	
		Nitzschia	49	4	
		CYANOPHYTA			
		Myxophyceae			
		Anacystis	150	11	
		Gomphosphaeria	98	7	
		TOTAL	1,400		
Dec. 8	1245	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	79	5	
		Chodatella	9	1	
		Crucigenia	37	2	
		Dictyosphaerium	46	3	
		Gloeocystis	19	1	
		Golenkinia	9	1	
		Kirchneriella	9	1	
		Scenedesmus	190	12	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	140	9	
		Eunotia	14	1	
		Melosira	180	11	
		Navicula	14	1	
		Nitzschia	160	10	
		CYANOPHYTA			
		Myxophyceae			
		Oscillatoria	680	42	
		EUGLENOPHYTA			
		Euglenophyceae			
		Trachelomonas	14	1	
		TOTAL	1,600		

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Dec. 20	1100	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	69	9	
		Dictyosphaerium	15	2	
		Kirchneriella	42	5	
		Micractinium	23	3	
		Scenedesmus	310	40	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	11	1	
		Melosira	61	8	
		Nitzschia	11	1	
		CYANOPHYTA			
		Myxophyceae			
		Anabaena	54	7	
		Anacystis	38	5	
		Oscillatoria	130	16	
		PYRRHOPHYTA			
		Dinophyceae			
		Glenodinium	8	1	
		TOTAL	770		
Feb. 22	0930	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	1,100	47	
		Chlamydomonas	230	10	
		Scenedesmus	120	5	
		Staurastrum	18	1	
		Ulothrix	27	1	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	18	1	
		Fragilaria	64	3	
		Melosira	220	10	
		Meridion	18	1	
		Navicula	82	4	
		Nitzschia	180	8	
		Chrysophyceae			
		Dinobryon	100	4	
		Mallomonas	18	1	
		CYANOPHYTA			
		Myxophyceae			
		Anacystis	36	2	
		TOTAL	2,200		
May 24	0945	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	1,000	3	
		Chlamydomonas	370	1	
		Coelastrum	1,300	3	
		Dictyosphaerium	9,000	24	
		Scenedesmus	5,000	13	
		Tetrastrum	650	2	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	5,000	13	
		Melosira	6,600	18	
		Nitzschia	3,400	9	
		CYANOPHYTA			
		Myxophyceae			
		Anabaena	4,500	12	
		TOTAL	37,000		

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
June 28	1000	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Actinastrum	11,000	5	
		Cosmarium	5,900	2	
		Dictosphaerium	57,000	22	
		Scenedesmus	8,100	3	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	3,600	1	
		Melosira	20,000	8	
		Stephanodiscus	2,500	1	
		Synedra	2,900	1	
		CYANOPHYTA			
		Myxophyceae			
		Agmenellum	33,000	13	
		Anacystis	35,000	14	
		Arthrospira	26,000	10	
		Oscillatoria	47,000	18	
		EUGLENOPHYTA			
		Euglenephuceae			
		Trachelomonas	680	0	
		TOTAL	260,000		
July 26	1230	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Cosmarium	2,100	8	
		Scenedesmus	1,600	6	
		Spaerocystis	7,100	27	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	1,300	5	
		Melosira	1,800	7	
		Nitzschia	330	1	
		CYANOPHYTA			
		Cyanophyceae			
		Agmenellum	5,000	19	
		Anacystis	4,400	16	
		Oscillatoria	3,000	47	
		TOTAL	27,000		
Aug. 16	0915	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	310	2	
		Crucigenia	150	1	
		Dictyosphaerium	500	4	
		Kirchneriella	620	5	
		Oocystis	380	3	
		Pediastrum	920	7	
		Scenedesmus	4,800	37	
		Treubaria	120	1	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	810	6	
		Navicula	77	1	
		CYANOPHYTA			
		Cyanophyceae			
		Agmenellum	3,000	23	
		Anacystis	960	7	
		EUGLENOPHYTA			
		Euglenophyceae			
		Trachelomonas	120	1	
		TOTAL	13,000		

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Sept. 13	0910	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	13	2	
		Cosmarium	7	1	
		Crucigenia	27	3	
		Dictyosphaerium	27	3	
		Scenedesmus	110	12	
		Sphaerocystis	400	45	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	33	4	
		Gyrosigma	7	1	
		Melosira	20	2	
		Navicula	47	5	
		CYANOPHYTA			
		Cyanophyceae			
		Anacystis	200	23	
		TOTAL	880		

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PERIPHYTON

Date	Length of exposure (days)	Biomass (mg/m^2)		Chlorophyll a (mg/m^2)	Chlorophyll b (mg/m^2)	Biomass chlorophyll ratio	Sampling method
		Dry weight	Ash weight				
Nov. 10	34	14460	4385	9.86	0.480	1022	Polyethylene strip
July 26	27	32400	21900	.360	.095	29170	

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	107	103	90	92	72	74	98	96	147	150	141
2	128	112	112	92	90	70	76	98	99	147	150	141
3	133	107	112	94	93	69	73	108	98	148	148	141
4	133	104	111	95	95	74	73	108	94	147	146	145
5	138	107	98	96	94	67	73	108	95	147	146	143
6	143	112	100	96	93	66	78	113	98	157	142	143
7	133	117	102	95	94	69	78	113	98	157	167	140
8	133	117	102	93	96	69	78	113	98	157	154	141
9	133	112	112	96	96	66	78	118	103	162	154	139
10	128	107	117	93	97	65	78	113	108	157	160	93
11	122	112	100	87	97	65	76	118	108	137	170	87
12	122	109	86	80	87	65	76	113	113	127	165	66
13	122	112	87	75	85	62	78	113	115	132	171	66
14	143	112	90	71	84	61	83	113	118	132	155	69
15	143	112	88	71	87	64	81	113	118	132	149	72
16	133	112	80	69	85	69	84	113	118	132	142	78
17	112	98	78	70	84	69	84	113	122	132	135	86
18	112	102	82	69	83	64	86	113	122	142	105	94
19	112	104	82	71	86	64	90	127	127	152	126	98
20	112	102	83	71	85	63	88	127	127	162	117	86
21	112	107	84	74	84	61	92	127	127	152	122	90
22	114	100	86	80	84	65	90	130	123	142	116	100
23	124	102	87	83	87	67	92	132	123	145	126	102
24	143	102	91	85	85	65	93	127	132	155	129	102
25	86	107	90	88	79	65	97	118	132	153	125	102
26	85	107	87	79	75	65	96	98	137	153	127	102
27	92	107	88	90	81	66	98	98	132	153	129	112
28	91	107	90	88	77	66	98	93	137	151	133	112
29	98	112	92	86	---	67	98	90	132	146	135	114
30	107	107	92	86	---	69	98	86	137	150	138	122
31	105	---	92	92	---	69	---	93	---	146	137	---
MEAN	120	108	94	84	88	66	85	111	116	147	141	108

WTR YR 1977 MEAN 106 MAX 171 MIN 61

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.5	12.0	7.0	4.0	2.5	11.0	15.0	17.5	23.5	28.5	26.5	26.5
2	19.5	10.0	6.0	3.0	2.5	10.5	16.5	18.0	23.0	27.5	26.5	26.5
3	19.0	10.0	6.0	3.5	2.0	10.0	18.0	20.0	22.5	29.0	26.5	26.5
4	18.5	9.5	5.0	3.5	3.5	11.5	18.0	20.0	23.0	30.0	26.0	27.0
5	19.0	10.0	6.0	4.0	5.0	12.0	19.0	22.0	24.0	27.0	26.0	27.0
6	19.0	9.0	5.0	3.5	3.0	12.0	16.5	22.5	24.5	28.5	27.5	26.0
7	19.0	9.5	8.5	4.0	2.5	12.0	15.5	24.0	23.0	30.0	28.0	26.0
8	20.5	9.5	9.0	3.5	2.0	10.0	15.5	23.5	21.5	30.0	28.0	25.0
9	23.0	7.0	5.0	6.5	2.0	10.0	15.0	22.5	22.0	30.0	28.5	24.0
10	19.5	8.0	6.0	5.5	3.0	10.0	13.5	19.5	20.0	28.5	29.0	24.0
11	17.0	9.0	7.0	2.5	3.5	11.0	14.5	18.0	21.0	28.5	29.0	23.5
12	15.0	10.0	8.5	3.0	5.0	12.0	15.5	18.0	22.0	29.0	29.0	22.0
13	14.5	7.5	8.0	2.0	8.0	13.5	16.5	19.0	22.0	29.0	28.5	21.0
14	16.0	7.0	6.5	2.5	6.0	13.5	17.5	20.0	23.0	28.5	28.5	21.0
15	15.0	7.0	7.5	3.5	7.0	14.0	18.5	25.0	24.0	28.5	27.5	21.5
16	16.5	6.5	8.0	2.5	7.0	15.0	19.5	21.5	23.5	28.0	26.0	22.0
17	17.0	7.5	7.5	1.0	5.5	15.0	19.5	21.5	24.0	28.0	26.5	23.0
18	14.0	7.5	7.5	0.5	5.0	15.0	19.5	23.0	25.0	28.5	25.5	23.5
19	13.0	7.5	8.5	0.5	5.0	15.0	19.5	23.5	25.5	29.0	23.0	24.0
20	15.0	9.0	8.0	0.5	6.5	14.5	20.0	24.0	26.0	29.0	22.5	25.0
21	13.5	8.5	6.5	0.5	5.5	13.5	20.0	23.0	26.5	29.5	24.0	25.0
22	12.5	8.0	5.0	0.5	5.5	13.5	20.0	23.5	26.0	29.5	24.5	24.0
23	12.0	6.5	5.0	0.5	6.0	12.0	20.5	23.5	26.0	27.0	25.0	23.0
24	12.0	6.0	4.5	1.0	8.5	11.5	21.0	23.0	23.5	25.0	25.5	23.0
25	13.0	6.0	5.0	2.0	9.0	11.5	20.0	22.0	24.0	26.5	25.5	23.5
26	14.0	7.0	5.0	2.0	10.0	11.5	19.5	21.0	25.0	27.0	24.5	24.0
27	12.0	9.5	5.0	3.0	12.0	12.0	18.0	21.5	26.0	25.0	25.0	24.0
28	11.0	11.5	5.0	4.0	11.5	12.5	17.5	22.0	27.0	24.0	25.5	24.0
29	9.0	13.5	5.5	2.5	---	14.0	19.0	22.5	28.0	25.0	25.5	22.0
30	9.5	10.0	4.5	2.5	---	15.0	17.0	22.5	28.5	25.0	26.0	21.5
31	11.0	---	6.0	3.0	---	15.5	---	23.0	---	26.5	26.5	---
MEAN	15.5	8.5	6.5	2.5	5.5	12.5	18.0	21.5	24.0	28.0	26.5	24.0

WTR YR 1977 MEAN 16.0 MAX 30.0 MIN 0.5

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE FOR SELECTED DAYS, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT					
06...	1325	325	12	11	87
NOV					
10...	0950	555	21	31	--
17...	1400	1210	25	82	95
DEC					
08...	1245	1190	23	74	93
20...	1100	6030	26	423	90
JAN					
10...	1740	2790	29	218	100
FEB					
22...	0930	1530	45	186	--
MAR					
22...	1200	9700	19	498	98
APR					
26...	1000	1130	27	82	97
MAY					
24...	0945	676	35	64	93
JUN					
28...	1000	409	21	23	94
JUL					
26...	1230	238	19	12	98
AUG					
16...	0915	260	24	17	100
SEP					
13...	0910	4200	43	488	73

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)
OCT							
20...	1030	380	15.0	7.1	17	4.3	140
NOV							
15...	1115	680	7.0	10.2	18	2.9	980
DEC							
08...	1035	1180	10.0	11.0	19	3.2	400
JAN							
11...	1600	3760	4.0	12.8	14	1.1	--
MAR							
03...	1335	3660	11.0	11.1	30	3.7	--
APR							
19...	1435	1380	22.0	8.6	28	3.1	20
MAY							
19...	1330	501	26.0	10.3	36	7.1	220
JUN							
14...	1530	634	21.0	10.3	31	4.1	260
JUL							
21...	1345	268	31.0	8.6	33	3.9	240
AUG							
15...	--	215	29.0	7.5	30	4.4	11000
SEP							
08...	1600	459	24.0	6.9	31	2.8	24000

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) 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) above mean sea level (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 259). Suspended sediment records for the current year are published on page 347 of this report.

AVERAGE DISCHARGE.--13 years, 149 ft³/s (4.220 m³/s), 12.97 in/yr (329 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.--Peak discharges above base of 1,000 ft³/s (28.3 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)
Jan. 11	1630	*1190	33.7	*9.30	2.835	Sept. 9	1130	1040	29.5	8.75	2.667

Minimum discharge, 0.05 ft³/s (0.001 m³/s) July 28, 29, gage height, 1.19 ft (0.363 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	100	.40	92	76	541	340	34	34	7.0	4.2	3.6
2	6.1	98	.41	83	71	448	233	32	32	16	32	3.5
3	5.7	97	.42	82	69	268	176	29	32	11	36	2.9
4	5.5	94	.40	80	70	188	152	28	28	7.3	25	3.0
5	5.5	94	.43	79	92	226	197	37	24	3.9	16	1.6
6	5.5	93	.43	78	61	336	278	32	24	3.1	10	.98
7	5.5	91	1.9	100	58	554	301	30	28	2.6	7.6	1.6
8	5.5	90	59	123	58	836	228	30	17	1.4	3.3	339
9	6.2	88	324	140	60	852	156	38	28	2.3	2.0	996
10	5.7	44	400	602	65	613	119	28	19	2.4	1.5	814
11	62	.23	316	1140	68	362	102	22	10	5.0	1.2	604
12	101	.16	373	1020	68	261	95	21	11	18	.84	213
13	99	.14	570	673	78	408	87	20	11	23	.68	81
14	97	.12	508	399	79	743	81	17	11	25	.65	46
15	96	.91	408	387	83	740	71	13	11	23	.73	28
16	94	.31	321	439	81	552	65	11	10	18	12	22
17	92	.16	298	341	75	311	58	11	9.5	13	20	24
18	88	.17	255	243	74	216	51	11	11	7.8	80	20
19	41	.20	199	172	81	171	50	8.1	9.9	5.1	148	16
20	1.4	.21	161	148	95	205	46	8.0	7.5	3.6	78	14
21	.82	.21	154	128	95	290	44	6.9	8.5	2.7	40	12
22	5.3	.21	128	117	82	433	42	6.8	4.3	2.5	26	9.8
23	9.1	.21	126	107	76	544	39	7.2	4.1	1.7	19	9.5
24	10	.23	108	103	104	483	41	21	4.4	1.3	16	10
25	10	.25	100	104	270	324	48	117	7.3	1.9	13	10
26	8.3	.28	106	114	315	212	69	220	7.9	.35	8.5	8.9
27	7.8	.31	122	117	271	163	69	195	4.3	.11	7.7	8.7
28	39	.53	122	119	376	140	61	126	5.5	.06	6.7	8.8
29	105	.99	117	108	---	133	48	80	5.4	.05	5.1	5.8
30	103	.50	99	95	---	174	40	54	2.5	.44	4.8	4.9
31	101	---	100	86	---	326	---	39	---	.47	4.5	---
TOTAL	1228.42	895.33	5478.39	7619	3051	12053	3387	1333.0	422.1	210.08	631.00	3322.58
MEAN	39.6	29.8	177	246	109	389	113	43.0	14.1	6.78	20.4	111
MAX	105	100	570	1140	376	852	340	220	34	25	148	996
MIN	.82	.12	.40	78	58	133	39	6.8	2.5	.05	.65	.98
CFSM	.25	.19	1.14	1.58	.70	2.49	.72	.28	.09	.04	.13	.71
IN.	.29	.21	1.31	1.82	.73	2.87	.81	.32	.10	.05	.15	.79

CAL YR 1976 TOTAL 39229.85 MEAN 107 MAX 1480 MIN .04 CFSM .69 IN 9.35
WTR YR 1977 TOTAL 39630.90 MEAN 109 MAX 1140 MIN .05 CFSM .70 IN 9.45

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 V-notch sharp-crested weir. Altitude of gage is 90 ft (27 m), by barometer.

REMARKS.--Records good. Suspended sediment records for current year are published on page 349 of this report.

AVERAGE DISCHARGE.--9 years, 2.28 ft^3/s (0.065 m^3/s), 14.07 in/yr (357 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, 0.24 ft^3/s (0.007 m^3/s) July 21, 22, 1976; minimum gage height, 0.84 ft (0.256 m), Aug. 24, 28, Sept. 1, 8, 9, 13, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 25 ft^3/s (0.71 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Jan. 10	0715	82	2.32	3.36	1.024
Mar. 13	1300	*114	3.23	*3.67	1.119
Mar. 20	1100	29	10.82	2.46	0.750
Aug. 18	1300	25	0.71	2.32	0.707
Sept. 8	1615	53	1.50	2.99	0.911

Minimum discharge, 0.29 ft^3/s (0.008 m^3/s) Aug. 8, 9, 10, 12, gage height, 0.86 ft (0.262 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.41	.50	.60	.79	1.1	2.6	2.1	.75	1.1	.64	.60	.41
2	.42	.45	.58	.75	1.1	1.9	2.0	.72	1.6	1.1	.64	.41
3	.43	.43	.55	.77	1.1	1.7	2.0	.70	1.1	.59	.52	.41
4	.40	.42	.54	.80	1.2	3.8	1.9	.68	.90	.53	.50	.40
5	.41	.40	.54	.79	1.2	4.5	3.6	.66	.79	.51	.45	.41
6	.40	.38	.54	.80	1.1	4.5	2.6	.69	.97	.49	.42	.43
7	.38	.36	1.0	1.9	1.1	12	1.9	.65	1.2	.48	.39	.47
8	.36	.35	1.1	1.1	1.1	6.3	1.7	.72	.79	.46	.38	16
9	.86	.34	.77	1.6	1.0	4.2	1.5	.63	.88	2.0	.37	3.4
10	.44	.33	.66	33	1.0	3.4	1.5	.62	.75	1.2	.38	1.0
11	.40	.50	.78	5.5	1.0	2.8	1.4	.62	.71	.58	.44	.61
12	.39	.90	4.1	3.3	1.0	2.4	1.3	.59	.76	.55	.38	.46
13	.39	.60	1.4	2.3	1.2	41	1.3	.58	.71	.51	.37	.43
14	.36	.50	.92	4.0	1.1	12	1.2	.56	.66	.51	.47	.42
15	.35	1.0	1.5	6.1	1.0	6.0	1.0	.55	.67	.47	.69	.41
16	.34	.90	4.3	3.7	1.1	4.5	.98	.57	.64	.46	.59	.41
17	.54	.66	1.5	2.4	1.0	3.6	.93	.66	.63	.45	.48	.42
18	.50	.58	1.1	1.9	1.0	3.2	.87	.65	.62	.43	12	.43
19	.44	.56	.96	1.7	1.2	2.5	.88	.63	.61	.42	1.6	.42
20	.98	.54	1.0	1.5	1.6	15	1.2	.65	.62	.41	.68	.41
21	.63	.53	1.5	1.5	1.2	7.6	1.1	.65	.67	.41	.55	.40
22	.47	.49	1.2	1.3	1.1	15	1.1	1.4	.57	.43	.50	.38
23	.44	.49	1.2	1.3	1.0	7.3	.92	.96	.64	.42	.48	.39
24	.45	.50	1.2	1.6	3.3	5.0	2.6	7.5	.69	.41	.49	.39
25	.50	.52	1.0	2.1	2.8	4.0	1.7	12	.68	.40	.50	.39
26	.47	.52	2.6	1.5	1.7	3.4	1.2	4.7	.65	.45	.45	.39
27	.45	.55	1.5	1.3	3.3	2.9	.94	2.6	.57	.43	.45	.39
28	.43	1.0	1.1	1.3	4.9	2.7	.83	1.7	.54	.41	.44	.38
29	.42	1.3	.99	1.3	---	2.5	.83	1.3	.51	.41	.43	.37
30	.41	.71	.85	1.2	---	2.6	.80	1.1	.49	.41	.43	.38
31	.60	---	.87	1.2	---	2.5	---	.94	---	.40	.42	---
TOTAL	14.47	17.31	38.45	90.30	41.5	193.4	43.88	47.73	22.72	17.37	27.49	31.62
MEAN	.47	.58	1.24	2.91	1.48	6.24	1.46	1.54	.76	.56	.89	1.05
MAX	.98	1.3	4.3	33	4.9	41	3.6	12	1.6	2.0	12	16
MIN	.34	.33	.54	.75	1.0	1.7	.80	.55	.49	.40	.37	.37
CFSM	.21	.26	.56	1.32	.67	2.84	.66	.70	.35	.26	.41	.48
IN.	.24	.29	.65	1.53	.70	3.27	.74	.81	.38	.29	.46	.53

CAL YR 1976 TOTAL 498.17 MEAN 1.36 MAX 67 MIN .30 CFSM .62 IN 8.42
WTR YR 1977 TOTAL 586.24 MEAN 1.61 MAX 41 MIN .33 CFSM .73 IN 9.91

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 (revised), 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) above mean sea level. Prior to Apr. 1, 1955, nonrecording gage at same site and datum.

REMARKS.--Records good. Suspended sediment records for the current year are published on page 347 of this report.

AVERAGE DISCHARGE.--23 years, 87.3 ft³/s (2.472 m³/s), 15.28 in/yr (388 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)
Jan. 10	1500	*980	27.8	*8.20	2.499	Aug. 18	1900	678	19.2	7.01	2.137
Mar. 14	1930	728	20.6	7.21	2.198	Sept. 8	2130	718	20.3	7.17	2.185
Mar. 20	1800	600	17.0	6.70	2.042						

Minimum discharge, 4.2 ft³/s (0.12 m³/s) Aug. 14, gage height, 1.19 ft (0.363 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	22	28	50	57	119	79	25	72	10	5.5	12
2	11	18	25	46	54	87	72	23	280	14	18	11
3	12	29	23	45	55	72	69	23	96	14	18	10
4	12	29	21	47	54	80	66	21	57	11	13	10
5	12	28	21	46	53	149	83	19	45	9.8	9.9	10
6	11	27	20	46	52	122	102	20	38	9.0	7.8	11
7	11	26	38	76	47	316	72	19	67	8.4	6.5	11
8	10	26	51	72	45	299	63	20	44	8.0	5.6	277
9	20	25	47	60	45	178	57	18	39	9.7	4.9	666
10	21	25	36	722	46	134	53	17	39	37	4.9	450
11	14	25	32	776	46	110	50	16	31	15	11	116
12	12	29	150	284	46	97	46	16	28	17	5.7	61
13	12	31	137	156	49	309	42	15	28	15	4.5	45
14	12	25	75	140	48	655	40	14	24	37	15	38
15	11	71	65	277	45	494	37	14	24	18	32	32
16	11	70	279	191	44	207	36	13	23	10	23	28
17	13	35	148	134	44	140	34	12	21	8.6	15	26
18	21	27	94	107	42	114	31	12	19	7.6	385	28
19	18	24	74	100	46	100	29	12	19	6.8	403	25
20	21	22	68	85	59	370	48	11	18	6.2	86	23
21	36	20	75	78	52	493	42	12	20	5.8	49	20
22	23	20	64	69	46	512	36	13	17	8.5	36	18
23	18	18	58	64	46	434	32	20	15	8.2	28	17
24	17	18	55	65	75	222	48	97	18	6.5	23	17
25	17	19	51	84	126	157	59	418	18	6.5	22	16
26	20	19	102	78	85	126	49	306	17	6.5	19	16
27	19	21	97	72	77	106	37	155	15	7.9	17	15
28	17	25	74	71	173	93	31	96	13	6.4	16	15
29	16	49	64	70	---	90	27	69	11	5.6	15	13
30	17	38	56	62	---	87	27	52	11	5.5	14	13
31	22	---	54	60	---	94	---	44	---	5.2	13	---
TOTAL	498	861	2182	4233	1657	6566	1497	1622	1167	344.7	1326.3	2050
MEAN	16.1	28.7	70.4	137	59.2	212	49.9	52.3	38.9	11.1	42.8	68.3
MAX	36	71	279	776	173	655	102	418	280	37	403	666
MIN	10	18	20	45	42	72	27	11	11	5.2	4.5	10
CFSM	.21	.37	.91	1.77	.76	2.73	.64	.67	.50	.14	.55	.88
IN.	.24	.41	1.05	2.03	.79	3.15	.72	.78	.56	.17	.64	.98

CAL YR 1976 TOTAL 20076.4 MEAN 54.9 MAX 1280 MIN 5.4 CFSM .71 IN 9.62
WTR YR 1977 TOTAL 24004.0 MEAN 65.8 MAX 776 MIN 4.5 CFSM .85 IN 11.51

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).

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) above mean sea level (Corps of Engineers bench mark). Prior to Nov. 26, 1934, nonrecording gage at site 200 ft (61 m) downstream at same datum.

REMARKS.--Records good except those for period of no gage-height record, Feb. 9 to Mar. 15, which are fair. Suspended sediment for the current year are published on page 348 of this report.

AVERAGE DISCHARGE.--48 years (water years 1929-77), 762 ft³/s (21.58 m³/s), 14.19 in/yr (360 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. 18, gage height, 13.09 ft (3.990 m); minimum, 35 ft³/s (0.99 m³/s) Aug. 10, gage height, 2.52 ft (0.768 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	83	186	496	574	800	1200	240	700	74	38	74
2	54	89	186	466	542	900	1060	219	885	73	45	68
3	56	123	179	441	511	1000	995	198	1020	74	54	63
4	57	154	167	421	491	1000	982	181	863	72	59	59
5	56	167	156	405	479	960	977	169	601	72	62	56
6	54	169	146	394	468	1000	953	157	435	70	55	54
7	53	168	148	417	456	1050	924	147	358	64	49	53
8	51	166	183	469	444	1100	905	145	309	59	44	141
9	56	163	233	500	450	1150	899	150	271	55	40	627
10	66	160	258	898	460	1250	898	145	252	54	36	892
11	76	161	274	1350	470	1400	870	138	246	64	38	1020
12	68	165	405	1650	480	1600	791	129	226	170	48	1180
13	61	169	607	1880	500	1800	633	121	202	207	42	1320
14	59	170	650	1990	520	2000	550	114	178	165	40	1450
15	55	190	699	2200	520	2300	470	106	161	166	42	1470
16	51	272	859	2370	540	2550	411	98	148	170	68	1210
17	54	292	1020	2400	520	2660	373	92	137	128	74	725
18	88	250	1140	2300	520	2710	342	87	127	96	273	374
19	118	216	1170	2000	500	2650	314	82	121	78	642	250
20	133	188	1120	1600	530	2580	295	78	130	66	768	214
21	143	168	1020	1400	560	2490	295	75	131	60	602	186
22	160	153	889	1200	540	2410	296	73	117	55	382	165
23	180	138	751	1000	540	2350	280	81	105	52	295	148
24	160	126	612	800	560	2300	268	162	100	50	233	135
25	129	117	564	742	580	2280	276	674	100	47	192	123
26	110	111	547	682	600	2260	328	1040	100	46	154	113
27	98	113	599	660	640	2220	346	1160	95	46	129	105
28	88	118	616	650	700	2130	315	1240	88	43	113	99
29	81	142	598	643	---	1940	282	1240	84	42	102	92
30	78	172	564	627	---	1690	259	1220	78	41	92	86
31	82	---	530	602	---	1440	---	996	---	38	82	---
TOTAL	2626	4873	17076	33653	14695	55970	17787	10757	8368	2497	4893	12552
MEAN	84.7	162	551	1086	525	1805	593	347	279	80.5	158	418
MAX	180	292	1170	2400	700	2710	1200	1240	1020	207	768	1470
MIN	51	83	146	394	444	800	259	73	78	38	36	53
CFSM	.12	.22	.76	1.49	.72	2.48	.81	.48	.38	.11	.22	.57
IN.	.13	.25	.87	1.72	.75	2.86	.91	.55	.43	.13	.25	.64

CAL YR 1976 TOTAL 182172 MEAN 498 MAX 4860 MIN 44 CFSM .68 IN 9.30
WTR YR 1977 TOTAL 185747 MEAN 509 MAX 2710 MIN 36 CFSM .70 IN 9.48

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. Suspended sediment records for the current year are published on page 348 of this report.

AVERAGE DISCHARGE.--21 years, 117 ft³/s (3.313 m³/s), 17.03 in/yr (433 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)
Jan. 11	0900	*1270	36.0	*13.70	4.176	Mar. 16	0130	750	21.2	12.65	3.856

No flow part of each day July 30, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	4.6	32	61	62	228	67	8.5	30	3.0	.03	2.7
2	1.9	4.4	27	53	56	192	58	7.1	104	3.0	.11	2.3
3	3.3	4.4	23	46	53	127	52	6.4	193	3.4	5.8	2.1
4	3.2	4.7	20	46	52	96	49	5.6	148	2.6	11	1.9
5	2.5	4.6	18	45	53	187	48	5.0	64	2.2	6.5	1.7
6	2.3	4.3	16	45	50	290	57	5.6	34	2.1	2.5	1.7
7	2.0	4.2	19	59	44	413	64	5.0	28	1.9	1.3	2.4
8	2.0	4.1	34	94	41	588	53	8.3	22	1.6	.74	23
9	2.6	3.9	46	92	40	585	43	6.4	20	1.3	.43	441
10	4.0	3.8	41	509	38	504	36	4.6	42	1.1	.34	586
11	3.4	4.2	36	1210	38	318	32	3.8	30	1.3	.36	400
12	2.9	5.5	66	1000	38	199	29	3.4	19	2.5	.24	117
13	2.5	7.0	134	842	39	219	26	3.0	14	2.0	.13	43
14	2.2	7.5	133	533	41	646	23	2.7	11	1.3	.11	26
15	1.9	15	106	431	40	733	21	2.5	9.0	.90	.47	17
16	1.7	44	215	473	38	712	18	2.2	7.9	.68	1.8	13
17	1.9	42	363	396	37	465	17	2.0	6.7	.56	1.2	11
18	3.6	30	292	270	36	229	14	1.9	6.0	.44	28	9.3
19	3.4	23	180	170	37	147	13	1.8	8.8	.29	126	7.9
20	3.1	19	113	120	41	199	30	1.7	15	.18	68	7.4
21	3.8	17	97	100	51	434	20	1.7	10	.11	34	6.8
22	4.1	15	89	85	48	498	16	1.6	5.9	.07	18	6.1
23	3.8	13	77	75	42	593	15	1.6	4.7	.05	11	5.4
24	3.9	12	66	70	46	520	14	12	5.4	.03	55	4.6
25	3.7	11	58	84	125	379	19	131	5.7	.01	55	4.1
26	4.0	11	95	103	153	218	26	268	18	.01	16	3.5
27	4.4	12	181	103	124	143	25	366	14	.01	8.6	3.1
28	4.0	14	154	95	166	108	17	323	7.7	.01	6.0	2.7
29	3.4	24	115	88	---	92	13	149	5.0	.01	4.5	2.4
30	3.1	35	85	78	---	81	10	67	3.6	.01	3.7	2.1
31	3.8	---	69	67	---	75	---	41	---	.01	3.2	---
TOTAL	94.1	404.2	3000	7443	1629	10218	925	1449.4	892.4	32.68	470.06	1757.2
MEAN	3.04	13.5	96.8	240	58.2	330	30.8	46.8	29.7	1.05	15.2	58.6
MAX	4.4	44	363	1210	166	733	67	366	193	3.4	126	586
MIN	1.7	3.8	16	45	36	75	10	1.6	3.6	.01	.03	1.7
CFSM	.03	.15	1.04	2.57	.62	3.54	.33	.50	.32	.01	.16	.63
IN.	.04	.16	1.20	2.97	.65	4.07	.37	.58	.36	.01	.19	.70

CAL YR 1976 TOTAL 23773.42 MEAN 65.0 MAX 1990 MIN .22 CFSM .70 IN 9.48
WTR YR 1977 TOTAL 28315.04 MEAN 77.6 MAX 1210 MIN .01 CFSM .83 IN 11.29

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.--Tritium determinations for period January 1976 to September 1977 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 FEBRUARY TO DECEMBER 1975

DATE	TRITIUM IN WATER MOLE-CULES (TU)	TRITIUM WATER MOLE-CULES COUNT ERROR (TU)
FEB		
01...	49.8	2.4
MAR		
01...	45.9	2.3
APR		
01...	42.7	2.5
MAY		
01...	50.9	2.4
JUN		
03...	55.1	2.8
JUL		
02...	53.9	2.7
AUG		
01...	48.6	2.5
SEP		
06...	47.2	2.4
OCT		
01...	37.6	2.0
NOV		
05...	50.3	2.5
DEC		
02...	47.5	2.4

02091960 CREEPING SWAMP NEAR CALICO, N. C.

LOCATION.--Lat 35°25'42", long 77°11'12", Beaufort County, Hydrologic Unit 03020202, on left bank at downstream side of bridge on State Highway 102, 4.2 mi (6.8 km) northeast of Calico, and 4.5 mi (7.2 km) upstream from mouth.

DRAINAGE AREA.--9.8 mi² (25.4 km²), approximately.

PERIOD OF RECORD.--March 1971 to March 1977 (discontinued).

GAGE.--Water-stage recorder and concrete control with a parabolic shaped sharp-crested weir. Datum of gage is at mean sea level (Soil Conservation Service bench mark). Prior to Oct. 1, 1972, at datum 27.98 ft (8.528 m) higher.

REMARKS.--Records good.

AVERAGE DISCHARGE.--5 years (water years 1972-76), 13,7 ft³/s (0.388 m³/s), 18.98 in/yr (482 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,000 ft³/s (28.3 m³/s) Oct. 1, 1971, gage height, 36.90 ft (11.247 m), present datum; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--For period October 1976 to March 1977. Peak discharges above base of 50 ft³/s (1.42 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)
Jan. 11	0030	82	2.32	34.80	10.607	Mar. 14	1130	52	1.47	34.59	10.543
Jan. 15	2115	53	1.50	34.60	10.546	Mar. 22	1545	*89	2.52	*34.84	10.619
Mar. 8	0245	76	2.15	34.77	10.598						

No flow Oct. 1 to Nov. 14, 19-27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO MARCH 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		.00	.68	13	8.6	27						
2		.00	1.5	11	7.7	22						
3		.00	1.5	9.7	7.0	17						
4		.00	1.2	10	6.5	15						
5		.00	1.1	11	6.2	18						
6		.00	.99	13	5.5	23						
7		.00	1.5	18	5.0	49						
8		.00	2.4	26	4.6	73						
9		.00	3.3	24	4.1	56						
10		.00	5.6	56	3.9	41						
11		.00	4.7	76	3.8	32						
12		.00	12	55	3.7	25						
13		.00	19	41	3.8	28						
14		.00	22	35	3.7	46						
15		.03	17	46	3.4	43						
16		.09	38	50	3.3	32						
17		.05	45	40	3.1	22						
18		.01	34	30	2.9	17						
19		.00	26	20	2.9	14						
20		.00	21	15	3.0	41						
21		.00	18	12	2.8	78						
22		.00	15	9.0	2.7	87						
23		.00	13	8.0	2.5	78						
24		.00	12	9.0	3.8	55						
25		.00	9.8	13	7.6	41						
26		.00	14	18	12	28						
27		.00	22	17	14	20						
28		.04	24	14	23	16						
29		.22	20	13	---	14						
30		.30	17	11	---	12						
31		---	15	9.6	---	9.8						
TOTAL	0	.74	438.27	733.3	161.1	1079.8						
MEAN	0	.025	14.1	23.7	5.75	34.8						
MAX	0	.30	45	76	23	87						
MIN	0	.00	.68	8.0	2.5	9.8						
CFSM	0	.003	1.44	2.42	.59	3.55						
IN.	0	.00	1.66	2.78	.61	4.10						

CAL YR 1976 TOTAL 2308.01 MEAN 6.31 MAX 141 MIN .00 CFSM .64 IN 8.76

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 at mean sea level (Soil Conservation Service benchmark). Prior to Oct. 1, 1972, at datum, 16.60 ft (5.060 m) higher.

REMARKS.--Records good.

AVERAGE DISCHARGE.--6 years, 33.8 ft³/s (0.957 m³/s), 17.00 in/yr (432 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 (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 26	1700	*267	7.56	*21.49	6.550

Minimum discharge, no flow Oct. 3-19, May 15-23, July 17 to Aug. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.05	3.8	27	24	48	25	1.9	45	.03	.00	10
2	.01	.04	2.9	24	23	46	22	1.4	35	.54	.00	7.5
3	.00	.04	2.2	22	20	42	20	1.0	38	1.2	.00	5.3
4	.00	.04	1.6	24	18	38	18	.77	31	1.3	.00	3.3
5	.00	.04	1.5	25	17	41	17	.77	28	.93	.00	1.9
6	.00	.03	1.7	24	15	43	16	.49	24	.67	.00	1.2
7	.00	.03	3.8	31	15	88	14	.30	20	.50	.00	.82
8	.00	.03	12	41	14	149	13	.17	16	.31	.00	1.8
9	.00	.02	14	41	13	155	12	.09	13	.16	.00	14
10	.00	.02	11	106	12	121	10	.05	10	.10	.00	16
11	.00	.02	11	154	11	86	9.4	.03	8.2	.05	.00	24
12	.00	.03	20	130	11	65	8.5	.02	6.9	.03	.00	33
13	.00	.03	32	90	11	65	7.5	.02	5.5	.02	.00	25
14	.00	.03	30	80	11	84	6.6	.01	3.9	.02	.00	18
15	.00	1.1	29	100	10	83	5.4	.00	3.5	.02	.00	13
16	.00	8.0	78	105	9.9	78	4.3	.00	3.3	.01	.00	10
17	.00	7.2	90	90	9.6	60	3.3	.00	2.4	.00	.00	8.1
18	.00	4.4	78	70	9.1	47	2.5	.00	1.4	.00	.18	6.6
19	.00	2.6	63	55	8.8	37	1.9	.00	.91	.00	3.3	5.5
20	.01	1.6	49	40	9.2	73	1.9	.00	.59	.00	3.9	4.5
21	.04	1.2	41	22	8.9	136	1.8	.00	.37	.00	2.7	3.5
22	.06	.85	33	15	8.4	209	1.6	.00	.21	.00	1.6	2.6
23	.07	.64	28	14	8.1	220	1.3	.00	.14	.00	1.1	1.7
24	.06	.51	24	23	11	164	1.7	14	.10	.00	10	1.4
25	.05	.45	21	32	22	111	3.0	137	.09	.00	48	1.3
26	.06	.44	30	34	26	76	4.1	233	.25	.00	122	1.1
27	.05	.60	40	33	28	56	4.6	241	.20	.00	86	.95
28	.04	.93	38	32	43	44	4.3	195	.11	.00	52	.70
29	.03	2.6	38	30	---	37	3.6	153	.06	.00	33	.50
30	.03	4.2	35	29	---	32	2.6	94	.03	.00	21	.33
31	.04	---	31	26	---	29	---	61	---	.00	15	---
TOTAL	.56	37.77	893.5	1569	427.0	2563	246.9	1135.02	298.16	5.89	399.78	223.60
MEAN	.018	1.26	28.8	50.6	15.3	82.7	8.23	36.6	9.94	.19	12.9	7.45
MAX	.07	8.0	90	154	43	220	25	241	45	1.3	122	33
MIN	.00	.02	1.5	14	8.1	29	1.3	.00	.03	.00	.00	.33
CFSM	.001	.05	1.07	1.87	.57	3.06	.31	1.36	.37	.007	.48	.28
IN.	.00	.05	1.23	2.16	.59	3.53	.34	1.56	.41	.01	.55	.31

CAL YR 1976 TOTAL 7270.53 MEAN 19.9 MAX 315 MIN .00 CFSM .74 IN 10.02
WTR YR 1977 TOTAL 7800.18 MEAN 21.4 MAX 241 MIN .00 CFSM .79 IN 10.75

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 mi² (471 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 2.07 ft (0.631 m) below mean sea level (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. Suspended sediment records for the current year are published on page 348 of this report.

AVERAGE DISCHARGE.--27 years, 202 ft³/s (5.721 m³/s), 15.07 in/yr (383 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,060 ft³/s (172 m³/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,1,230 ft³/s (34.8 m³/s) Mar. 23, gage height 11.18 ft (3.408 m); minimum, 7.4 ft³/s (0.21 m³/s) Aug. 14, 15, gage height, 3.80 ft (1.158 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	10	64	212	148	340	181	32	277	16	8.0	55
2	13	10	54	188	136	289	163	30	191	31	16	41
3	12	11	46	171	127	242	151	28	166	35	32	32
4	12	10	40	170	122	211	140	26	125	27	41	26
5	12	10	36	174	118	215	133	25	89	21	36	21
6	12	10	34	174	111	223	123	23	66	17	28	18
7	12	10	38	207	99	428	111	23	56	14	20	17
8	12	10	89	284	91	764	102	21	48	12	14	24
9	13	10	136	280	86	791	92	24	43	11	11	315
10	14	10	134	620	84	665	84	23	41	10	9.3	508
11	15	10	124	1080	83	495	78	20	37	10	8.6	425
12	15	10	183	1140	80	369	72	18	33	22	8.3	264
13	15	10	353	1060	80	351	67	17	31	20	8.0	182
14	14	10	353	812	80	554	61	16	29	17	7.7	134
15	13	20	307	805	77	557	56	15	112	16	7.8	99
16	13	115	633	864	73	458	52	14	87	13	9.3	74
17	13	110	868	743	69	347	47	13	48	10	9.5	58
18	13	82	778	560	66	274	44	12	36	8.8	29	50
19	14	60	590	395	65	229	41	12	30	8.2	266	43
20	17	47	428	300	65	396	41	11	27	7.8	206	37
21	20	39	336	245	65	844	56	11	26	7.8	139	33
22	23	33	280	205	62	1100	58	11	23	7.8	88	29
23	22	30	240	176	59	1220	48	12	20	7.7	56	26
24	18	26	210	165	68	1080	45	58	19	7.8	131	23
25	16	25	187	189	187	812	50	744	18	7.7	294	19
26	14	23	255	216	222	560	52	1110	21	8.6	450	17
27	13	24	438	216	200	383	49	1180	41	9.3	332	17
28	12	30	405	206	298	288	43	1180	34	9.5	224	16
29	11	53	341	192	---	244	39	1020	26	8.8	155	15
30	10	71	282	175	---	216	35	767	20	8.2	110	14
31	10	---	242	161	---	198	---	492	---	7.8	77	---
TOTAL	436	929	8504	12385	3021	15143	2314	6988	1820	417.8	2831.5	2632
MEAN	14.1	31.0	274	400	108	488	77.1	225	60.7	13.5	91.3	87.7
MAX	23	115	868	1140	298	1220	181	1180	277	35	450	508
MIN	10	10	34	161	59	198	35	11	18	7.7	7.7	14
CFSM	.08	.17	1.51	2.20	.59	2.68	.42	1.24	.33	.07	.50	.48
IN.	.09	.19	1.74	2.53	.62	3.10	.47	1.43	.37	.09	.58	.54

CAL YR 1976 TOTAL 53187.4 MEAN 145 MAX 1540 MIN 9.0 CFSM .80 IN 10.87
WTR YR 1977 TOTAL 57421.3 MEAN 157 MAX 1220 MIN 7.7 CFSM .86 IN 11.74

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 mi² (435 km²).

PERIOD OF RECORD.--January 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 19.15 ft (5.837 m) above mean sea level. Prior to Mar. 21, 1951, nonrecording gage on bridge 50 ft (15 m) upstream at same datum.

REMARKS.--Records good except those for period of no gage-height record, Feb. 15 to Mar. 24, which are poor. Suspended sediment records for the current year are published on page 348 of this report.

AVERAGE DISCHARGE.--26 years, 199 ft³/s (5.636 m³/s), 16.09 in/yr (409 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,100 ft³/s (258 m³/s) Sept. 21, 1955, gage height, 17.84 ft (5.438 m); minimum, 1.3 ft³/s (0.037 m³/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 ft³/s (215 m³/s), from information furnished by North Carolina State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,320 ft³/s (37.4 m³/s) Mar. 24, gage height, 12.55 ft (3.825 m); minimum, 3.5 ft³/s (0.10 m³/s) Aug. 17, 18, gage height, 2.54 ft (0.774 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	32	152	364	155	180	213	53	490	25	5.9	11
2	35	33	139	283	142	130	191	44	382	226	7.4	9.1
3	33	33	126	219	130	170	172	39	494	292	15	7.6
4	30	33	113	187	121	230	158	46	475	378	17	6.5
5	27	32	100	173	117	290	145	38	400	557	36	5.5
6	26	31	88	166	110	380	132	31	302	594	29	5.0
7	24	31	93	176	102	500	121	26	202	419	19	5.2
8	22	31	165	217	94	600	110	23	142	216	14	14
9	27	30	230	244	86	900	100	21	113	100	11	37
10	36	29	266	370	82	860	90	19	134	58	8.4	91
11	37	28	266	511	81	740	81	17	119	41	6.9	108
12	36	28	311	678	79	580	75	16	96	34	5.8	98
13	34	28	450	795	77	500	67	15	80	29	5.1	74
14	32	29	544	749	78	460	58	13	62	24	4.6	51
15	30	52	622	704	78	440	52	13	51	22	5.3	37
16	28	152	722	682	72	410	47	12	45	22	4.7	26
17	27	193	803	640	70	400	43	11	40	19	3.7	19
18	29	191	846	600	70	370	40	11	36	16	6.7	16
19	29	182	803	500	74	370	37	10	35	15	16	15
20	31	164	697	400	78	400	35	9.6	33	14	55	17
21	35	145	576	300	90	600	40	9.4	30	12	96	20
22	39	123	462	250	105	1000	39	9.1	25	11	100	19
23	38	101	361	230	125	1250	35	9.4	21	9.7	61	18
24	36	84	278	180	150	1300	38	25	19	8.7	50	19
25	34	72	219	198	200	1170	70	261	18	8.0	41	19
26	33	63	246	220	250	891	106	766	19	8.0	33	13
27	33	64	361	225	350	678	117	1130	18	7.7	27	10
28	32	81	433	218	250	527	105	1190	17	7.0	22	9.0
29	31	119	477	207	---	395	86	1020	16	6.6	18	7.6
30	30	150	478	190	---	289	67	839	17	6.2	15	6.8
31	30	---	436	171	---	239	---	652	---	6.1	13	---
TOTAL	982	2364	11863	11047	3416	17249	2670	6378.5	3931	3192.0	752.5	794.3
MEAN	31.7	78.8	383	356	122	556	89.0	206	131	103	24.3	26.5
MAX	39	193	846	795	350	1300	213	1190	494	594	100	108
MIN	22	28	88	166	70	130	35	9.1	16	6.1	3.7	5.0
CFSM	.19	.47	2.28	2.12	.73	3.31	.53	1.23	.78	.61	.15	.16
IN.	.22	.52	2.63	2.45	.76	3.82	.59	1.41	.87	.71	.17	.18

CAL YR 1976 TOTAL 70533.9 MEAN 193 MAX 1170 MIN 6.6 CFSM 1.15 IN 15.62
WTR YR 1977 TOTAL 64639.3 MEAN 177 MAX 1300 MIN 3.7 CFSM 1.05 IN 14.31

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 September 1977.

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

REMARKS.--Records good. Suspended sediment records for the current year are published on page 349 of this report. Recording rain gage at station.

EXTREMES FOR PERIOD.--November to September; peak discharges 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)
Dec. 26	0445	109	3.09	2.57	0.783
Mar. 4	1715	106	3.00	2.55	0.777
May 25	1015	*116	3.29	*2.62	0.799

No flow for part of July 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	2.3	3.4	4.0	3.6	2.6	2.0	1.5	.50	.87	.74
2	1.8	2.0	3.4	3.8	3.4	2.5	1.7	2.7	.50	2.0	.74
3	1.5	2.0	6.1	3.8	3.0	2.4	2.2	1.5	.50	2.0	.74
4	1.5	2.0	5.3	3.4	17	2.2	1.1	1.3	.50	5.7	.74
5	1.5	2.0	4.1	3.4	8.4	2.1	1.1	1.1	.30	3.0	.87
6	1.3	2.0	3.7	3.0	6.5	2.3	1.1	1.1	.30	1.5	.87
7	1.5	6.1	7.4	3.0	27	2.1	1.1	1.3	.30	1.1	.87
8	1.3	4.1	4.9	2.7	7.9	2.0	1.5	1.1	.22	1.1	1.2
9	1.5	3.4	4.1	2.3	5.3	1.9	2.0	2.0	.22	1.0	11
10	1.5	3.0	5.7	2.3	4.5	1.8	1.0	1.8	.14	1.0	4.1
11	1.5	3.0	3.7	2.3	4.5	1.7	1.0	1.3	.14	.87	3.7
12	1.3	12	3.4	2.0	4.5	1.6	1.0	1.1	.14	.87	3.4
13	1.3	9.5	3.0	1.8	4.9	1.5	1.0	1.1	.22	1.0	2.7
14	1.5	5.3	8.4	1.8	4.7	1.4	1.0	1.0	.14	2.3	2.3
15	3.4	9.0	6.8	2.0	4.1	1.3	.87	2.3	.07	1.5	2.3
16	2.3	8.4	5.4	1.7	3.8	1.3	.87	2.0	.07	1.1	2.7
17	2.3	5.7	4.2	1.7	3.5	1.2	.87	1.3	.07	1.0	2.7
18	2.3	4.9	3.8	1.8	3.3	1.2	1.3	1.1	.07	.87	2.7
19	2.3	3.7	3.5	1.9	3.2	1.1	1.3	1.0	.14	7.4	2.4
20	2.3	3.7	3.1	1.9	3.0	1.1	3.0	1.0	.14	1.5	2.3
21	2.3	3.4	2.7	2.0	5.0	1.0	2.3	.87	.07	1.1	2.1
22	2.7	3.4	2.4	2.0	23	.95	1.9	.87	.07	1.0	2.0
23	2.7	3.4	2.3	1.9	7.0	.90	1.6	.87	.07	.87	2.0
24	3.0	2.7	2.5	7.3	4.9	10	1.4	.74	.07	1.0	1.8
25	3.0	2.7	4.3	3.9	3.8	7.0	9.0	.74	.07	.87	1.6
26	3.0	25	3.8	3.6	3.4	4.5	3.7	.87	.14	.87	1.7
27	3.0	7.9	4.2	5.5	3.1	4.0	2.7	.74	.50	.74	1.8
28	3.7	6.5	4.2	4.5	2.8	3.0	2.0	.74	.30	.74	3.4
29	3.0	5.3	4.1	---	2.1	2.6	1.8	.74	.87	.87	2.0
30	2.3	4.5	4.1	---	1.9	2.3	3.0	.60	.87	.87	1.5
31	---	4.1	4.1	---	2.8	---	2.7	---	.87	.74	---
TOTAL	64.1	163.0	132.1	81.3	185.9	71.55	59.11	36.38	8.58	47.35	68.97
MEAN	2.14	5.26	4.26	2.90	6.00	2.39	1.91	1.21	.28	1.53	2.30
MAX	3.7	25	8.4	7.3	27	10	9.0	2.7	.87	7.4	11
MIN	1.3	2.0	2.3	1.7	1.9	.90	.87	.60	.07	.74	.74
CFSM	1.78	4.38	3.55	2.42	5.00	1.99	1.59	1.01	.23	1.28	1.92
IN.	1.99	5.05	4.09	2.52	5.76	2.22	1.83	1.13	.27	1.47	2.14

02093800 REEDY FORK NEAR OAK RIDGE, N. C.

LOCATION.--Lat 36°10'24", long 79°57'15", 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.--19.9 mi² (51.5 km²).

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) above mean sea level. Prior to Dec. 13, 1955, nonrecording gage at same site and datum.

REMARKS.--Records good. Some diurnal fluctuation at medium and low flows caused by mill upstream. Suspended-sediment records for the current year are published on page 349 of this report.

AVERAGE DISCHARGE.--22 years, 22.1 ft³/s (0.626 m³/s), 15.08 in/yr (383 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; 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. 9	1400	822	23.3	9.34	2.847	Apr. 5	1430	469	13.3	7.94	2.420
Oct. 20	1830	520	14.7	8.20	2.499	Sept. 8	1900	*1210	34.3	*10.11	3.082

Minimum discharge, 1.2 ft³/s (0.034 m³/s) Aug. 7, gage height, 2.44 ft (0.744 m); minimum daily, 1.7 ft³/s (0.048 m³/s) Aug. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	11	16	14	12	23	14	9.1	7.9	5.3	2.1	4.5
2	7.2	10	14	13	12	20	13	8.9	7.6	5.0	2.7	3.5
3	7.8	10	13	14	12	17	17	9.4	6.6	4.6	2.7	3.5
4	6.3	11	12	15	15	19	22	9.0	6.7	4.6	2.8	3.7
5	5.6	9.8	12	16	16	19	240	10	6.2	3.1	2.4	3.2
6	5.7	8.9	12	15	12	37	71	9.2	7.3	4.1	2.1	3.3
7	6.2	9.2	131	18	11	38	32	9.3	6.8	4.2	1.7	3.5
8	18	9.0	69	16	11	26	25	9.8	5.3	2.9	2.5	452
9	462	9.1	48	15	13	21	21	8.3	6.7	2.8	3.2	161
10	59	9.4	29	29	13	19	19	8.0	6.2	6.2	2.7	36
11	22	9.9	26	23	14	18	18	8.0	5.4	6.3	4.5	21
12	16	11	36	19	15	17	16	8.1	5.7	5.3	4.5	13
13	12	10	34	17	25	24	16	7.8	5.8	4.8	3.9	12
14	11	9.8	24	19	18	19	15	7.4	5.6	4.9	4.3	10
15	9.6	12	32	26	16	17	13	7.1	6.3	3.5	5.0	10
16	8.7	12	47	22	15	16	11	6.8	5.8	3.5	33	16
17	9.2	11	29	16	13	15	11	8.5	5.7	3.6	7.1	18
18	8.9	11	22	17	13	15	11	8.2	5.7	3.9	9.0	12
19	8.5	11	19	16	14	14	11	8.3	5.3	3.8	6.1	9.9
20	251	10	22	15	14	18	10	12	4.2	3.5	5.0	9.3
21	83	9.9	26	14	12	15	10	9.2	3.8	2.4	5.3	8.4
22	19	9.5	17	13	11	24	10	7.8	3.3	2.6	4.7	8.1
23	12	9.3	17	13	13	18	10	7.6	4.8	2.6	4.8	7.9
24	11	9.6	16	13	25	16	9.8	7.6	5.7	2.0	20	7.9
25	14	9.7	16	14	21	15	10	8.8	11	2.2	8.7	7.6
26	18	9.8	32	14	17	15	9.2	10	10	2.6	6.6	7.6
27	11	14	23	15	26	14	9.3	9.2	7.1	3.3	5.7	7.2
28	9.9	22	20	16	37	14	9.3	8.2	6.0	2.2	5.3	6.5
29	9.3	43	18	15	---	15	9.6	7.5	7.2	2.2	4.6	6.7
30	9.9	21	15	14	---	20	9.9	7.0	6.0	2.6	4.8	6.8
31	13	---	16	12	---	16	---	8.0	---	2.1	4.6	---
TOTAL	1153.8	362.9	863	508	446	594	703.1	264.1	187.7	112.7	182.4	880.1
MEAN	37.2	12.1	27.8	16.4	15.9	19.2	23.4	8.52	6.26	3.64	5.88	29.3
MAX	462	43	131	29	37	38	240	12	11	6.3	33	452
MIN	5.6	8.9	12	12	11	14	9.2	6.8	3.3	2.0	1.7	3.2
CFSM	1.87	.61	1.40	.82	.80	.97	1.18	.43	.32	.18	.30	1.47
IN.	2.16	.68	1.61	.95	.83	1.11	1.31	.49	.35	.21	.34	1.65

CAL YR 1976 TOTAL 6122.8 MEAN 16.7 MAX 462 MIN 3.3 CFSM .84 IN 11.45
WTR YR 1977 TOTAL 6257.8 MEAN 17.1 MAX 462 MIN 1.7 CFSM .86 IN 11.70

CAPE FEAR RIVER BASIN

02094500 REEDY FORK NEAR GIBSONVILLE, N. C.

LOCATION.--Lat 36°10'31", long 79°36'57", Guilford County, Hydrologic Unit 03030002, on right bank 0.2 mi (0.3 km) downstream from Huffines Mill on Secondary Road 2719 (revised), 1.2 mi (1.9 km) upstream from Buffalo Creek, and 6 mi (10 km) northwest of Gibsonville.

DRAINAGE AREA.--133 mi² (344 km²).

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 loose, leaky rock-masonry control. Datum of gage is 626.88 ft (191.073 m) above mean sea level.

REMARKS.--Records poor. Flow regulated since 1923 by Lake Brandt 14 mi (23 km) upstream (see p. 259), since 1957 by Lake Higgins on Brush Creek, a tributary to Lake Brandt, (see p. 259), 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 16.3 ft³/s (0.46 m³/s) and an average of 21.1 ft³/s (0.60 m³/s) from Lake Townsend for municipal water supply. Cone Mills diverted from Richland Lake an average of 2.2 ft³/s (0.062 m³/s) during the year. Suspended-sediment records for the current year are published on page 349 of this report.

AVERAGE DISCHARGE.--49 years, 98.4 ft³/s (2.787 m³/s), 10.05 in/yr (255 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, 1,560 ft³/s (44.2 m³/s) Sept. 9, gage height, 6.32 ft (1.926 m); minimum, 1.4 ft³/s (0.040 m³/s) July 29, 30, Aug. 6, 7, gage height, 0.36 ft (0.110 m); minimum daily, 1.5 ft³/s (0.042 m³/s) July 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	15	21	51	16	30	22	8.4	7.8	4.4	2.0	2.5
2	8.9	11	13	41	15	36	16	8.3	23	4.2	2.6	2.7
3	8.9	9.4	12	29	15	24	19	8.1	8.9	4.2	3.2	2.5
4	8.0	8.4	10	31	16	25	25	8.1	7.1	4.0	3.2	2.7
5	6.4	8.4	9.7	35	19	34	361	9.3	6.5	3.8	2.3	2.5
6	4.9	8.4	9.7	37	17	78	524	9.7	6.5	3.7	1.6	2.3
7	4.1	8.0	156	50	14	93	374	9.3	6.8	3.5	1.6	2.2
8	14	8.4	644	58	13	68	236	11	6.9	3.5	1.9	212
9	227	7.5	513	50	14	51	33	9.3	6.8	3.6	2.4	820
10	36	8.0	433	166	15	41	19	8.1	7.1	3.5	1.9	14
11	14	8.0	93	246	16	33	19	7.7	7.1	3.8	2.8	8.1
12	8.4	8.0	75	451	16	29	27	7.6	7.3	4.2	3.1	6.4
13	7.1	7.5	75	318	28	48	33	7.6	7.5	3.7	3.6	5.8
14	6.2	7.5	76	49	25	45	26	7.5	7.3	4.0	3.4	5.6
15	5.4	8.4	94	43	19	31	24	7.5	7.4	3.5	3.8	5.4
16	4.9	10	186	37	17	26	24	7.1	7.7	3.1	4.0	5.3
17	5.8	8.9	372	24	16	26	22	6.9	51	2.9	3.4	5.6
18	7.5	9.4	86	20	15	21	63	7.2	18	2.7	3.4	5.9
19	7.1	10	29	20	16	33	69	7.8	7.1	2.3	3.1	5.7
20	122	11	38	161	17	23	35	8.8	6.1	2.1	2.6	5.5
21	705	10	73	565	15	23	85	7.6	5.9	2.1	2.2	5.3
22	429	9.4	64	303	15	54	53	7.1	5.6	2.2	2.2	5.1
23	336	9.4	53	293	14	54	14	6.9	5.3	2.2	1.9	5.0
24	44	9.4	52	288	29	28	11	6.6	5.4	2.0	2.7	4.9
25	15	9.4	43	299	34	23	10	7.0	6.6	2.0	5.2	4.8
26	244	9.4	78	346	28	20	10	40	6.1	2.1	4.4	4.9
27	344	11	91	336	34	18	10	17	5.6	2.0	3.3	5.1
28	63	23	93	304	49	18	9.7	11	5.3	1.7	2.7	5.1
29	15	328	86	52	---	18	9.4	8.6	5.0	1.5	2.4	5.1
30	11	75	75	20	---	25	8.8	7.8	4.7	1.5	2.3	4.9
31	18	---	60	17	---	24	---	7.7	---	1.6	2.3	---
TOTAL	2744.6	675.2	3713.4	4740	557	1100	2191.9	292.6	269.4	91.6	87.5	1172.9
MEAN	88.5	22.5	120	153	19.9	35.5	73.1	9.44	8.98	2.95	2.82	39.1
MAX	705	328	644	565	49	93	524	40	51	4.4	5.2	820
MIN	4.1	7.5	9.7	17	13	18	8.8	6.6	4.7	1.5	1.6	2.2

CAL YR 1976 TOTAL 18368.5 MEAN 50.2 MAX 705 MIN 1.9
WTR YR 1977 TOTAL 17636.1 MEAN 48.3 MAX 820 MIN 1.5

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.--37.0 mi² (95.8 km²).

PERIOD OF RECORD.--August 1928 to current year.

REVISED RECORDS.--WSP 1303: 1929, 1931-42, monthly and yearly runoff. WSP 1383: Drainage area, 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) above mean sea level (levels by Corps of Engineers).

REMARKS.--Records good. Diurnal fluctuation at low flow caused by mills above station. Diversion into basin from Greensboro and Proximity Mills enter above station. Suspended-sediment records for the current year are published on page 350 of this report.

AVERAGE DISCHARGE.--49 years, 52.7 ft³/s (1.492 m³/s), 19.34 in/yr (491 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,600 ft³/s (187 m³/s) June 16, 1969, gage height, 16.63 ft (5.069 m), 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 920 ft³/s (26 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. 9	1100	2080	58.9	11.17	3.405	July 11	0500	970	27.5	7.09	2.161
Oct. 20	1330	1180	33.4	8.24	2.512	Sept. 8	1600	*5440	154	*15.35	4.679
Dec. 7	0830	1420	40.2	9.44	2.877						

Minimum discharge, 10 ft³/s (0.28 m³/s) July 31, gage height, 1.88 ft (0.573 m); minimum daily, 17 ft³/s (0.48 m³/s) July 24, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	36	37	37	38	46	43	26	32	27	19	24
2	42	31	36	38	37	42	40	27	180	30	20	23
3	97	30	33	37	39	40	55	30	31	23	26	24
4	31	31	32	39	39	92	81	29	26	21	24	19
5	28	31	32	52	39	58	327	31	24	23	24	19
6	25	29	33	42	35	235	73	29	80	25	24	21
7	25	30	527	89	36	149	54	29	46	26	20	25
8	203	29	189	53	36	65	48	28	28	25	21	2200
9	1000	29	82	55	35	50	41	26	32	28	21	207
10	50	30	58	418	37	45	33	27	28	25	21	62
11	34	28	82	100	38	52	34	26	25	255	27	52
12	30	32	159	59	36	42	35	27	25	40	24	44
13	28	30	79	52	91	144	36	25	25	28	22	44
14	27	29	53	106	45	53	35	24	27	26	26	34
15	28	54	153	107	40	45	35	22	26	24	93	57
16	24	38	122	70	39	42	38	23	26	24	131	121
17	33	30	63	53	37	40	34	26	55	23	27	77
18	31	30	50	45	40	39	33	24	57	23	98	40
19	26	30	49	39	40	39	35	32	28	22	29	36
20	555	32	99	39	37	72	49	30	25	23	26	33
21	86	26	79	38	35	41	36	24	25	26	25	31
22	41	27	47	37	36	156	33	24	24	28	25	32
23	35	27	43	36	36	54	33	25	35	24	53	31
24	36	26	39	40	116	46	35	26	27	17	66	30
25	88	27	47	48	51	42	33	46	212	18	31	30
26	86	31	170	45	39	41	33	118	58	21	25	31
27	37	37	57	44	139	38	31	37	33	21	26	32
28	33	185	51	47	82	39	30	29	28	19	25	30
29	31	184	44	45	---	38	35	28	31	19	26	33
30	30	49	37	38	---	128	28	29	27	18	25	32
31	93	---	42	37	---	50	---	29	---	17	24	---
TOTAL	2976	1258	2624	1985	1348	2063	1486	956	1326	969	1074	3474
MEAN	96.0	41.9	84.6	64.0	48.1	66.5	49.5	30.8	44.2	31.3	34.6	116
MAX	1000	185	527	418	139	235	327	118	212	255	131	2200
MIN	24	26	32	36	35	38	28	22	24	17	19	19

CAL YR 1976 TOTAL 20175 MEAN 55.1 MAX 1000 MIN 17
WTR YR 1977 TOTAL 21539 MEAN 59.0 MAX 2200 MIN 17

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.--599 mi^2 (1,551 km^2).

PERIOD OF RECORD.--October 1928 to current year.

REVISED RECORDS.--WSP 757: 1929(M). WSP 782: 1934. WSP 822: Drainage area. 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) above mean sea level.

REMARKS.--Records good. Some diurnal fluctuation and occasional regulation. City of Burlington diverted from two reservoirs on Stony Creek (see p. 259) an average of 13.7 ft^3/s (0.39 m^3/s) for municipal water supply, about half of which was returned above station as sewage, the remainder was returned below station. Corps of Engineer gage-height telephone telemeter at station. Suspended-sediment records for the current year are published on page 350 of this report.

AVERAGE DISCHARGE.--49 years, 561 ft^3/s (15.89 m^3/s), 12.72 in/yr (323 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,000 ft^3/s (1,050 m^3/s) Sept. 18, 1945, gage height, 31.10 ft (9.479 m), from floodmark; minimum 3 ft^3/s (0.085 m^3/s) Sept. 5, 1930, gage height, 0.92 ft (0.280 m); minimum daily 5 ft^3/s (0.14 m^3/s) Sept. 6, 1930.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,620 ft^3/s (159 m^3/s) Sept. 9, gage height, 13.13 ft (4.002 m), no peak above base of 6,000 ft^3/s (170 m^3/s); minimum, 51 ft^3/s (1.44 m^3/s) Sept. 7, gage height, 1.42 ft (0.433 m); minimum daily, 59 ft^3/s (1.67 m^3/s) Aug. 9, Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	189	344	426	311	239	594	354	164	157	114	104	84
2	175	260	349	273	230	479	300	158	325	108	69	81
3	165	241	278	240	227	402	293	159	258	112	80	76
4	194	218	244	247	239	403	369	169	152	97	74	70
5	130	209	217	261	264	542	1270	172	124	79	84	66
6	115	190	201	288	264	941	1880	175	124	76	74	59
7	101	181	1110	317	230	1720	1180	191	176	79	68	64
8	106	179	1970	426	216	1020	979	193	177	77	68	1390
9	1630	175	1690	397	219	693	621	188	134	77	59	4640
10	2030	174	1250	2010	226	537	427	166	124	85	64	1270
11	1300	172	942	1920	235	450	346	153	123	398	75	332
12	887	174	1190	1020	248	414	309	143	108	386	79	243
13	620	171	1050	832	330	644	296	141	105	170	88	192
14	410	166	664	586	463	735	274	138	102	124	69	154
15	259	177	642	890	362	466	261	130	116	112	78	137
16	196	217	1340	785	325	395	259	123	116	100	556	204
17	168	207	1050	509	281	347	253	114	293	89	390	447
18	164	187	699	372	254	311	231	124	876	88	163	255
19	169	180	436	336	255	305	299	127	280	78	226	183
20	593	175	406	326	278	324	224	128	143	84	119	153
21	2230	171	632	779	271	394	300	133	98	82	90	136
22	1220	164	471	606	245	656	270	115	94	82	88	123
23	1090	163	374	533	239	846	223	111	92	85	91	116
24	700	161	346	512	304	480	217	112	99	79	155	112
25	459	157	312	521	639	390	210	141	175	76	211	105
26	594	160	604	589	449	333	204	263	424	64	132	107
27	727	161	688	583	442	303	193	370	212	68	103	100
28	471	298	489	591	972	282	183	272	160	74	93	102
29	280	1460	439	445	---	270	177	225	140	73	90	99
30	232	826	378	277	---	411	178	178	133	68	81	96
31	267	---	335	259	---	522	---	160	---	62	85	---
TOTAL	17871	7718	21222	18041	8946	16609	12580	5136	5640	3346	3806	11196
MEAN	576	257	685	582	320	536	419	166	188	108	123	373
MAX	2230	1460	1970	2010	972	1720	1880	370	876	398	556	4640
MIN	101	157	201	240	216	270	177	111	92	62	59	59
CFSM	.96	.43	1.14	.97	.53	.89	.70	.28	.31	.18	.21	.62
IN.	1.11	.48	1.32	1.12	.56	1.03	.78	.32	.35	.21	.24	.70

CAL YR 1976 TOTAL 131485 MEAN 359 MAX 3560 MIN 47 CFSM .60 IN 8.17
WTR YR 1977 TOTAL 132111 MEAN 362 MAX 4640 MIN 59 CFSM .60 IN 8.20

02096700 BIG ALAMANCE CREEK NEAR ELON COLLEGE, N. C.

LOCATION.--Lat 36°02'21", long 79°31'45", 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 current year. 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 good except for those for periods Jan. 12 to Feb. 11 and July 26 to Aug. 14, which are poor. Suspended-sediment records for the current year are published on page 350 of this report.

AVERAGE DISCHARGE.--20 years, 109 ft³/s (3.087 m³/s), 12.76 in/yr (324 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)
Sept. 8	2245	*6170	175	*23.74	7.236

Minimum discharge observed, 0.84 ft³/s (0.024 m³/s) Aug. 3. Minimum daily, 0.90 ft³/s (0.025 m³/s) Aug. 2

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	51	69	54	40	136	106	26	15	6.1	1.0	5.1
2	12	41	56	44	37	98	87	26	129	5.1	.90	4.9
3	11	35	50	50	40	81	91	26	48	4.6	2.1	4.6
4	18	34	45	48	45	86	156	25	23	4.0	3.1	5.0
5	11	31	42	49	49	160	558	27	17	3.7	1.8	3.8
6	12	29	40	51	45	340	343	24	16	3.6	2.5	3.1
7	7.6	28	359	61	43	468	167	22	22	3.2	3.5	3.1
8	12	26	250	80	46	243	129	25	16	2.9	7.5	2350
9	460	25	203	70	46	155	102	25	13	2.7	11	2270
10	110	23	110	1120	40	119	86	19	12	4.0	7.0	301
11	46	21	104	505	42	102	79	17	10	74	5.6	159
12	31	21	403	140	41	93	72	17	9.6	32	9.2	100
13	23	21	272	90	71	200	65	17	9.3	14	8.9	72
14	20	20	126	90	87	171	61	16	8.6	8.8	6.2	61
15	16	21	202	200	64	113	57	15	8.2	6.4	93	57
16	14	30	556	134	57	93	55	13	8.2	4.5	660	144
17	14	29	198	90	50	80	50	13	8.3	3.4	76	210
18	14	25	119	80	45	73	47	12	24	2.7	51	77
19	15	23	93	70	47	68	45	12	15	2.3	38	48
20	278	22	86	70	52	84	44	11	11	1.6	23	36
21	236	21	161	70	49	103	43	11	7.6	1.6	16	29
22	69	19	97	70	45	246	42	10	6.2	1.6	13	25
23	48	19	79	60	43	218	40	10	5.8	1.6	11	22
24	39	18	70	50	64	125	40	10	7.8	1.5	9.4	20
25	33	17	65	50	128	97	38	15	24	1.6	9.1	19
26	37	17	145	50	80	83	35	45	32	1.6	8.0	18
27	38	20	128	56	92	74	31	38	29	1.5	7.9	18
28	28	54	89	57	284	70	30	24	16	1.5	7.1	16
29	24	323	77	50	---	67	29	18	11	1.4	6.3	14
30	23	120	66	40	---	160	28	15	8.2	1.4	5.6	13
31	38	---	61	45	---	166	---	14	---	1.2	5.4	---
TOTAL	1750.6	1184	4421	3694	1772	4372	2756	598	570.8	206.1	1110.10	6108.6
MEAN	56.5	39.5	143	119	63.3	141	91.9	19.3	19.0	6.65	35.8	204
MAX	460	323	556	1120	284	468	558	45	129	74	660	2350
MIN	7.6	17	40	40	37	67	28	10	5.8	1.2	.90	3.1
CFSM	.49	.34	1.23	1.03	.55	1.22	.79	.17	.16	.06	.31	1.76
IN.	.56	.38	1.42	1.18	.57	1.40	.88	.19	.18	.07	.36	1.96

CAL YR 1976 TOTAL 22732.20 MEAN 62.1 MAX 1240 MIN 2.1 CFSM .54 IN 7.29
WTR YR 1977 TOTAL 28543.20 MEAN 78.2 MAX 2350 MIN .90 CFSM .67 IN 9.15

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.--1,284 mi² (3,326 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 283.31 ft (86.353 m) above mean sea level.

REMARKS.--Records good. Considerable regulation for short periods at low flow caused by powerplant above station. Gage height telemeter at station.

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, 1.9 ft³/s (0.054 m³/s) Sept. 23, 1976, gage height, 1.95 ft (0.594 m) Sept. 23, 1976; minimum daily, 29 ft³/s (0.82 m³/s) Aug. 5, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,400 ft³/s (351 m³/s) Sept. 9, gage height, 10.51 ft (3.203 m), no peak above base of 15,000 ft³/s (425 m³/s); minimum, 8.6 ft³/s (0.24 m³/s) Oct. 20, gage height, 2.08 ft (0.634 m); minimum daily, 29 ft³/s (0.82 m³/s) Aug. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	193	393	1010	640	467	1900	1240	301	219	171	67	90
2	267	426	699	580	441	1170	914	294	384	151	98	92
3	248	344	556	540	417	939	835	280	712	135	149	88
4	216	312	457	530	441	1570	1320	294	370	127	171	82
5	251	283	388	510	462	3190	3090	312	251	122	29	77
6	190	263	352	499	472	2440	4690	328	251	106	84	69
7	195	245	939	609	436	5850	2480	290	166	96	84	74
8	127	233	4000	835	398	3520	1880	320	248	92	74	2130
9	754	230	3380	882	379	2000	1470	361	251	90	74	10900
10	3490	221	2150	7570	398	1470	1050	312	201	92	72	4100
11	1660	221	1730	6290	412	1180	851	257	182	230	69	956
12	1330	230	3030	2400	426	1020	747	276	171	882	79	544
13	874	224	3370	1740	488	2800	679	227	190	422	82	398
14	653	216	1850	1410	783	2740	634	174	179	257	82	301
15	451	270	1270	2190	740	1560	573	213	111	190	88	245
16	267	336	3250	2100	615	1160	556	248	168	156	820	219
17	245	344	2670	1360	544	947	538	201	139	137	1300	1170
18	251	336	1750	981	478	820	505	190	931	115	516	1220
19	221	242	1110	859	446	754	467	190	672	104	436	505
20	527	254	890	790	467	798	533	193	328	102	312	324
21	3500	239	1140	783	510	1050	441	132	233	158	201	328
22	2090	301	1340	900	472	2500	516	174	161	36	219	221
23	1410	187	882	939	431	2970	467	233	156	92	92	190
24	1170	182	754	890	472	1610	446	168	153	94	82	104
25	726	213	672	851	1140	1140	446	187	166	86	130	166
26	585	207	790	939	1130	931	402	653	297	84	283	224
27	874	210	1690	956	1080	798	398	898	483	84	100	70
28	798	227	1160	931	2610	719	344	603	280	72	125	219
29	478	1830	947	906	---	686	336	431	216	70	176	62
30	332	2360	804	628	---	2010	287	375	187	75	48	207
31	301	---	690	527	---	1970	---	283	---	74	77	---
TOTAL	24674	11579	45720	42565	17555	54212	29135	9398	8456	4702	6219	25375
MEAN	796	386	1475	1373	627	1749	971	303	282	152	201	846
MAX	3500	2360	4000	7570	2610	5850	4690	898	931	882	1300	10900
MIN	127	182	352	499	379	686	287	132	111	36	29	62
CFSM	.62	.30	1.15	1.07	.49	1.36	.76	.24	.22	.12	.16	.66
IN.	.71	.34	1.32	1.23	.51	1.57	.84	.27	.24	.14	.18	.74

CAL YR 1976 TOTAL 273863 MEAN 748 MAX 8650 MIN 31 CFSM .58 IN 7.93
WTR YR 1977 TOTAL 279590 MEAN 766 MAX 10900 MIN 29 CFSM .60 IN 8.10

02098200 HAW RIVER NEAR HAYWOOD, N. C.

LOCATION.--Lat 35°38'56", long 79°03'59", Chatham County, Hydrologic Unit 03030002, 0.4 mi (0.6 km) downstream from B. Everett Jordan Dam (under construction), on right bank 1.3 mi (2.1 km) upstream from bridge on U.S. Highway 1, 2.1 mi (3.4 km) north of Haywood, and 3.9 mi (6.3 km) upstream from mouth.

DRAINAGE AREA.--1,700 mi² (4,400 km²), approximately.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 155.00 ft (47.244 m) above mean sea level (Corps of Engineers bench mark). Since June 22, 1966, auxiliary water-stage recorder 2.6 mi (4.2 km) downstream.

REMARKS.--Records good above 500 ft³/s (14.2 m³/s) and poor below, except those for period Jan. 11 to Feb. 7, which are fair. Some regulation for short periods at low flow caused by powerplants above station. Flows above 12,000 ft³/s (340 m³/s) regulated by temporary storage in B. Everett Jordan Reservoir beginning Dec. 16, 1972. Suspended sediment records collected 2.4 mi (3.9 km) downstream from station for the current year are published on page 350 of this report.

AVERAGE DISCHARGE.--12 years, 1,477 ft³/s (41.83 m³/s), 11.80 in/yr (300 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); minimum daily discharge, 35 ft³/s (0.99 m³/s) Sept. 12, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 8,000 ft³/s (227 m³/s) Jan. 11. Minimum daily discharge, 60 ft³/s (1.70 m³/s) Aug. 6, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	149	520	2000	830	600	4500	3250	390	220	220	100	90
2	320	538	1000	750	570	3230	2500	380	500	200	90	126
3	290	469	750	700	540	2510	1730	360	900	180	130	118
4	280	400	613	690	570	1830	1630	380	500	170	190	110
5	290	372	502	660	600	3540	2730	405	330	160	220	103
6	230	350	428	650	600	4010	4680	426	330	140	60	94
7	210	325	1200	911	550	4980	4790	380	220	120	110	107
8	190	310	3960	1260	535	5870	4190	420	320	120	110	443
9	920	300	5020	1490	502	5470	3740	470	330	120	100	4660
10	3130	290	3760	3600	520	4850	2900	405	260	120	100	5920
11	2410	290	2620	8000	540	4290	1990	330	240	300	90	4730
12	1540	300	2980	6500	550	3370	1400	360	220	486	100	3050
13	993	290	5280	3500	630	3180	1150	300	250	1100	100	1270
14	800	280	4460	2600	1020	5300	950	230	230	554	100	571
15	568	350	2720	2100	1040	5110	820	280	140	330	110	422
16	351	440	2900	3000	800	4100	720	320	220	200	120	375
17	320	450	4600	2700	700	3300	200	260	130	180	897	489
18	311	440	3270	1900	620	2200	650	250	300	150	1500	1340
19	300	310	1950	1200	580	1440	610	250	1200	140	670	1100
20	650	330	1390	1100	600	1270	690	250	900	130	537	701
21	3230	310	1320	1000	660	1610	570	180	420	210	400	481
22	3450	390	1850	1000	610	2900	670	230	226	120	280	290
23	1820	240	1510	1100	560	4830	610	300	200	80	120	250
24	1420	240	1110	1100	610	4250	580	220	200	110	110	135
25	925	280	972	1000	1400	3240	580	240	220	110	170	220
26	704	270	955	1000	2050	2290	520	850	380	100	320	290
27	1100	280	1840	1050	1800	1580	520	1110	630	88	130	200
28	915	300	2070	1050	3500	1200	450	1020	373	90	130	90
29	600	879	1540	1000	---	1090	440	941	257	90	163	280
30	450	3070	1230	850	---	1860	370	490	240	100	230	80
31	386	---	1030	700	---	3200	---	370	---	100	60	---
TOTAL	29252	13613	66830	54991	23857	102400	46630	12797	10886	6318	7547	28135
MEAN	944	454	2156	1774	852	3303	1554	413	363	204	243	938
MAX	3450	3070	5280	8000	3500	5870	4790	1110	1200	1100	1500	5920
MIN	149	240	428	650	502	1090	200	180	130	80	60	80
CFSM	.56	.27	1.27	1.04	.50	1.94	.91	.24	.21	.12	.14	.55
IN.	.64	.30	1.46	1.20	.52	2.24	1.02	.28	.24	.14	.17	.62

CAL YR 1976 TOTAL 379447 MEAN 1037 MAX 7110 MIN 114 CFSM .61 IN 8.30
WTR YR 1977 TOTAL 403256 MEAN 1105 MAX 8000 MIN 60 CFSM .65 IN 8.82

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.--14.7 mi² (38.1 km²).

PERIOD OF RECORD.--July 1928 to current year.

REVISED RECORDS.--WSP 1383: Drainage area, 1941. WSP 1723: 1929(M).

GAGE.--Water-stage recorder. Datum of gage is 764.02 ft (232.873 m) above mean sea level. Intake pipe extended to downstream side of bridge since Mar. 1, 1934.

REMARKS.--Records good. Slight diurnal flucutation at low flow during growing season. Suspended-sediment records for the current year are published on page 351 of this report.

AVERAGE DISCHARGE.--49 years, 15.7 ft³/s (0.445 m³/s), 14.50 in/yr (368 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)
Oct. 9	0530	2700	76.5	5.94	1.810	Aug. 15	2215	2770	78.4	6.08	1.853
Oct. 20	0815	1390	39.4	3.69	1.125	Sept. 8	1245	*3380	95.7	*7.41	2.259
Dec. 7	0430	1410	39.9	3.72	1.134						

Minimum discharge, 1.0 ft³/s (0.028 m³/s) Aug. 8, gage height, 0.17 ft (0.052 m); minimum daily, 1.1 ft³/s (0.031 m³/s) Aug. 8, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	8.4	11	8.1	7.1	17	11	5.9	4.9	2.8	1.5	2.4
2	4.3	7.0	8.5	7.8	6.9	13	9.9	6.0	4.6	3.6	1.5	2.3
3	4.6	6.6	7.4	7.9	7.2	11	11	5.8	4.1	2.8	1.8	2.3
4	3.6	6.3	6.8	8.1	8.3	14	22	6.0	3.8	2.6	1.9	2.2
5	3.7	6.2	6.5	9.4	8.1	14	211	5.8	3.7	2.5	1.6	2.2
6	3.4	5.7	6.7	8.9	7.0	63	34	5.3	5.6	2.5	1.3	2.3
7	3.4	5.7	279	17	6.6	49	19	5.3	4.9	2.3	1.2	2.9
8	30	5.4	101	14	6.5	22	15	5.2	4.0	2.1	1.1	1250
9	738	5.3	32	22	6.6	16	12	4.7	4.0	2.0	1.3	68
10	21	5.4	19	113	7.1	14	11	4.6	3.6	3.2	1.2	19
11	8.3	5.2	19	28	7.4	13	9.9	4.7	3.4	22	1.3	9.6
12	6.4	5.7	43	15	8.3	12	9.2	4.9	3.6	5.9	1.3	6.7
13	7.3	5.5	25	13	24	30	8.8	4.6	3.4	3.4	1.1	5.6
14	6.9	5.2	15	26	12	15	8.4	4.4	3.3	2.9	1.2	5.0
15	6.3	6.7	48	31	10	12	8.1	4.3	3.5	2.2	331	4.8
16	5.6	5.9	39	20	8.8	11	8.5	4.3	3.3	1.9	144	13
17	5.9	5.4	19	10	7.1	9.6	7.6	4.3	3.3	2.1	9.7	10
18	5.3	5.3	14	9.5	6.5	9.4	7.3	4.2	3.3	1.9	8.5	6.1
19	5.0	5.2	12	9.3	8.2	8.7	13	4.1	3.1	1.8	5.0	5.3
20	373	5.2	28	8.8	8.2	12	8.7	4.7	2.9	1.8	3.9	4.9
21	37	5.1	23	7.9	7.4	10	7.6	4.2	2.7	1.6	4.2	4.3
22	14	5.0	13	7.6	7.2	29	7.2	4.2	2.6	1.9	3.5	4.0
23	9.4	4.8	11	7.3	7.3	15	7.0	5.5	3.3	2.1	18	3.8
24	7.8	4.8	10	8.2	24	12	7.4	4.6	3.5	1.7	13	3.7
25	25	5.0	12	9.1	15	10	6.7	5.7	15	1.7	5.7	3.6
26	27	5.0	43	8.4	11	9.7	6.3	7.9	6.2	1.7	4.1	3.6
27	11	6.7	17	10	68	9.2	6.1	5.8	4.0	1.6	3.5	3.6
28	8.2	41	14	9.0	34	9.1	6.0	5.0	3.4	1.5	3.1	3.6
29	7.1	49	12	9.0	---	9.0	6.3	4.5	3.2	1.5	2.9	3.4
30	7.2	17	9.3	7.7	---	22	5.9	4.3	2.9	1.6	2.7	3.3
31	16	---	9.7	7.4	---	14	---	4.6	---	1.5	2.6	---
TOTAL	1419.2	260.7	913.9	478.4	345.8	514.7	511.9	155.4	123.1	90.7	584.7	1461.5
MEAN	45.8	8.69	29.5	15.4	12.4	16.6	17.1	5.01	4.10	2.93	18.9	48.7
MAX	738	49	279	113	68	63	211	7.9	15	22	331	1250
MIN	3.4	4.8	6.5	7.3	6.5	8.7	5.9	4.1	2.6	1.5	1.1	2.2
CFSM	3.12	.59	2.01	1.05	.84	1.13	1.16	.34	.28	.20	1.29	3.31
IN.	3.59	.66	2.31	1.21	.88	1.30	1.30	.39	.31	.23	1.48	3.70

CAL YR 1976 TOTAL 4835.7 MEAN 13.2 MAX 738 MIN 2.3 CFSM .90 IN 12.24
WTR YR 1977 TOTAL 6860.0 MEAN 18.8 MAX 1250 MIN 1.1 CFSM 1.28 IN 17.36

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 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) above mean sea level (levels by Corps of Engineers).

REMARKS.--Records good. Some regulation by High Point Lake and Oak Hollow Reservoir (see p. 260). City of High Point diverted an average of 17.4 ft³/s (0.49 m³/s) for municipal water supply during water year; 10.3 ft³/s (0.29 m³/s) was discharged as sewage effluent into Richland Creek above station and 5.1 ft³/s (0.14 m³/s) into Rich Fork Creek in Pee Dee River basin. Suspended-sediment records for the current year are published on page 351 of this report.

AVERAGE DISCHARGE.--49 years, 122 ft³/s (3.455 m³/s), 13.36 in/yr (339 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 or 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 or 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)
Oct. 9	1300	4540	129	18.27	5.569	Sept. 8	1700	*8620	244	*24.35	7.422

Minimum discharge, 9.9 ft³/s (0.28 m³/s) Aug. 7, gage height, 1.79 ft (0.546 m). Minimum daily, 11 ft³/s (0.31 m³/s) July 4, 25, 31, Aug. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	77	99	69	42	168	113	29	21	16	11	18
2	17	52	71	58	40	111	87	27	53	15	16	17
3	17	46	55	55	40	82	155	28	21	13	16	15
4	15	42	45	55	42	122	235	29	17	11	15	14
5	15	38	40	59	46	149	977	37	16	12	14	13
6	15	34	40	62	45	385	462	27	17	12	13	14
7	15	32	1400	123	39	455	217	31	30	13	32	31
8	68	31	708	119	36	242	149	25	18	13	61	4940
9	2320	33	380	153	35	154	111	23	18	13	18	1310
10	325	30	207	1190	37	115	91	24	18	14	15	249
11	117	29	185	429	36	112	82	23	16	314	29	116
12	60	30	428	201	37	104	75	22	15	41	28	66
13	43	28	304	139	104	304	68	22	14	28	14	47
14	37	26	169	161	93	186	62	20	18	23	12	40
15	33	38	422	271	69	124	57	18	29	20	129	36
16	27	39	493	190	56	102	53	17	19	17	537	98
17	24	30	258	120	47	82	46	20	25	14	90	132
18	27	29	163	90	43	73	45	19	55	14	95	64
19	24	29	118	72	46	73	52	18	17	15	44	48
20	1120	28	209	65	48	109	82	30	15	15	26	41
21	684	26	343	61	48	90	69	21	16	15	20	34
22	197	25	155	57	44	297	53	17	16	14	18	30
23	101	28	113	51	41	184	45	18	18	13	26	27
24	68	27	93	54	109	115	43	20	18	12	81	23
25	72	25	82	62	134	90	40	24	24	11	35	20
26	191	23	357	65	86	75	38	32	28	13	25	21
27	100	32	210	61	178	67	35	29	19	13	20	22
28	64	178	139	62	344	66	33	22	18	13	17	21
29	51	519	111	59	---	66	33	18	17	13	18	20
30	45	192	87	48	---	273	31	17	17	12	18	20
31	110	---	79	47	---	184	---	20	---	11	18	---
TOTAL	6044	1796	7563	4308	1965	4759	3639	727	643	773	1511	7547
MEAN	195	59.9	244	139	70.2	154	121	23.5	21.4	24.9	48.7	252
MAX	2320	519	1400	1190	344	455	977	37	55	314	537	4940
MIN	15	23	40	47	35	66	31	17	14	11	11	13

CAL YR 1976 TOTAL 36486 MEAN 99.7 MAX 2320 MIN 10
WTR YR 1977 TOTAL 41275 MEAN 113 MAX 4940 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).

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) above mean sea level (levels by Corps of Engineers).

REMARKS.--Records good. Flow slightly regulated by High Point Municipal Lake (see p. 260) and small powerplant reservoirs. Prior to January 1963 large diurnal fluctuation caused by powerplant immediately above station. Town of Asheboro diverted an average of 5.0 ft³/s (0.14 m³/s) for water supply from Pee Dee River basin and discharged an average of 4.3 ft³/s (0.12 m³/s) of sewage into the Deep River above the station. Suspended-sediment records for the current year are published on page 351 of this report.

AVERAGE DISCHARGE.--54 years, (1923-77) 347 ft³/s (9.827 m³/s), 13.62 in/yr (346 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)
Jan. 10	0930	6600	187	11.39	3.472	Sept. 9	0030	*15400	436	*21.30	6.492

Minimum discharge, 14 ft³/s (0.40 m³/s) July 27, Aug. 2, gage height, 0.58 ft (0.177 m); minimum daily, 15 ft³/s (0.42 m³/s) Aug. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	188	277	186	129	474	430	96	62	40	16	35
2	76	126	194	156	127	312	311	92	63	37	15	32
3	76	101	157	157	126	240	462	91	95	35	16	30
4	70	92	130	153	134	611	789	90	87	33	17	29
5	62	87	117	158	137	791	2150	89	75	30	20	28
6	56	80	112	173	131	1090	1360	92	66	27	23	25
7	51	75	2310	341	119	1830	580	91	56	23	25	25
8	51	73	1460	382	112	853	404	94	55	20	26	7460
9	3190	70	1050	370	112	469	318	101	56	19	46	6140
10	1020	73	482	4690	118	351	266	89	53	19	51	631
11	244	74	367	1610	121	297	242	81	50	192	348	287
12	135	75	1590	563	121	285	223	77	47	137	77	177
13	97	77	1100	392	148	1400	205	73	44	158	67	148
14	85	74	491	354	289	724	189	70	42	84	59	130
15	77	160	887	733	213	405	179	67	42	71	52	97
16	71	183	1860	509	174	312	170	63	44	59	1060	447
17	68	117	760	322	151	263	156	59	49	51	198	987
18	65	94	438	275	132	232	142	57	48	43	344	274
19	63	85	312	212	133	217	139	56	54	35	131	157
20	1650	81	303	207	142	317	146	55	57	29	74	120
21	1730	79	981	181	134	336	172	57	53	25	65	119
22	425	73	433	167	127	1270	148	59	48	24	58	137
23	206	71	294	154	123	778	132	59	43	24	53	101
24	141	72	248	157	228	400	132	56	42	23	49	99
25	118	70	213	166	416	305	126	56	39	19	52	69
26	197	68	699	184	255	254	115	98	39	16	55	62
27	204	72	570	180	419	228	110	119	42	16	54	58
28	126	128	349	183	1130	210	106	96	44	16	51	58
29	100	1520	282	174	---	207	101	84	43	18	48	58
30	88	570	230	146	---	1910	98	75	43	17	43	55
31	154	---	202	147	---	845	---	67	---	16	39	---
TOTAL	10747	4708	18898	13782	5701	18216	10101	2409	1581	1356	3232	18075
MEAN	347	157	610	445	204	588	337	77.7	52.7	43.7	104	603
MAX	3190	1520	2310	4690	1130	1910	2150	119	95	192	1060	7460
MIN	51	68	112	146	112	207	98	55	39	16	15	25
CFSM	1.00	.45	1.76	1.29	.59	1.70	.97	.22	.15	.13	.30	1.74
IN.	1.16	.51	2.03	1.48	.61	1.96	1.09	.26	.17	.15	.35	1.94

CAL YR 1976 TOTAL 95569 MEAN 261 MAX 3850 MIN 18 CFSM .75 IN 10.28
WTR YR 1977 TOTAL 108806 MEAN 298 MAX 7460 MIN 15 CFSM .86 IN 11.70

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 except those for periods of no gage-height record, Oct. 9 to Nov. 18 and Mar. 24 to May 4, which are fair. Suspended sediment records for the current year are published on page 352 of this report.

AVERAGE DISCHARGE.--19 years, 14.8 ft³/s (0.419 m³/s), 13.14 in/yr (334 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)
Jan. 10	0730	484	13.7	5.11	1.558
Mar. 4	1600	*529	15.0	*5.24	1.597
Mar. 13	0630	421	11.9	4.92	1.500

No flow July 28 to Aug. 2, 4-18, 24-31, Sept. 1-7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	3.0	3.5	4.4	4.4	19	50	2.5	1.2	.90	.00	.00
2	.02	2.0	2.6	3.9	4.0	13	20	2.4	1.1	1.1	.00	.00
3	.03	1.5	2.0	3.7	3.9	10	15	2.4	.87	1.5	.01	.00
4	.02	1.1	1.7	3.8	4.2	167	13	2.3	.65	1.2	.00	.00
5	.02	.90	1.5	3.9	4.3	73	11	2.0	.55	1.0	.00	.00
6	.02	.80	1.4	4.3	3.9	56	120	1.7	.53	.88	.00	.00
7	.02	.80	17	20	3.5	118	70	1.6	1.3	.72	.00	.00
8	.02	.90	29	13	3.2	38	60	1.5	.86	.57	.00	47
9	10	1.5	15	21	3.1	21	30	1.4	.65	.52	.00	5.1
10	2.0	1.9	7.8	295	3.2	16	20	1.2	.55	1.6	.00	1.5
11	.50	2.1	17	39	3.4	14	13	1.2	.40	1.4	.00	.67
12	.30	2.2	129	18	3.6	12	9.0	1.3	.30	1.2	.00	.28
13	.20	2.7	33	13	5.2	188	7.0	1.0	.29	1.2	.00	.18
14	.20	3.0	14	17	5.3	41	6.0	.95	.31	1.0	.00	.12
15	.20	8.0	50	43	4.5	21	5.0	.92	.44	.83	.00	.08
16	.20	10	59	20	4.0	16	4.0	1.0	.35	.61	.00	.07
17	.30	3.0	22	13	3.6	12	3.5	.96	.42	.40	.00	.69
18	1.0	1.5	12	11	3.5	11	3.0	.86	.51	.25	.00	1.0
19	3.0	1.2	9.1	9.0	3.8	8.9	4.0	.89	.60	.15	.01	.39
20	30	1.0	8.5	8.5	4.7	24	3.5	.93	.52	.08	.02	.13
21	20	.90	12	8.0	4.1	17	3.2	.87	.33	.05	.02	.05
22	10	.80	7.8	7.5	3.7	159	3.0	.75	.25	.04	.01	.04
23	2.5	.80	6.6	6.8	3.6	37	3.5	.39	.19	.03	.01	.02
24	1.0	.76	5.6	7.4	17	21	5.0	.44	.20	.02	.00	.02
25	1.0	.74	5.0	8.0	16	14	4.5	1.8	.41	.02	.00	.02
26	3.0	.72	17	6.0	8.9	12	4.0	12	.77	.02	.00	.02
27	2.0	.78	12	5.8	65	11	3.5	4.2	1.5	.01	.00	.02
28	1.5	1.6	8.7	5.4	56	10	3.2	2.2	1.4	.00	.00	.02
29	1.0	18	7.2	5.2	---	9.0	3.0	1.6	1.2	.00	.00	.02
30	1.0	6.2	5.6	5.0	---	40	2.6	1.3	1.0	.00	.00	.02
31	4.0	---	5.2	4.6	---	160	---	1.3	---	.00	.00	---
TOTAL	95.07	80.40	527.8	634.2	253.6	1368.9	502.5	55.86	19.65	17.30	.08	57.46
MEAN	3.07	2.68	17.0	20.5	9.06	44.2	16.8	1.80	.66	.56	.003	1.92
MAX	30	18	129	295	65	188	120	12	1.5	1.6	.02	47
MIN	.02	.72	1.4	3.7	3.1	8.9	2.6	.39	.19	.00	.00	.00
CFSM	.20	.18	1.11	1.34	.59	2.89	1.10	.12	.04	.04	.000	.13
IN.	.23	.20	1.28	1.54	.62	3.33	1.22	.14	.05	.04	.00	.14

CAL YR 1976 TOTAL 3337.15 MEAN 9.12 MAX 191 MIN .00 CFSM .60 IN 8.11
WTR YR 1977 TOTAL 3612.82 MEAN 9.90 MAX 295 MIN .00 CFSM .65 IN 8.78

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) above mean sea level.

REMARKS.--Records good. Diurnal fluctuation and some regulation at low flow caused by small powerplants above station. Suspended sediment records for the current year are published on page 352 of this report.

AVERAGE DISCHARGE.--47 years, 1,444 ft³/s (40.89 m³/s), 13.91 in/yr (353 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)
Jan. 10	1600	*15800	447	*7.64	2.329

Minimum discharge, 31 ft³/s (0.88 m³/s) Aug. 1, gage height, 0.71 ft (0.216 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	191	1490	746	630	3620	9690	361	229	88	36	79
2	79	199	794	671	584	1900	2810	349	208	85	51	68
3	74	297	551	610	542	1280	1900	343	208	83	56	68
4	79	257	440	558	525	1420	2310	337	185	80	57	60
5	99	214	371	550	542	6630	5550	325	176	76	68	54
6	119	189	323	558	542	4710	8000	313	187	72	83	58
7	111	174	678	795	509	8410	4000	302	187	69	67	62
8	101	163	4620	1870	464	8830	2240	302	175	65	53	2750
9	127	150	4340	1670	413	3790	1690	281	155	73	47	9510
10	1850	142	2460	11800	420	2170	1370	270	139	91	42	10100
11	1990	139	1420	13500	434	1640	1180	242	126	92	40	2260
12	643	138	7120	9690	449	1370	1050	226	121	94	45	756
13	372	145	9330	2550	456	8070	952	212	115	147	60	478
14	247	148	4200	1700	502	12200	878	203	112	221	80	325
15	182	180	2290	3680	627	5930	816	194	109	214	120	239
16	149	334	7570	3770	636	2570	775	187	107	173	100	224
17	134	739	6390	2310	550	1720	836	178	102	134	170	325
18	131	573	2830	1490	486	1370	746	170	114	112	1000	1640
19	127	400	1690	1090	456	1180	653	161	120	96	700	857
20	402	304	1240	1000	456	1730	592	156	119	85	500	486
21	4000	257	1220	880	494	3810	558	159	107	77	300	313
22	3010	228	2000	800	517	7800	542	159	105	98	200	215
23	1100	207	1420	750	471	9860	542	155	106	101	140	171
24	597	193	1030	670	610	4420	517	165	104	62	116	168
25	420	183	868	727	1920	2310	756	210	101	50	102	160
26	327	173	1020	760	1860	1670	746	293	107	47	86	131
27	285	172	2290	795	1540	1380	558	543	118	42	79	110
28	282	181	1950	910	4960	1190	464	479	106	39	75	91
29	328	447	1320	921	---	1100	413	415	96	37	77	82
30	262	2500	1030	826	---	8200	387	314	92	36	82	70
31	216	---	857	730	---	13900	---	258	---	34	82	---
TOTAL	17935	9617	75152	69377	22595	136180	53521	8262	4036	2773	4714	31910
MEAN	579	321	2424	2238	807	4393	1784	267	135	89.5	152	1064
MAX	4000	2500	9330	13500	4960	13900	9690	543	229	221	1000	10100
MIN	74	138	323	550	413	1100	387	155	92	34	36	54
CFSM	.41	.23	1.72	1.59	.57	3.12	1.27	.19	.10	.06	.11	.76
IN.	.47	.25	1.98	1.83	.60	3.59	1.41	.22	.11	.07	.12	.84

CAL YR 1976 TOTAL 383738 MEAN 1048 MAX 10300 MIN 45 CFSM .74 IN 10.12
WTR YR 1977 TOTAL 436072 MEAN 1195 MAX 13900 MIN 34 CFSM .85 IN 11.50

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) above mean sea level.

REMARKS.--Records good except those for period of no gage-height record, Dec. 8 to Jan. 27, which are poor. Suspended sediment records for the current year are published on page 352 of this report.

AVERAGE DISCHARGE.--5 years, 79.2 ft³/s (2.243 m³/s), 14.50 in/yr (368 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 (0.0003 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)
Jan. 10	Unknown	2340	66.3	12.15	3.703	Mar. 22	1300	797	22.6	6.46	1.969
Mar. 7	1330	862	24.4	6.77	2.063	Mar. 30	1700	870	24.6	6.80	2.073
Mar. 14	0045	*2520	71.4	*12.73	3.880						

Minimum discharge, 0.05 ft³/s (0.001 m³/s) July 31, Aug. 1, gage height, 1.10 ft (0.335 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	7.6	31	40	30	91	155	9.9	5.6	2.6	5.6	.60
2	5.1	5.1	22	35	29	63	98	9.4	11	2.5	22	.32
3	6.0	4.5	19	32	27	50	84	8.8	7.1	2.3	8.8	.24
4	4.6	4.6	16	30	30	53	87	8.3	5.3	2.1	7.8	.20
5	3.6	4.5	14	28	31	170	325	8.3	4.3	2.1	3.3	.15
6	4.7	4.6	13	35	27	187	404	7.5	4.3	2.0	2.6	.18
7	4.0	4.1	115	50	28	738	122	6.8	6.8	1.6	2.2	.30
8	5.4	4.1	230	80	29	473	88	7.1	5.3	1.2	1.9	126
9	31	5.4	120	60	26	145	70	7.1	4.6	1.1	1.8	97
10	17	7.0	90	1500	22	94	58	6.2	4.3	7.0	1.4	31
11	6.4	8.1	75	1000	24	77	52	6.2	2.3	7.1	1.3	7.5
12	3.1	12	200	400	24	67	46	5.9	4.3	3.7	1.5	3.8
13	2.0	15	300	120	25	1230	41	5.6	4.6	3.1	.92	2.6
14	2.0	11	200	100	26	1680	37	5.3	4.3	3.5	.78	2.3
15	2.0	21	100	200	24	280	33	5.1	4.6	3.0	.78	2.2
16	2.0	31	160	160	23	130	30	4.8	4.6	2.2	1.8	2.5
17	8.8	21	120	100	21	88	26	4.6	4.3	1.7	2.6	32
18	16	14	90	80	20	74	24	4.6	4.3	1.1	8.3	12
19	11	10	80	65	22	66	22	4.3	4.1	.78	11	3.4
20	82	8.5	70	55	28	202	22	4.6	3.9	.55	3.9	25
21	90	7.9	90	50	28	178	19	4.3	3.5	.32	2.7	8.2
22	30	8.4	70	47	23	608	17	4.3	3.1	.32	2.3	2.5
23	16	8.7	60	45	22	386	18	4.1	3.2	.36	2.0	1.7
24	9.9	8.1	50	44	61	132	20	6.5	3.8	.22	1.8	1.6
25	8.4	8.1	45	45	164	93	19	33	6.7	.16	1.9	1.5
26	24	8.1	70	48	73	76	17	25	9.7	.19	1.8	1.5
27	13	9.0	100	50	59	65	15	22	5.1	.22	1.5	1.6
28	8.5	13	80	48	179	58	13	12	4.0	.14	1.5	1.6
29	6.0	84	60	45	---	53	11	8.3	3.5	.10	1.3	1.5
30	5.0	60	50	37	---	517	11	6.5	2.9	.11	.92	1.3
31	7.7	---	45	34	---	527	---	5.6	---	.07	.72	---
TOTAL	438.5	418.4	2785	4663	1125	8651	1984	262.0	145.4	53.44	108.72	372.29
MEAN	14.1	13.9	89.8	150	40.2	279	66.1	8.45	4.85	1.72	3.51	12.4
MAX	90	84	300	1500	179	1680	404	33	11	7.1	22	126
MIN	2.0	4.1	13	28	20	50	11	4.1	2.3	.07	.72	.15
CFSM	.19	.19	1.21	2.02	.54	3.76	.89	.11	.07	.02	.05	.17
IN.	.22	.21	1.40	2.34	.56	4.34	.99	.13	.07	.03	.05	.19

CAL YR 1976 TOTAL 15511.77 MEAN 42.4 MAX 891 MIN .04 CFSM .57 IN 7.78
WTR YR 1977 TOTAL 21006.75 MEAN 57.6 MAX 1680 MIN .07 CFSM .78 IN 10.53

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 Norfolk Southern Railway bridge, 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) above mean sea level. 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.--Water-discharge record 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.--53 years (water years 1924-77), 3,338 ft³/s (94.53 m³/s), 13.18 in/yr (335 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, 25,000 ft³/s (708 m³/s) Jan. 10, gage height, 12.70 ft (3.871 m), no peak above base of 30,000 ft³/s (850 m³/s); minimum, 99 ft³/s (2.80 m³/s) Aug. 11, gage height, 0.56 ft (0.171 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	299	608	4400	1810	1490	8160	16000	771	673	293	118	128
2	428	672	2300	1610	1350	5790	7130	757	738	283	269	144
3	420	722	1560	1430	1290	4200	4380	754	632	243	206	146
4	373	709	1240	1320	1280	3200	3750	719	898	207	247	147
5	314	625	1050	1290	1320	7770	6910	699	692	189	233	137
6	355	546	868	1300	1300	9990	13300	679	530	181	213	126
7	328	489	1260	1550	1260	12800	10300	709	554	172	130	116
8	333	474	6580	2780	1140	16800	7210	676	395	159	156	4270
9	427	430	10300	3360	1050	10900	6050	672	417	168	133	12800
10	2440	402	7400	15400	1050	7760	5000	672	446	287	110	16700
11	5910	403	4760	23400	1080	6560	3720	644	377	205	108	9520
12	2710	426	9370	19200	1140	5420	2810	573	331	203	116	4770
13	1710	457	16200	9660	1160	10500	2290	535	315	720	118	2480
14	1180	398	11000	7030	1230	21800	2040	508	323	693	171	1130
15	874	560	5910	8000	1630	13900	1890	435	286	565	308	719
16	637	775	8980	8440	1700	7710	1750	417	260	463	271	606
17	485	1100	12600	6170	1470	5770	1680	460	253	370	694	699
18	463	1370	7540	3920	1310	4300	1580	392	265	303	1950	2250
19	444	1020	4520	2710	1210	3000	1430	374	755	253	1340	2400
20	940	757	3080	2290	1230	3470	1310	380	882	216	1060	1460
21	4960	656	2660	2090	1210	6090	1300	356	599	203	970	946
22	7870	588	3540	2180	1270	9770	1200	343	435	236	628	670
23	3750	598	3500	2180	1230	15900	1250	323	298	216	457	526
24	2380	487	2480	1960	1250	10500	1220	442	272	151	323	426
25	1660	437	2050	1950	2860	6480	1180	722	282	147	216	367
26	1270	455	2040	1980	4180	4640	1470	630	345	141	184	335
27	1060	457	3600	2140	3310	3450	1220	1380	361	133	286	335
28	1290	503	4670	2280	6820	2790	999	1800	541	118	280	286
29	1160	886	3240	2300	---	2470	907	1710	468	116	218	242
30	846	4790	2530	2100	---	6750	887	1290	354	106	219	242
31	710	---	2120	1760	---	18700	---	892	---	108	207	---
TOTAL	48026	22800	153348	145590	47820	257340	112163	21714	13977	7848	11939	65123
MEAN	1549	760	4947	4696	1708	8301	3739	700	466	253	385	2171
MAX	7870	4790	16200	23400	6820	21800	16000	1800	898	720	1950	16700
MIN	299	398	868	1290	1050	2470	887	323	253	106	108	116
CFSM	.45	.22	1.44	1.37	.50	2.41	1.09	.20	.14	.07	.11	.63
IN.	.52	.25	1.66	1.57	.52	2.78	1.21	.23	.15	.08	.13	.70

CAL YR 1976 TOTAL 815024 MEAN 2227 MAX 17500 MIN 118 CFSM .65 IN 8.81
WTR YR 1977 TOTAL 907688 MEAN 2487 MAX 23400 MIN 106 CFSM .72 IN 9.82

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) above mean sea level.

REMARKS.--Records good. Some diurnal fluctuation at low flow during growing season. Water quality records for the current year are published on pages 335-340 and 352 of this report.

AVERAGE DISCHARGE.--9 years, 13.3 ft³/s (0.377 m³/s), 23.61 in/yr (600 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 (1.7 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 21	0115	*84	2.38	*2.41	0.735

Minimum discharge, 3.3 ft³/s (0.09 m³/s) July 20, 21, 22, 25, 26, Sept. 4, gage height, 0.86 ft (0.262 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	8.6	10	10	10	12	14	8.6	8.2	5.0	5.0	4.3
2	9.7	8.0	10	10	10	10	13	8.5	15	5.3	10	4.3
3	8.6	7.9	9.4	10	11	10	13	8.3	8.4	5.3	12	4.3
4	7.2	7.8	9.1	11	11	13	13	8.1	7.1	5.0	9.0	4.0
5	6.9	7.7	9.1	11	11	15	19	7.8	6.7	4.8	6.0	4.3
6	6.7	7.5	9.1	11	10	19	15	7.5	6.7	5.2	5.0	4.5
7	6.4	7.6	24	18	9.8	37	12	7.2	9.9	5.2	4.5	4.5
8	6.4	7.5	22	13	9.8	17	12	7.2	7.2	5.0	4.3	30
9	18	7.5	14	14	9.9	13	11	7.0	7.0	7.2	5.2	33
10	11	7.5	11	51	10	12	11	7.1	6.6	18	8.0	11
11	7.8	8.0	13	21	10	12	11	7.3	6.4	6.9	5.2	7.9
12	6.9	8.5	35	14	9.9	12	10	7.2	6.3	6.0	4.3	6.7
13	6.7	10	24	13	10	43	10	6.9	6.3	5.7	4.5	6.3
14	6.7	20	14	18	10	26	10	6.6	8.3	5.2	6.0	6.0
15	6.4	28	23	30	9.7	14	9.9	6.5	11	5.0	6.3	5.9
16	6.4	26	32	16	9.7	13	13	6.4	9.0	4.7	12	9.0
17	10	11	17	14	9.5	12	11	6.5	7.2	4.5	9.3	24
18	11	10	14	13	9.8	12	9.9	6.2	6.1	4.3	33	9.2
19	7.9	9.4	13	12	11	11	10	6.0	6.6	4.3	15	7.7
20	32	8.4	13	12	11	29	14	8.0	6.6	4.0	7.2	7.0
21	42	8.8	14	12	10	22	10	7.2	5.6	4.0	6.0	6.4
22	11	8.8	12	12	9.7	50	9.6	7.0	5.3	4.5	5.5	6.1
23	9.6	8.4	12	11	9.4	21	9.6	6.9	12	5.2	5.0	6.0
24	9.2	8.8	12	12	18	15	12	11	9.0	4.3	5.2	5.8
25	9.1	8.4	11	13	17	14	11	27	11	4.0	5.0	5.6
26	12	8.4	20	13	11	13	12	14	7.8	4.5	5.0	5.5
27	9.3	9.1	14	12	13	13	9.7	11	6.9	5.0	5.0	5.4
28	8.4	17	10	12	19	13	8.9	8.9	6.3	4.3	4.7	5.3
29	8.2	24	11	12	---	13	8.8	8.3	5.3	4.3	4.7	5.2
30	8.2	12	11	11	---	21	9.2	8.6	5.3	4.7	4.5	5.1
31	10	---	11	11	---	20	---	7.6	---	4.3	4.5	---
TOTAL	329.7	330.6	463.7	453	310.2	557	342.6	262.4	231.1	165.7	226.9	250.3
MEAN	10.6	11.0	15.0	14.6	11.1	18.0	11.4	8.46	7.70	5.35	7.32	8.34
MAX	42	28	35	51	19	50	19	27	15	18	33	33
MIN	6.4	7.5	9.1	10	9.4	10	8.8	6.0	5.3	4.0	4.3	4.0
CFSM	1.39	1.44	1.96	1.91	1.45	2.35	1.49	1.11	1.01	.70	.96	1.09
IN.	1.60	1.61	2.25	2.20	1.51	2.71	1.67	1.28	1.12	.81	1.10	1.22

CAL YR 1976 TOTAL 4247.9 MEAN 11.6 MAX 50 MIN 5.0 CFSM 1.52 IN 20.66
WTR YR 1977 TOTAL 3923.2 MEAN 10.7 MAX 51 MIN 4.0 CFSM 1.40 IN 19.08

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 mi² (7.15 km²).

PERIOD OF RECORD.--November 1976 to September 1977.

GAGE.--Water-stage recorder. Datum of gage is 147.92 ft (45.086 m) above mean sea level (North Carolina Geodetic Survey bench mark).

REMARKS.--Records good. Suspended sediment records for the current year are published on page 353 of this report. Recording rain gage at station.

EXTREMES FOR PERIOD.--November to September; peak discharges above base of 70 ft³/s (7.98 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. 10	0345	76	2.15	3.99	1.216	Aug. 3	2015	90	2.55	4.40	1.341
May 25	0745	107	3.03	4.57	1.393	Aug. 18	0930	*184	5.21	*5.62	1.713
July 11	2000	168	4.76	5.42	1.652						

Minimum discharge, 0.99 ft³/s (0.03 m³/s) Sept. 29, gage height, 1.88 ft (0.573 m); minimum gage height, 1.76 ft (0.536 m) Dec. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR NOVEMBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		1.4	1.9	1.2	2.5	3.2	2.5	1.3	6.9	1.3	5.2	1.3
2		1.3	1.6	1.2	2.3	2.4	2.0	1.3	18	2.2	7.1	1.3
3		1.3	1.3	1.3	2.2	2.2	2.0	1.3	6.4	1.6	15	1.3
4		1.3	1.3	1.6	2.2	3.6	2.0	1.4	2.1	1.4	13	1.2
5		1.2	1.2	1.5	2.4	6.1	6.7	1.4	1.6	1.6	2.0	1.3
6		1.2	1.2	1.4	2.1	7.2	3.8	1.4	2.4	1.7	1.4	1.3
7		1.3	19	5.9	1.8	17	1.9	1.3	3.8	1.8	1.3	1.4
8		1.3	8.1	2.3	1.7	5.2	1.8	1.4	1.5	1.6	1.2	32
9		1.3	2.5	5.3	1.7	3.9	1.6	1.4	1.7	1.6	1.3	9.7
10		1.4	1.7	41	1.8	2.5	1.6	1.4	1.4	1.8	4.4	2.2
11		1.2	2.5	9.6	1.8	2.2	1.6	1.4	1.4	15	8.4	1.5
12		2.7	18	5.9	1.8	1.9	1.5	1.5	1.4	25	2.0	1.2
13		1.1	6.6	5.1	1.8	24	1.4	1.5	1.4	4.9	1.6	1.1
14		1.0	2.6	10	1.8	7.1	1.4	1.5	10	6.2	4.6	1.1
15		41	9.1	14	1.7	3.0	1.4	1.5	11	1.7	4.1	1.3
16		12	13	6.0	3.0	2.3	1.4	1.5	1.9	1.4	11	1.4
17		3.1	3.9	4.3	1.7	1.9	1.3	1.5	1.5	1.3	2.3	1.3
18		2.9	3.1	3.6	1.7	1.9	1.2	1.6	1.5	1.2	68	1.2
19		1.9	2.9	3.4	1.9	1.8	1.3	1.9	1.7	1.2	8.8	1.2
20		1.2	2.8	3.3	2.5	17	1.2	11	1.9	1.2	2.6	1.2
21		1.3	3.0	3.3	1.9	9.9	1.3	3.4	1.7	1.2	1.9	1.1
22		1.3	2.3	3.1	1.8	24	1.3	2.0	1.6	1.4	1.7	1.1
23		1.2	1.9	2.9	1.7	7.1	1.3	1.8	14	1.4	1.7	1.1
24		1.2	1.8	3.1	9.7	4.3	1.4	31	3.9	1.3	2.1	1.1
25		1.2	1.8	4.2	6.0	3.6	1.7	49	8.6	1.3	1.8	1.1
26		1.2	7.9	3.2	2.3	3.1	3.0	9.0	3.5	1.4	1.5	1.1
27		2.7	3.3	3.2	5.8	2.9	1.5	3.3	1.9	1.4	1.3	1.1
28		7.0	2.1	3.1	9.4	2.6	1.3	2.1	1.6	1.3	1.3	1.1
29		9.1	1.5	3.0	---	3.3	1.3	2.1	1.4	1.4	1.3	1.0
30		3.3	1.3	2.7	---	6.1	1.4	1.7	1.2	1.6	1.3	1.1
31		---	1.3	2.7	---	5.8	---	1.5	---	1.5	1.3	---
TOTAL		110.6	132.5	162.4	79.0	189.1	55.1	145.4	118.9	90.9	182.5	76.4
MEAN		3.69	4.27	5.24	2.82	6.10	1.84	4.69	3.96	2.93	5.89	2.55
MAX		41	19	41	9.7	24	6.7	49	18	25	68	32
MIN		1.0	1.2	1.2	1.7	1.8	1.2	1.3	1.2	1.2	1.2	1.0
CFSM		1.34	1.55	1.90	1.02	2.21	.67	1.70	1.44	1.06	2.13	.92
IN.		1.49	1.79	2.19	1.06	2.55	.74	1.96	1.60	1.22	2.46	1.03

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) above mean sea level. 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 periods of no gage-height record, Feb. 26 to May 5 and Aug. 29 to Sept. 30, 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. Suspended sediment records for the current year are published on page 353 of this report.

AVERAGE DISCHARGE.--40 years, 4,941 ft³/s (139.9 m³/s), 13.95 in/yr (354 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, 26,100 ft³/s (739 m³/s) Jan. 12; maximum gage height, 16.47 ft (5.020 m) Jan. 12; minimum discharge, 360 ft³/s (10.2 m³/s) July 31, Aug. 1, gage height, 0.65 ft (0.198 m); minimum daily, 392 ft³/s (11.1 m³/s) July 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	670	1260	6750	3670	3600	10000	18800	1650	1900	881	416	610
2	680	1160	5320	3290	3230	9400	17400	1600	2210	903	700	580
3	750	1220	3700	3060	2950	7100	10000	1500	3120	850	840	550
4	831	1290	2820	2850	2750	5400	7700	1450	2530	760	1380	530
5	930	1250	2300	2750	2650	5450	7700	1400	2210	700	1170	500
6	773	1130	1990	2690	2530	6500	12600	1330	1710	640	830	490
7	721	1020	2480	2910	2490	14800	14000	1280	1730	552	710	480
8	686	932	4540	3570	2490	19800	11000	1300	1450	507	561	2000
9	1210	884	11300	4890	2380	18100	9000	1210	1280	525	498	10000
10	1440	858	12000	10900	2230	14000	7500	1150	1220	680	498	14000
11	4870	835	8880	21600	2180	10600	6100	1120	1090	760	700	16800
12	5010	932	8790	25800	2180	8600	4900	1130	980	936	620	9900
13	2920	985	15700	21800	2200	11000	4100	1060	881	980	525	4800
14	1990	1060	17600	16000	2260	16600	3500	969	892	1440	561	2800
15	1480	1920	13800	12900	2390	22300	3100	958	1180	1270	670	1800
16	1170	3120	11400	12800	2690	19000	3000	881	1180	1050	1510	1400
17	995	3210	15000	11600	2610	12700	2800	820	958	881	1990	1300
18	938	3210	14800	8970	2390	9280	2700	810	860	730	3730	1800
19	931	2980	10700	6500	2240	7100	2400	830	870	610	5510	3200
20	1210	2350	7150	5270	2260	6700	2300	860	1450	516	3650	2700
21	3130	1910	5910	4520	2320	8800	2200	840	1690	472	2550	2100
22	8580	1630	5370	4060	2300	12200	2150	850	1370	543	1990	1600
23	8020	1470	6000	4080	2300	18100	2100	870	1220	516	1430	1300
24	4850	1380	5160	3940	2370	22100	2200	1280	1270	489	1110	1000
25	3490	1220	4170	3670	3240	15200	2100	6730	1360	516	914	900
26	2600	1150	3930	3770	5600	10900	2200	5760	1260	472	780	750
27	2120	1200	4520	3840	5400	8200	2400	3890	1300	440	680	800
28	1860	1310	6380	3920	6200	6100	2200	3480	1200	424	690	720
29	1870	1890	6210	4000	---	5200	1900	3350	1250	408	690	670
30	1810	3030	5090	4100	---	5800	1700	2800	1060	424	650	650
31	1480	---	4310	3980	---	12900	---	2270	---	392	630	---
TOTAL	70015	47796	234070	227700	80430	359930	171750	55428	42681	21267	39183	86730
MEAN	2259	1593	7551	7345	2873	11610	5725	1788	1423	686	1264	2891
MAX	8580	3210	17600	25800	6200	22300	18800	6730	3120	1440	5510	16800
MIN	670	835	1990	2690	2180	5200	1700	810	860	392	416	480
CFSM	.47	.33	1.57	1.53	.60	2.41	1.19	.37	.30	.14	.26	.60
IN.	.54	.37	1.81	1.76	.62	2.78	1.33	.43	.33	.16	.30	.67

CAL YR 1976 TOTAL 1265458 MEAN 3458 MAX 20400 MIN 362 CFSM .72 IN 9.79
WTR YR 1977 TOTAL 1436980 MEAN 3937 MAX 25800 MIN 392 CFSM .82 IN 11.11

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 (revised), 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) below mean sea level (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 14.6 ft³/s (0.41 m³/s) for municipal water supply, most of which is returned as sewage below station. Gage height telemeter at station.

AVERAGE DISCHARGE.--8 years, 5,835 ft³/s (165.2 m³/s), 15.18 in/yr (386 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,300 ft³/s (1,590 m³/s) Feb. 8, 1973, gage height, 24.77 ft (7.550 m); 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, 22,500 ft³/s (637 m³/s) Jan. 14, gage height, 20.86 ft (6.358 m); minimum, 412 ft³/s (11.7 m³/s) Aug. 1, gage height, 14.45 ft (4.404 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	907	1600	4150	4660	3910	7490	13900	1810	2810	1110	463	714
2	915	1390	6250	3990	3510	9820	16800	1720	2670	1030	722	672
3	940	1330	5120	3620	3220	9490	17500	1630	3290	1060	1040	610
4	1010	1360	3770	3350	3040	7540	14600	1580	3480	966	1350	562
5	1150	1420	2910	3150	2940	6210	10400	1540	2960	859	1620	605
6	1150	1340	2410	3040	2770	7670	9360	1500	2460	799	1320	651
7	1020	1260	2270	3120	2710	11800	12200	1410	2170	724	981	681
8	960	1170	3160	3460	2670	14200	13900	1380	2020	650	794	1870
9	1090	1040	6210	4280	2560	16600	13000	1360	1720	619	661	5950
10	1580	1030	10800	6430	2440	17600	10500	1270	1560	676	606	11200
11	2240	990	11500	12300	2380	16600	8240	1230	1420	743	649	14300
12	5170	1020	10200	17000	2390	13900	6400	1230	1280	841	716	15400
13	4320	1080	11300	19900	2430	11200	5120	1200	1150	971	683	12900
14	2850	1150	14800	22000	2430	12300	4230	1110	1060	1180	625	7290
15	2020	1550	16800	21300	2470	16300	3680	1060	1180	1400	735	3760
16	1600	2610	16200	18100	2630	18700	3390	1010	1360	1260	997	2410
17	1340	3360	15100	16000	2800	19100	3190	961	1270	1070	1740	1910
18	1180	3380	15800	13400	2690	16900	3080	917	1110	913	2250	1940
19	1110	3340	16000	11000	2510	12700	3000	936	1030	768	4860	2570
20	1160	2990	13400	8000	2440	8760	2680	981	1150	665	5270	3380
21	1760	2440	9440	6500	2430	8510	2460	970	1600	595	3610	2970
22	4470	2050	6980	5400	2440	11400	2330	955	1670	566	2670	2340
23	8250	1800	6310	4800	2450	14400	2210	1000	1530	585	2020	1870
24	7240	1660	6300	4500	2520	17000	2270	1150	1540	566	1570	1530
25	4860	1530	5400	4370	2990	18600	2350	3970	1540	560	1440	1260
26	3490	1420	4840	4180	4150	18200	2220	7850	1570	593	1200	1070
27	2630	1420	4900	4250	5740	15300	2350	7080	1510	674	1010	1020
28	2150	1460	5650	4340	6010	11000	2360	5790	1440	583	894	1050
29	1970	1750	6910	4400	---	7810	2130	5120	1380	502	867	949
30	1950	2200	6450	4420	---	6600	1940	4370	1310	495	819	943
31	1860	---	5460	4270	---	8240	---	3540	---	478	766	---
TOTAL	74342	52140	256890	249530	83670	391940	197790	67630	52240	24501	44948	104377
MEAN	2398	1738	8287	8049	2988	12640	6593	2182	1741	790	1450	3479
MAX	8250	3380	16800	22000	6010	19100	17500	7850	3480	1400	5270	15400
MIN	907	990	2270	3040	2380	6210	1940	917	1030	478	463	562
CFSM	.46	.33	1.59	1.54	.57	2.42	1.26	.42	.33	.15	.28	.67
IN.	.53	.37	1.83	1.78	.60	2.79	1.41	.48	.37	.17	.32	.74

CAL YR 1976 TOTAL 1451337 MEAN 3965 MAX 18600 MIN 585 CFSM .76 IN 10.34
WTR YR 1977 TOTAL 1599998 MEAN 4384 MAX 22000 MIN 463 CFSM .84 IN 11.40

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 1973 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.--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. Malfunctions of water-quality monitor caused some loss of daily records during November, May and June.

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; minimum, 0.5°C Jan. 24, 1976.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 317 micromhos Oct. 19, 20; minimum, 54 micromhos Apr. 3.
WATER TEMPERARUES: Maximum, 32.0°C July 9, 19, 20, 21; minimum, 1.0°C Jan. 20-25.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	FECAL COLIFORM .7UM-MF (COL./100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	HARDNESS (CA,MG) (MG/L)
OCT										
05...	1105	1170	145	6.8	22.0	9	5.3	B44	B36	13
NOV										
10...	1100	1060	97	6.8	10.0	10	9.6	B28	B24	19
DEC										
07...	1145	2240	170	6.7	9.0	5	10.6	92	300	25
20...	1015	13900	73	6.4	7.5	40	10.3	220	2000	17
FEB										
28...	1200	6010	97	7.1	11.0	15	10.4	150	100	16
MAR										
29...	1100	7720	57	7.0	14.0	20	8.8	B60	B40	15
APR										
26...	1145	2170	75	7.1	22.5	8	7.9	B64	B16	18
MAY										
17...	1030	972	100	7.1	24.0	8	7.4	B12	B8	15
JUN										
29...	1100	1380	105	6.7	28.5	2	6.2	2500	980	12
JUL										
26...	1130	567	129	5.9	29.0	4	5.8	B16	130	11
AUG										
17...	1015	1760	128	7.1	30.0	25	--	--	--	11
SEP										
13...	1115	13500	71	5.6	22.5	170	5.3	430	550	13

B 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 1976 TO SEPTEMBER 1977

DATE	NON-CARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)
OCT									
05...	0	2.0	2.0	21	73	2.5	2.9	24	0
NOV									
10...	7	4.3	2.0	9.8	49	1.0	2.6	15	0
DEC									
07...	0	5.7	2.7	21	61	1.8	3.5	39	0
20...	9	4.2	1.6	5.9	40	.6	1.9	10	0
FEB									
28...	0	4.1	1.3	11	57	1.2	1.8	21	0
MAR									
29...	9	3.5	1.5	5.3	41	.6	1.5	7	0
APR									
26...	7	4.4	1.7	7.7	45	.8	1.7	13	0
MAY									
17...	0	2.9	1.9	14	67	1.6	.1	29	0
JUN									
29...	1	2.0	1.7	14	68	1.8	2.1	13	0
JUL									
26...	0	1.4	1.8	20	75	2.6	2.8	17	0
AUG									
17...	0	1.5	1.8	19	74	2.5	2.9	18	0
SEP									
13...	5	3.1	1.3	6.4	45	.8	3.0	10	0

DATE	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)
OCT									
05...	20	6.1	16	17	.2	5.5	85	--	78
NOV									
10...	12	3.8	12	9.0	.2	8.1	83	--	55
DEC									
07...	32	12	18	16	.3	12	112	--	99
20...	8	6.4	10	6.7	.1	8.5	62	62	44
FEB									
28...	17	2.7	12	9.7	.1	8.1	58	--	58
MAR									
29...	6	1.1	7.9	5.2	.0	7.7	64	--	36
APR									
26...	11	1.7	9.6	7.0	.1	8.4	57	--	47
MAY									
17...	24	3.7	12	11	.1	6.1	71	68	63
JUN									
29...	11	4.2	12	11	.1	6.5	84	--	56
JUL									
26...	14	34	16	15	.1	7.7	94	--	73
AUG									
17...	15	2.3	16	15	.1	7.3	83	--	73
SEP									
13...	8	40	11	5.8	.1	6.1	64	--	42

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
OCT									
05...	.12	269	--	.93	.90	1.8	8.1	.40	--
NOV									
10...	.11	238	--	.61	.74	1.4	6.0	.19	--
DEC									
07...	.15	677	--	1.0	1.1	2.1	9.3	.46	2
20...	.08	2330	47	.44	.77	1.2	5.4	.16	2
FEB									
28...	.08	941	--	.73	.71	1.4	6.4	.23	--
MAR									
29...	.09	1330	--	.35	.59	.94	4.2	.11	--
APR									
26...	.08	334	--	.46	.65	1.1	4.9	.16	--
MAY									
17...	.10	186	11	.72	.68	1.4	6.2	.23	2
JUN									
29...	.11	313	--	.78	.85	1.6	7.2	.31	--
JUL									
26...	.13	144	--	.74	.52	1.3	5.6	.40	--
AUG									
17...	.11	394	--	.64	1.1	1.7	7.7	.36	1
SEP									
13...	.09	2330	--	.52	1.1	1.6	7.2	.34	--

DATE	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	SUS-PENDED COBALT (CO) (UG/L)
DEC										
07...	1	1	0	0	0	20	20	0	0	0
20...	1	1	2	2	0	10	0	12	0	0
MAY										
17...	0	2	0	0	0	<10	<7	3	0	0
AUG										
17...	0	1	0	0	0	<10	<9	1	0	0

DATE	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)
DEC										
07...	0	6	2	4	690	280	7	4	3	60
20...	0	9	5	4	1400	220	22	17	5	90
MAY										
17...	0	1	0	2	960	210	9	0	13	110
AUG										
17...	0	9	6	3	1600	650	9	9	0	180

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS-PENDED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	SUS-PENDED MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)
DEC										
07...	20	40	.1	.0	.1	0	0	0	30	10
20...	60	30	.1	.1	.0	0	0	0	20	0
MAY										
17...	10	100	.3	.3	.0	0	0	0	10	10
AUG										
17...	50	130	.0	.0	.0	0	0	0	0	0

DATE	DIS-SOLVED ZINC (ZN) (UG/L)	DIS-SOLVED GROSS ALPHA AS U-NAT. (UG/L)	SUS-PENDED GROSS ALPHA AS U-NAT. (UG/L)	DIS-SOLVED GROSS BETA AS CS-137 (PC/L)	SUS-PENDED GROSS BETA AS CS-137 (PC/L)	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L)	SUS-PENDED GROSS BETA AS SR90 /Y90 (PC/L)	DIS-SOLVED RA-226 (RADON METHOD) (PC/L)	DIS-SOLVED NATURAL URANIUM (U) (UG/L)	DIS-SOLVED URANIUM (U) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
DEC											
07...	20	--	--	--	--	--	--	--	--	--	7.8
20...	20	.8	3.3	3.9	3.3	3.1	2.6	.10	.6	--	--
MAY											
17...	0	<.8	.6	3.0	.5	2.4	.4	.10	--	.10	7.0
AUG											
17...	0	--	--	--	--	--	--	--	--	--	7.2

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Oct. 5	1105	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Gonium	17	21	
		Kirchneriella	4	5	
		Scenedesmus	9	11	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cocconeis	4	5	
		Gomphonema	9	11	
		Gyrosigma	4	5	
		Navicula	9	11	
		Nitzschia	21	26	
		EUGLENOPHYTA			
		Euglenophyceae			
		Euglena	4	5	
		TOTAL	81		
Nov. 10	1100	CHRYSOPHYTA			Depth Integrating Sampler
		Bacillariophyceae			
		Cocconeis	5	20	
		Gyrosigma	5	20	
		Navicula	5	20	
		Nitzschia	11	40	
		TOTAL	27		
Dec. 7	1145	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	35	14	
		Scenedesmus	35	14	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	16	7	
		Fragilaria	41	17	
		Gomphonema	3	1	
		Melosira	95	39	
		Nitzschia	13	5	
		Synedra	3	1	
		TOTAL	240		
Dec. 20	1015	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	35	11	
		Crucigenia	46	14	
		Dictyosphaerium	46	14	
		Kirchneriella	12	4	
		Scenedesmus	23	7	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	12	4	
		Gomphonema	23	7	
		Melosira	130	39	
		TOTAL	320		

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Feb. 28	1200	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	45	6	
		Chodatella	6	1	
		Dictyosphaerium	45	6	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Achnanthes	6	1	
		Asterionella	68	9	
		Cocconeis	11	2	
		Cyclotella	34	5	
		Eunotia	6	1	
		Fragilaria	34	5	
		Gomphonema	34	5	
		Hantzschia	11	2	
		Melosira	45	6	
		Meridion	6	1	
		Navicula	120	6	
		Nitzschia	180	24	
		Pinnularia	23	3	
		Rhoicosphenia	6	1	
		Synedra	40	5	
		Chrysophyceae			
		Dinobryon	6	1	
		Mallomonas	11	2	
		TOTAL	730		
May 17	1030	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Actinastrum	3,100	14	
		Ankistrodesmus	210	1	
		Chlamydomonas	340	2	
		Crucigenia	340	2	
		Dictyosphaerium	1,100	5	
		Gonium	250	1	
		Tetrastrum	170	1	
		Treubaria	130	1	
		CYANOPHYTA			
		Myxophyceae			
		Oscillatoria	16,000	73	
		PHYRRHOPHYTA			
		Dinophyceae			
		Peridinium	130	1	
		TOTAL	22,000		
June 29	1100	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Actinastrum	130	14	
		Ankistrodesmus	39	4	
		Chlamydomonas	50	5	
		Dictyosphaerium	22	2	
		Gonium	88	9	
		Micractinium	44	5	
		Pandorina	180	18	
		Scenedesmus	22	2	
		Selenastrum	6	1	
		Spermatozoopsis	66	7	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	17	2	
		Cymbella	6	1	
		Navicula	6	1	
		Synedra	17	2	
		CYANOPHYTA			
		Myxophyceae			
		Agmenellum	260	28	
		TOTAL	950		

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
July 26	1130	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Actinastrum	580	2	
		Coronastrum	21,000	90	
		Pandorina	420	2	
		Schroederia	220	1	
		Sphaerocystis	900	4	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Melosira	220	1	
		TOTAL	24,000		
Aug. 17	1015	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Actinastrum	110	6	
		Eudorina	470	25	
		Gloeocystis	160	9	
		Micractinium	54	3	
		Oocystis	34	2	
		Scenedesmus	160	8	
		Schroederia	190	10	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	14	1	
		Melosira	220	12	
		Navicula	14	1	
		Chrysophyceae			
		Mallomonas	14	1	
		CYANOPHYTA			
		Cyanophyceae			
		Agmenellum	110	6	
		Anacystis	150	8	
		EUGLENOPHYTA			
		Euglenophyceae			
		Trachelomonas	27	1	
		PYRRHOPHYTA			
		Dinophyceae			
		Glenodinium	14	1	
		TOTAL	1,800		
Sept. 13	1115	CHRYSOPHYTA			Depth Integrating Sampler
		Bacillariphyceae			
		Gomphonema	200	5	
		Navicula	400	10	
		Nitzschia	200	5	
		Stephanodiscus	200	5	
		CYANOPHYTA			
		Cyanophyceae			
		Lyngbya	3,000	75	
		TOTAL	4,000		

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PERIPHYTON

Date	Length of exposure (days)	Biomass (mg/m²)		Chlorophyll a (mg/m²)	Chlorophyll b (mg/m²)	Biomass chlorophyll ratio	Sampling method
		Dry weight	Ash weight				
Oct. 5	31	4923	7462	2.18	1.56	1165	Polyethelene strip
Aug. 17	46	1420	945	1.56	.000	304	

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	128	122	126	106	103	104	111	101	107	93	89	92
2	131	128	129	104	98	100	106	100	103	89	85	87
3	141	131	136	99	96	98	109	102	107	84	82	83
4	147	142	144	99	96	98	129	108	115	82	81	82
5	146	141	144	98	94	96	174	132	155	82	81	81
6	140	132	135	98	93	96	179	175	177	84	82	84
7	147	132	139	103	98	101	174	153	163	86	84	85
8	153	146	151	104	102	103	151	119	134	86	84	85
9	151	148	149	102	98	100	119	106	114	84	82	83
10	148	130	141	98	96	97	105	88	96	83	81	82
11	142	122	129	96	93	95	116	95	109	82	70	77
12	169	139	151	93	92	93	108	97	101	78	65	73
13	183	163	171	92	90	91	102	89	97	69	63	66
14	183	140	159	90	88	89	88	78	81	70	64	67
15	190	144	167	91	87	89	79	73	75	69	67	68
16	230	192	208	91	90	90	74	70	73	67	65	66
17	269	232	248	96	90	94	72	70	70	70	64	66
18	304	271	288	107	95	102	76	70	72	70	66	68
19	317	307	313	107	99	102	77	75	76	68	67	67
20	317	303	311	99	85	93	76	74	75	70	67	69
21	302	230	272	84	75	79	75	74	74	72	70	71
22	229	165	189	77	74	75	77	75	76	72	68	71
23	180	107	146	77	75	76	79	77	78	69	68	69
24	104	82	88	81	76	78	77	73	75	72	69	70
25	104	85	99	83	80	82	75	73	74	73	71	72
26	102	100	101	81	80	81	76	72	74	78	73	76
27	113	101	106	90	82	84	79	76	78	77	76	77
28	115	113	114	99	90	95	79	75	77	77	76	76
29	113	103	107	111	101	107	77	75	76	84	77	81
30	107	104	105	111	104	107	80	77	79	87	84	86
31	107	104	106	---	---	---	91	80	85	92	87	89
MONTH	317	82	160	111	74	93	179	70	95	93	63	76

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	94	90	93	107	93	97	71	61	64	81	79	80
2	90	83	86	112	91	101	75	57	63	84	80	82
3	84	82	83	111	96	105	57	54	56	87	83	85
4	84	83	84	97	80	85	57	55	56	88	86	86
5	86	83	85	85	80	82	57	56	56	88	86	87
6	87	86	86	86	78	83	59	57	58	88	86	87
7	87	86	87	87	76	79	71	58	62	92	87	90
8	87	86	87	88	72	79	75	68	73	96	91	94
9	85	79	82	74	65	68	71	68	69	98	95	96
10	84	79	82	67	66	66	75	72	74	98	95	97
11	87	85	86	69	65	67	78	75	77	100	96	98
12	89	87	88	68	64	67	76	71	73	99	95	97
13	88	87	87	65	63	64	70	69	70	99	94	97
14	87	86	87	67	63	65	73	69	71	100	97	99
15	88	86	87	66	63	65	74	72	73	98	95	96
16	87	85	86	62	56	57	74	72	73	102	95	98
17	86	84	85	57	56	56	74	72	73	104	100	102
18	90	86	87	57	55	56	74	73	74	103	102	103
19	96	90	94	58	56	57	75	73	74	104	102	103
20	100	95	98	59	57	58	73	71	72	---	---	105
21	103	100	101	61	59	60	75	70	73	---	---	106
22	103	103	103	65	61	63	73	72	73	---	---	108
23	106	102	105	62	57	59	74	72	72	---	---	107
24	111	105	107	64	57	60	74	72	73	---	---	101
25	120	111	117	61	56	58	75	72	73	---	---	75
26	117	106	113	58	56	57	76	73	74	---	---	63
27	105	96	100	59	57	58	74	73	74	---	---	65
28	98	94	96	60	58	59	79	74	76	---	---	68
29	---	---	---	57	55	57	82	79	81	---	---	70
30	---	---	---	59	56	58	83	79	82	---	---	72
31	---	---	---	62	59	60	---	---	---	---	---	75
MONTH	120	79	92	112	55	68	83	54	70	104	79	90

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1			80	100	95	97	118	114	117	137	129	133
2			82	95	92	94	117	113	115	142	135	137
3			77	98	91	94	114	111	113	140	134	136
4			75	114	98	103	117	112	114	135	132	133
5			78	107	103	105	115	106	110	134	132	133
6			82	109	106	108	129	114	123	142	134	138
7			85	112	109	111	122	118	121	152	142	148
8			87	112	109	111	117	114	115	166	150	159
9			90	111	106	109	127	116	123	168	113	147
10			92	107	104	106	132	124	129	152	99	124
11			95	105	100	103	135	129	131	144	63	108
12			98	100	95	99	135	129	131	117	84	105
13			100	95	92	94	136	129	132	81	69	73
14			103	94	91	92	137	132	135	73	69	71
15			100	95	90	93	138	135	136	73	71	72
16			97	105	94	100	137	131	134	75	73	74
17			98	114	106	110	132	129	130	78	75	77
18			101	128	113	120	160	131	148	79	77	78
19			102	140	127	134	158	105	122	81	78	80
20			101	147	140	144	111	96	102	90	81	86
21			92	149	146	148	110	77	88	94	89	91
22			90	148	146	147	83	73	80	103	93	99
23			92	150	144	147	71	63	66	103	100	102
24			92	146	139	144	74	63	69	100	95	97
25			92	143	137	140	85	74	80	100	95	98
26			91	140	134	136	96	85	91	101	99	100
27			94	134	132	133	110	95	102	102	99	101
28			94	133	128	130	126	109	119	99	96	97
29			95	132	126	128	129	126	128	98	95	97
30			97	129	122	125	128	120	125	100	97	99
31			---	125	118	121	129	124	126	---	---	---
MONTH			92	150	90	117	160	63	115	168	63	106
YEAR	317	54	98									

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.5	22.5	22.5	11.0	10.5	11.0	10.5	9.5	10.0	5.5	5.0	5.0
2	22.5	22.0	22.0	11.0	10.5	11.0	9.5	9.0	9.5	5.0	4.5	5.0
3	22.5	21.5	22.0	11.0	10.5	11.0	9.5	9.0	9.5	5.0	4.5	4.5
4	22.0	21.0	21.5	11.0	10.5	11.0	9.5	9.0	9.0	4.5	4.5	4.5
5	21.5	21.0	21.0	11.0	10.5	10.5	9.0	8.0	8.5	4.5	4.5	4.5
6	21.0	20.5	21.0	10.5	10.0	10.5	8.5	8.0	8.5	4.5	4.5	4.5
7	21.0	20.5	21.0	10.5	10.0	10.0	9.0	6.0	9.0	5.0	4.5	5.0
8	21.0	21.0	21.0	10.0	10.0	10.0	9.0	8.5	9.0	5.0	4.5	4.5
9	21.5	21.0	21.0	---	---	---	8.5	7.5	8.0	4.5	4.0	4.5
10	20.5	20.5	20.5	---	---	---	9.0	7.0	8.0	5.0	4.5	4.5
11	20.5	20.0	20.0	---	---	---	9.0	7.0	8.0	5.0	4.5	4.5
12	20.0	19.0	19.0	---	---	---	7.5	7.0	7.5	4.5	4.0	4.0
13	19.0	18.0	18.0	---	---	---	7.5	7.0	7.5	4.0	3.0	3.5
14	18.0	18.0	18.0	---	---	---	8.0	7.5	8.0	3.5	3.0	3.0
15	18.0	17.5	17.5	10.0	10.0	10.0	8.5	8.0	8.5	3.5	3.0	3.5
16	18.0	17.5	17.5	10.0	9.5	9.5	8.5	8.5	8.5	3.5	3.0	3.0
17	17.5	17.0	17.5	9.5	9.5	9.5	8.5	8.0	8.5	3.0	2.5	2.5
18	17.0	16.5	16.5	9.5	9.0	9.5	8.5	8.0	8.0	2.5	2.0	2.5
19	16.5	15.5	16.0	9.5	9.0	9.0	8.0	8.0	8.0	2.0	1.5	2.0
20	16.5	16.0	16.0	9.0	9.0	9.0	8.0	8.0	8.0	1.5	1.0	1.5
21	15.5	15.0	15.5	9.5	9.0	9.0	8.0	7.5	8.0	1.5	1.0	1.0
22	15.0	14.5	15.0	9.5	9.0	9.0	7.5	7.0	7.0	1.5	1.0	1.0
23	14.5	13.0	13.5	9.0	9.0	9.0	7.0	7.0	7.0	1.0	1.0	1.0
24	13.0	12.0	12.5	9.0	8.5	9.0	7.0	6.5	6.5	1.0	1.0	1.0
25	12.5	12.0	12.0	9.0	8.5	8.5	6.5	6.0	6.0	1.5	1.0	1.5
26	12.0	11.5	11.5	9.0	8.5	8.5	6.0	5.5	6.0	2.0	1.5	2.0
27	11.5	11.5	11.5	9.5	9.0	9.0	5.5	5.5	5.5	2.5	2.0	2.5
28	11.5	11.0	11.0	10.0	9.5	9.5	5.5	5.5	5.5	3.0	2.5	3.0
29	11.0	10.5	10.5	10.5	10.0	10.5	5.5	5.0	5.5	3.0	3.0	3.0
30	10.5	10.0	10.5	10.5	10.5	10.5	5.5	5.5	5.5	3.5	3.0	3.0
31	11.0	10.5	11.0	---	---	---	6.0	5.5	5.5	3.5	3.0	3.5
MONTH	22.5	10.0	17.0	11.0	8.5	10.0	10.5	5.0	7.5	5.5	1.0	3.0

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	3.5	3.0	3.5	12.0	11.0	11.5	16.0	15.5	15.5	20.5	20.0	20.5
2	4.0	3.5	3.5	12.0	11.0	11.5	16.5	16.0	16.0	21.0	20.5	20.5
3	4.0	3.5	3.5	11.5	11.5	11.5	16.5	16.0	16.5	21.5	20.5	21.0
4	4.0	3.5	3.5	11.5	11.5	11.5	17.5	16.5	17.0	22.0	20.5	21.5
5	4.0	3.5	4.0	12.0	11.5	11.5	17.5	17.5	17.5	22.5	21.0	22.0
6	4.0	3.5	4.0	11.5	11.5	11.5	17.5	17.0	17.0	23.0	22.0	22.5
7	4.0	3.5	4.0	11.5	11.5	11.5	18.0	17.0	17.5	24.0	22.5	23.0
8	4.0	3.5	4.0	12.0	11.0	11.5	17.0	16.5	16.5	24.0	23.0	23.5
9	4.0	3.5	4.0	11.5	11.0	11.5	16.5	15.5	16.0	24.0	23.0	23.5
10	4.0	3.5	4.0	11.0	10.5	11.0	16.0	15.5	16.0	23.0	22.5	23.0
11	4.5	4.0	4.5	11.0	11.0	11.0	16.5	15.5	16.0	23.0	22.5	22.5
12	5.5	4.5	5.0	12.0	11.0	11.5	17.0	16.0	16.5	23.0	22.0	22.5
13	6.0	5.5	5.5	12.5	12.0	12.0	17.0	16.5	16.5	23.5	22.5	23.0
14	6.5	6.0	6.0	13.5	12.5	13.0	18.0	17.0	17.0	24.0	22.5	23.0
15	6.5	6.0	6.5	15.0	13.5	14.5	18.5	17.5	18.0	24.0	22.5	23.0
16	6.5	6.0	6.0	15.5	15.0	15.5	19.0	18.5	18.5	24.5	23.5	24.0
17	6.5	6.0	6.0	15.5	15.0	15.5	20.0	19.0	19.5	25.0	23.5	24.0
18	6.5	6.0	6.0	15.5	15.0	15.0	20.0	19.5	19.5	25.0	23.5	24.5
19	7.0	6.0	6.5	15.5	15.0	15.5	20.5	20.0	20.0	25.5	24.5	24.5
20	7.5	7.0	7.5	15.5	15.0	15.5	21.0	20.0	20.5	---	---	---
21	7.5	7.0	7.5	15.0	15.0	15.0	22.0	20.5	21.0	---	---	---
22	7.5	7.5	7.5	15.0	14.5	14.5	21.5	21.0	21.5	---	---	---
23	8.0	7.5	7.5	14.5	13.5	13.5	22.5	21.5	22.0	---	---	---
24	8.0	8.0	8.0	13.5	13.0	13.0	22.5	21.5	22.0	---	---	---
25	8.5	8.0	8.5	13.0	12.0	12.5	22.5	21.5	22.0	---	---	---
26	9.5	8.5	9.0	12.5	12.0	12.5	22.5	21.5	22.0	---	---	---
27	10.0	9.0	9.5	13.0	12.5	12.5	21.5	21.0	21.5	---	---	---
28	11.0	10.0	10.5	13.5	12.5	13.0	22.0	20.5	21.0	---	---	---
29	---	---	---	14.0	13.5	14.0	21.0	20.5	21.0	---	---	---
30	---	---	---	15.0	14.0	14.5	20.5	20.5	20.5	---	---	---
31	---	---	---	15.5	15.0	15.0	---	---	---	---	---	---
MONTH	11.0	3.0	6.0	15.5	10.5	13.0	22.5	15.5	18.5	25.5	20.0	22.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1				30.0	28.5	29.5	29.5	28.5	29.0	27.5	27.0	27.5
2				30.0	29.0	29.0	29.0	28.5	28.5	27.5	27.5	27.5
3				29.5	29.0	29.5	28.5	28.0	28.5	28.0	27.5	27.5
4				30.0	29.0	29.5	28.5	28.0	28.0	28.0	27.5	27.5
5				30.5	29.0	29.5	28.5	27.5	28.0	27.5	27.5	27.5
6				31.0	29.5	30.0	29.0	28.0	28.5	28.0	27.5	27.5
7				31.5	30.0	30.5	29.5	28.0	28.5	28.0	27.0	27.5
8				31.5	30.0	30.5	30.0	28.5	29.0	28.0	27.0	27.5
9				32.0	30.5	31.0	30.5	28.5	29.5	27.5	26.0	27.0
10				31.0	30.0	30.5	31.0	29.0	29.5	27.0	26.0	26.5
11				31.0	30.0	30.5	31.0	29.0	30.0	26.5	24.0	25.0
12				31.0	30.5	30.5	31.0	29.5	30.0	24.5	23.0	23.5
13				31.5	30.5	30.5	30.5	29.5	30.0	23.0	22.5	23.0
14				31.5	30.0	30.5	30.5	30.0	30.0	23.0	22.5	23.0
15				31.5	30.5	31.0	30.0	29.5	29.5	23.5	23.0	23.0
16				31.5	31.0	31.5	30.5	29.0	29.5	24.0	23.5	24.0
17				31.5	31.0	31.5	30.5	29.5	30.0	24.5	24.0	24.5
18				31.5	31.0	31.0	29.5	29.0	29.5	25.0	24.5	24.5
19				32.0	31.0	31.5	28.5	27.5	28.0	25.0	24.5	25.0
20				32.0	31.0	31.5	27.5	27.0	27.0	25.5	25.0	25.0
21				32.0	31.0	31.5	27.0	26.5	26.5	26.0	25.0	25.5
22				31.5	31.0	31.0	26.5	26.0	26.0	26.0	25.5	25.5
23				31.0	31.0	31.0	26.5	25.5	26.0	25.5	25.5	25.5
24				31.0	30.5	31.0	26.5	26.0	26.0	25.5	25.0	25.5
25				31.0	30.0	30.5	26.5	26.0	26.5	26.0	25.0	25.5
26				30.5	29.5	30.0	26.5	26.5	26.5	26.0	25.5	25.5
27				29.5	29.0	29.5	27.0	26.5	26.5	26.5	25.5	26.0
28				29.5	29.0	29.0	27.0	26.5	27.0	26.0	25.5	25.5
29				29.5	28.5	29.0	27.0	27.0	27.0	25.5	25.0	25.5
30				30.5	28.5	29.0	27.0	26.5	27.0	25.5	25.0	25.0
31				29.0	28.5	28.5	27.5	27.0	27.0	---	---	---
MONTH				32.0	28.5	30.5	31.0	25.5	28.0	28.0	22.5	25.5
YEAR	32.0	1.0	16.5									

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE FOR SELECTED DAYS, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT					
04...	1250	1040	9	25	93
05...	1105	1170	14	44	96
NOV					
10...	1100	1060	19	54	97
DEC					
07...	1145	2240	11	67	100
20...	1015	13900	45	1690	100
FEB					
28...	1200	6010	19	308	100
MAR					
29...	1100	7720	28	584	100
APR					
26...	1145	2170	20	117	100
MAY					
17...	1030	972	8	21	100
JUL					
26...	1130	567	16	24	93
AUG					
17...	1015	1760	18	86	99
SEP					
13...	1115	13500	155	5650	97

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

WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)
OCT									
06...	1315	1160	120	6.2	22.0	4.7	18	.8	40
NOV									
01...	1130	1600	70	6.1	12.0	7.3	25	.6	10
DEC									
01...	1300	4270	70	6.2	7.0	6.9	15	1.0	30
FEB									
01...	1230	3910	60	6.9	5.0	12.8	26	1.3	10
MAR									
01...	1215	7460	80	6.8	11.0	10.8	15	1.0	170
APR									
04...	1230	14500	50	6.5	21.5	7.1	26	.5	110
MAY									
02...	1145	1720	80	6.8	21.0	7.5	19	.7	40
JUN									
02...	1250	2700	70	6.4	24.0	6.1	33	1.1	70
JUL									
19...	1220	785	150	6.2	32.0	5.8	22	1.7	<10
AUG									
08...	1145	796	90	7.5	29.0	7.5	20	.7	10
SEP									
08...	1330	2120	170	6.7	28.0	5.4	22	--	60

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 Bearskin 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) above mean sea level (levels by Corps of Engineers). Prior to Jan. 12, 1951, nonrecording gage at same site and datum.

REMARKS.--Records good. Suspended sediment records for the current year are published on page 353 of this report.

AVERAGE DISCHARGE.--27 years, 115 ft³/s (3.257 m³/s), 16.20 in/yr (411 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, 756 ft³/s (21.4 m³/s) Jan. 13, gage height, 7.36 ft (2.243 m); minimum, 2.7 ft³/s (0.08 m³/s), Aug. 14, gage height, 1.31 ft (0.399 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	20	80	140	123	161	208	33	181	21	3.3	12
2	9.3	19	71	120	115	157	198	29	140	26	7.6	10
3	11	18	60	100	110	168	192	25	138	33	22	9.1
4	16	17	53	95	106	183	178	23	128	27	19	8.5
5	14	17	48	93	103	193	167	22	120	21	18	8.1
6	12	16	45	92	100	179	164	19	118	17	12	8.3
7	11	16	54	108	100	209	152	18	118	14	7.5	8.8
8	9.4	15	82	116	104	229	145	16	109	12	5.3	78
9	12	15	95	119	106	234	131	14	99	11	4.1	194
10	18	15	101	257	111	250	111	14	84	14	3.5	218
11	20	15	97	365	113	267	97	14	61	14	3.7	213
12	16	16	131	468	113	252	87	12	48	13	3.4	195
13	13	18	158	723	104	244	78	11	39	13	3.2	108
14	11	20	157	572	85	259	69	10	35	22	3.1	46
15	9.6	77	178	477	76	269	61	9.5	34	15	4.0	33
16	8.7	131	255	393	70	334	56	8.7	36	12	36	28
17	10	129	300	344	66	389	51	8.0	33	9.0	29	26
18	18	141	350	310	63	329	51	7.6	28	6.6	78	25
19	22	147	400	290	63	278	46	6.8	41	5.5	179	24
20	24	123	350	270	68	273	49	6.6	98	4.8	202	23
21	44	76	300	250	72	293	54	6.4	90	4.0	250	22
22	46	59	250	220	69	371	44	6.3	152	3.9	259	20
23	35	51	220	200	63	453	38	6.3	157	6.2	163	18
24	25	45	190	180	88	488	40	39	123	5.9	50	18
25	21	40	180	170	139	477	65	247	124	4.5	34	17
26	22	38	170	165	134	404	71	357	153	3.7	28	15
27	25	45	250	160	142	332	64	383	140	4.2	22	14
28	22	58	300	155	169	287	55	468	64	3.9	19	13
29	19	83	250	154	---	251	42	366	40	3.6	16	11
30	18	84	200	142	---	225	37	283	29	4.1	14	10
31	18	---	180	133	---	218	---	220	---	3.6	14	---
TOTAL	568.4	1564	5555	7381	2775	8656	2801	2689.2	2760	358.5	1512.7	1433.8
MEAN	18.3	52.1	179	238	99.1	279	93.4	86.7	92.0	11.6	48.8	47.8
MAX	46	147	400	723	169	488	208	468	181	33	259	218
MIN	8.4	15	45	92	63	157	37	6.3	28	3.6	3.1	8.1
CFSM	.19	.54	1.86	2.47	1.03	2.89	.97	.90	.95	.12	.51	.50
IN.	.22	.60	2.14	2.85	1.07	3.34	1.08	1.04	1.07	.14	.58	.55

CAL YR 1976 TOTAL 30380.9 MEAN 83.0 MAX 524 MIN 2.5 CFSM .86 IN 11.72
WTR YR 1977 TOTAL 38054.6 MEAN 104 MAX 723 MIN 3.1 CFSM 1.08 IN 14.68

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) above mean sea level. 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 353 of this report.

AVERAGE DISCHARGE.--26 years, 783 ft³/s (22.17 m³/s), 15.64 in/yr (397 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,3,010 ft³/s (85.2 m³/s) Mar. 26, gage height, 13.39 ft (4.08 m); minimum, 36 ft³/s (1.02 m³/s) Aug. 1, gage height, 1.29 ft (0.393 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	100	559	905	803	956	1640	298	953	161	36	116
2	68	120	497	805	758	974	1480	263	851	157	43	111
3	71	130	441	732	716	1000	1340	236	776	220	119	100
4	71	120	394	699	690	995	1200	214	611	196	205	92
5	71	110	360	676	674	1020	1090	198	486	178	181	86
6	70	97	334	650	650	1090	1030	181	405	134	137	82
7	70	95	354	687	613	1280	990	166	367	106	101	84
8	77	93	510	839	579	1520	927	152	354	88	73	455
9	96	90	600	873	555	1700	861	139	333	75	57	923
10	160	88	580	1090	548	1820	783	127	423	66	49	1200
11	170	88	536	1460	554	1870	729	121	387	61	44	1220
12	130	89	654	1720	555	1820	671	106	316	65	42	1020
13	100	93	1030	1940	548	1750	592	100	250	72	38	745
14	90	98	1210	2210	547	1800	520	96	206	124	38	582
15	82	194	1240	2470	527	1870	468	93	274	269	39	468
16	75	607	1360	2610	499	1900	423	90	302	252	66	397
17	75	829	1520	2700	475	1850	409	85	224	187	85	311
18	88	825	1630	2680	456	1730	401	82	187	153	130	258
19	116	682	1740	2490	454	1560	387	79	164	87	431	229
20	130	575	1800	2200	455	1560	352	76	338	61	869	205
21	150	508	1750	1910	472	1790	340	75	679	53	1020	191
22	170	444	1580	1670	462	2140	323	73	765	49	1040	173
23	180	382	1390	1500	442	2440	303	72	975	45	823	157
24	170	329	1220	1360	462	2700	299	111	1060	41	632	142
25	140	288	1070	1250	747	2910	389	535	830	40	599	132
26	110	262	1040	1180	952	3010	433	1030	624	39	423	124
27	100	265	1250	1110	947	2930	472	1180	568	43	284	116
28	95	318	1370	1050	937	2710	473	1220	449	41	222	108
29	90	479	1360	993	---	2420	413	1190	319	40	179	99
30	85	594	1220	922	---	2120	340	1110	214	38	156	94
31	82	---	1040	856	---	1950	---	1040	---	37	140	---
TOTAL	3253	8992	31639	44237	17077	57185	20078	10538	14690	3178	8301	10020
MEAN	105	300	1021	1427	610	1845	669	340	490	103	268	334
MAX	180	829	1800	2700	952	3010	1640	1220	1060	269	1040	1220
MIN	68	88	334	650	442	956	299	72	164	37	36	82
CFSM	.15	.44	1.50	2.10	.90	2.71	.98	.50	.72	.15	.39	.49
IN.	.18	.49	1.73	2.42	.93	3.13	1.10	.58	.80	.17	.45	.55

CAL YR 1976 TOTAL 210767 MEAN 576 MAX 4320 MIN 29 CFSM .85 IN 11.53
WTR YR 1977 TOTAL 229188 MEAN 628 MAX 3010 MIN 36 CFSM .92 IN 12.54

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.--March to September 1977.

REMARKS.--Collection of water-quality data began March 1977.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM .7UM-MF (COL./100 ML)	TOTAL ACIDITY AS H+ (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)
SEP										
13...	1100	86	65	4.2	20.0	4.7	6400	62	.0	.0
15...	1040	18	65	4.1	21.5	4.2	2500	220	.0	.0
19...	1300	8.3	68	5.2	22.5	3.2	720	110	--	--
22...	1030	12	50	4.5	22.0	4.0	1800	120	--	--

DATE	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL ORTHO PHOSPHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
SEP										
13...	--	--	--	--	74	.10	17.2	.00	.01	8.4
15...	--	--	--	--	--	--	--	.01	.01	8.2
19...	3	0	2	30	88	.12	1.97	.01	.01	8.9
22...	10	0	8	506	74	.10	2.40	.00	.00	5.3

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE FOR SELECTED DAYS, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR				
07...	0930	117	39	12
09...	0830	151	3	1.2
15...	0840	223	4	2.4
29...	1110	80	1	.22
APR				
08...	0740	69	14	2.6
15...	0745	23	10	.62
19...	1640	16	22	.95
SEP				
13...	1100	86	66	15
15...	1040	18	9	.44
19...	1300	8.3	16	.36
22...	1030	12	13	.42

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.--March to September 1977.

REMARKS.--Collection of water-quality data began March 1977.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM .7UM-MF (COL./100 ML)	TOTAL ACIDITY AS H+ (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)
SEP										
13...	1320	243	65	4.7	21.0	4.5	4800	B30	.0	.0
15...	1115	108	68	4.1	22.0	3.9	4400	64	.0	.0
19...	1045	61	65	4.7	22.0	3.2	3700	320	--	--
22...	1140	16	52	4.7	22.0	4.0	2100	100	--	--

DATE	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL ORTHO PHOSPHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
SEP										
13...	--	--	--	--	78	.11	51.2	.00	.01	8.6
15...	--	--	--	--	76	.10	22.2	.00	.00	8.9
19...	2	0	2	64	75	.10	12.4	.01	.01	8.5
22...	6	0	5	192	83	.11	3.59	.01	.00	7.2

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE FOR SELECTED DAYS, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR				
07...	1235	200	9	4.9
09...	1025	227	3	1.8
15...	1040	291	7	5.5
29...	1415	122	3	.99
APR				
08...	0940	135	7	2.6
15...	0945	48	14	1.8
19...	1500	23	28	1.7
JUN				
20...	1600	1.4	8	.03
SEP				
13...	1320	243	6	3.9
15...	1115	108	8	2.3
19...	1045	61	17	2.8
22...	1140	16	16	.69

02107000 SOUTH RIVER NEAR PARKERSBURG, N. C.

LOCATION.--Lat 34°48'45", long 78°27'26", Bladen County, Hydrologic Unit 03030006, on right bank 5 ft (2 m) downstream from 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.--382 mi² (989 km²).

PERIOD OF RECORD.--October 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 50.38 ft (15.356 m) above mean sea level. Prior to Oct. 13, 1961, nonrecording gage at present site at datum 50.00 ft (15.240 m) lower.

REMARKS.--Records good. Suspended sediment records for the current year are published on page 353 of this report.

AVERAGE DISCHARGE.--26 years, 423 ft³/s (11.98 m³/s), 15.04 in/yr (382 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, 1,720 ft³/s (48.7 m³/s) Mar. 25, gage height, 10.91 ft (3.325 m); minimum, 4.0 ft³/s (0.11 m³/s) Aug. 14, gage height, 2.25 ft (0.686 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	31	177	545	509	437	1050	114	564	144	6.3	60
2	7.4	31	173	518	488	450	944	99	509	110	14	49
3	7.3	31	171	492	463	450	863	88	456	88	15	41
4	7.4	30	171	471	443	481	787	79	406	77	16	35
5	6.8	30	166	443	421	540	717	70	365	74	14	31
6	6.5	29	160	423	401	584	669	62	340	63	12	28
7	6.0	28	165	418	381	641	636	53	344	49	11	26
8	5.7	27	183	416	365	677	613	46	395	42	10	90
9	7.6	26	195	414	351	709	594	40	471	49	8.5	210
10	11	25	204	511	333	721	577	35	518	60	7.0	280
11	11	24	217	611	318	743	556	31	494	61	5.8	380
12	12	24	257	730	307	765	527	28	422	52	5.0	446
13	15	24	317	982	295	820	492	25	340	41	4.3	413
14	15	25	366	1340	285	878	449	23	299	36	4.2	316
15	14	44	421	1600	278	908	408	20	383	29	6.0	224
16	13	133	524	1620	269	976	368	18	299	25	13	171
17	12	171	616	1570	259	1140	332	16	227	23	11	139
18	15	180	700	1480	251	1310	300	15	170	21	23	126
19	17	186	810	1390	245	1330	268	13	133	18	113	130
20	18	194	908	1300	241	1300	236	13	135	16	178	152
21	27	198	971	1180	236	1250	207	14	173	14	229	181
22	32	194	976	1060	232	1360	189	16	209	13	292	205
23	34	178	934	934	229	1470	171	15	239	13	324	212
24	36	161	868	829	243	1600	162	26	239	12	326	196
25	35	147	787	743	301	1720	156	172	236	10	291	164
26	34	136	760	672	340	1680	152	425	236	8.9	226	132
27	33	133	721	636	351	1580	168	691	225	9.5	176	108
28	32	139	672	609	388	1470	165	906	220	8.4	139	91
29	30	166	636	582	---	1380	147	950	213	7.3	109	77
30	30	178	604	554	---	1260	130	846	186	7.0	89	67
31	30	---	575	531	---	1170	---	684	---	6.5	74	---
TOTAL	568.5	2923	15405	25604	9223	31820	13033	5633	9446	1187.6	2752.1	4780
MEAN	18.3	97.4	497	826	329	1026	434	182	315	38.3	88.8	159
MAX	36	198	976	1620	509	1720	1050	950	564	144	326	446
MIN	5.7	24	160	414	229	437	130	13	133	6.5	4.2	26
CFSM	.05	.26	1.30	2.16	.86	2.69	1.14	.48	.83	.10	.23	.42
IN.	.06	.28	1.50	2.49	.90	3.10	1.27	.55	.92	.12	.27	.47

CAL YR 1976 TOTAL 103792.5 MEAN 284 MAX 1850 MIN 1.9 CFSM .74 IN 10.11
WTR YR 1977 TOTAL 122375.2 MEAN 335 MAX 1720 MIN 4.2 CFSM .88 IN 11.92

02108000 NORTHEAST CAPE FEAR RIVER NEAR CHINQUAPIN, N. C.

LOCATION.--Lat 34°49'45", long 77°49'57", 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.--600 mi² (1,550 km²).

PERIOD OF RECORD.--July 1940 to current year.

GAGE.--Water-stage recorder. Datum of gage is 17.28 ft (5.267 m) above mean sea level (levels by Corps of Engineers).

REMARKS.--Records good except those for period of no gage-height record June 20 to July 26, which are poor. Suspended sediment records for the current year are published on page 354 of this report.

AVERAGE DISCHARGE.--37 years, 726 ft³/s (20.56 m³/s), 16.43 in/yr (417 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, 4,020 ft³/s (114 m³/s) Mar. 24, gage height, 12.38 ft (3.773 m); minimum, 13 ft³/s (0.37 m³/s) Aug. 14, 15, gage height, 1.11 ft (0.338 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	95	494	1100	673	840	734	180	1370	100	20	87
2	70	111	488	900	622	830	590	165	866	60	22	74
3	70	113	470	800	578	765	545	150	703	80	24	63
4	66	109	435	700	554	690	502	125	603	110	44	56
5	65	105	393	650	543	720	456	109	437	90	102	51
6	62	100	358	640	526	795	418	96	326	70	108	48
7	60	95	378	680	499	1060	380	86	267	60	67	49
8	57	91	546	700	469	1690	360	77	215	55	46	108
9	58	88	679	750	437	2120	340	71	175	50	33	180
10	66	83	711	900	420	2230	330	66	257	47	24	800
11	100	80	691	1200	418	2170	325	62	232	40	19	840
12	113	81	820	1800	412	2100	320	59	157	45	16	650
13	106	83	1160	2200	407	2000	300	54	124	55	14	500
14	95	90	1420	2390	405	2100	290	50	116	65	13	400
15	81	161	1500	2590	397	2200	270	46	221	75	19	320
16	70	411	1680	2730	382	2100	250	42	301	100	38	280
17	64	559	1920	2630	367	2000	240	38	203	110	67	250
18	63	608	2100	2270	354	1900	225	36	113	70	81	220
19	74	607	2160	1910	349	2000	210	33	180	45	348	190
20	89	619	2120	1580	352	2200	200	32	450	38	628	170
21	95	610	1950	1280	350	2600	190	31	700	34	669	150
22	134	553	1700	1130	340	3100	180	30	1000	31	533	140
23	140	465	1420	949	328	3500	170	30	1100	29	348	130
24	120	395	1140	859	371	3960	160	44	1150	26	304	120
25	108	348	921	866	701	3860	200	266	900	23	319	110
26	101	310	962	892	836	3400	240	1020	700	25	345	100
27	98	300	1280	889	840	2790	270	1490	500	29	365	90
28	97	323	1480	873	830	2180	250	1520	350	27	290	80
29	93	406	1500	844	---	1720	230	1640	250	26	179	75
30	88	472	1450	789	---	1330	200	1760	150	24	127	70
31	88	---	1300	727	---	967	---	1710	---	22	102	---
TOTAL	2662	8471	35626	39218	13760	61917	9375	11118	14116	1661	5314	6401
MEAN	85.9	282	1149	1265	491	1997	313	359	471	53.6	171	213
MAX	140	619	2160	2730	840	3960	734	1760	1370	110	669	840
MIN	57	80	358	640	328	690	160	30	113	22	13	48
CFSM	.14	.47	1.92	2.11	.82	3.33	.52	.60	.79	.09	.29	.36
IN.	.17	.53	2.21	2.43	.85	3.84	.58	.69	.88	.10	.33	.40

CAL YR 1976 TOTAL 233737 MEAN 639 MAX 5560 MIN 55 CFSM 1.07 IN 14.49
WTR YR 1977 TOTAL 209639 MEAN 574 MAX 3960 MIN 13 CFSM .96 IN 13.00

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.--63.8 mi² (165 km²).

PERIOD OF RECORD.--July 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 29.36 ft (8.949 m) above mean sea level. 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. Suspended sediment records for the current year are published on page 354 of this report.

AVERAGE DISCHARGE.--22 years, 97.0 ft³/s (2.747 m³/s), 20.65 in/yr (525 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,940 ft³/s (140 m³/s) Aug. 18, 1971, gage height, 12.98 ft (3.956 m); 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. 22	2000	*1000	283	*9.46	2.883

Minimum discharge, 1.6 ft³/s (0.05 m³/s) July 25, gage height, 0.86 ft (0.262 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	18	84	103	60	86	103	13	33	11	2.4	13
2	16	20	69	80	55	77	84	11	22	21	4.6	11
3	14	17	53	68	52	57	69	10	24	65	8.6	9.6
4	12	15	44	66	48	49	66	10	19	76	23	8.4
5	11	14	41	64	45	78	61	9.3	15	30	53	7.8
6	11	13	37	62	42	107	62	8.6	13	12	17	8.7
7	9.9	11	53	79	40	215	57	7.9	15	8.7	7.3	10
8	9.2	12	104	106	38	426	48	6.8	15	6.5	4.7	385
9	12	11	127	114	37	424	42	6.5	12	5.9	3.8	616
10	23	12	132	203	36	312	36	6.9	14	5.7	3.0	456
11	28	12	110	400	36	215	34	6.6	18	4.0	2.7	250
12	20	13	153	430	37	159	31	7.1	13	3.8	2.5	150
13	14	14	290	310	36	156	29	6.8	11	3.7	2.1	76
14	12	16	330	230	35	288	25	6.2	10	28	3.0	41
15	11	51	292	240	34	415	23	5.4	73	45	4.9	32
16	9.2	114	319	280	33	315	21	5.1	94	15	11	65
17	8.8	140	382	300	32	210	20	5.7	42	8.1	16	47
18	12	172	372	210	30	152	18	5.3	19	5.2	13	30
19	16	133	273	160	32	106	17	5.4	15	4.4	53	25
20	14	74	199	120	34	170	23	4.9	17	3.5	100	24
21	20	52	157	90	33	392	28	5.5	25	3.0	116	21
22	27	45	122	80	30	836	21	5.4	32	2.7	56	19
23	24	40	97	65	29	858	18	5.2	32	2.9	21	17
24	16	36	80	70	43	580	26	8.6	28	2.2	21	15
25	13	34	70	75	90	370	35	36	24	1.8	62	15
26	16	31	144	80	93	249	30	116	29	2.2	70	14
27	18	40	252	90	88	180	22	107	44	5.8	40	14
28	16	48	274	95	80	137	17	53	31	6.5	30	14
29	14	71	243	85	---	110	15	26	18	3.8	20	13
30	13	83	179	75	---	105	14	49	13	3.6	17	13
31	13	---	137	65	---	111	---	59	---	3.3	15	---
TOTAL	473.1	1362	5219	4495	1278	7945	1095	619.2	770	400.3	803.6	2420.5
MEAN	15.3	45.4	168	145	45.6	256	36.5	20.0	25.7	12.9	25.9	80.7
MAX	28	172	382	430	93	858	103	116	94	76	116	616
MIN	8.8	11	37	62	29	49	14	4.9	10	1.8	2.1	7.8
CFSM	.24	.71	2.63	2.27	.72	4.01	.57	.31	.40	.20	.41	1.27
IN.	.28	.79	3.04	2.62	.75	4.63	.64	.36	.45	.23	.47	1.41

CAL YR 1976 TOTAL 31408.9 MEAN 85.8 MAX 2470 MIN 4.6 CFSM 1.35 IN 18.31
WTR YR 1977 TOTAL 26880.7 MEAN 73.6 MAX 858 MIN 1.8 CFSM 1.15 IN 15.67

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.--11 mi² (28 km²), approximately.

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

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 27.58 ft (8.406 m) above mean sea level.

REMARKS.--Records excellent except those for period of no gage-height record, Mar. 13 to Apr. 27, which are poor. Suspended-sediment records for the current year are published on page 354 of this report. Recording rain gage at station.

EXTREMES FOR THE CURRENT PERIOD.--September 1976: Peak discharge 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)
Sept. 2	1815	*203	5.75	*5.24	1.597

Minimum discharge, 0.06 ft³/s (0.002 m³/s) Sept. 1, 2, gage height, 2.18 ft (0.664 m).

Water year 1977

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. 22	1000	170	4.81	5.90	1.798	Aug. 5	1615	187	5.30	4.82	1.469
May 25	2130	235	6.66	5.62	1.713	Sept. 8	1330	*249	7.05	*6.10	1.859
July 9	1845	191	5.41	4.85	1.478						

Minimum discharge, 0.05 ft³/s (0.001 m³/s), July 24, 25, 26, gage height, 2.16 ft (0.658m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1												.08
2												14
3												17
4												6.4
5												3.2
6												2.1
7												1.1
8												.63
9												.40
10												6.6
11												6.7
12												2.9
13												1.6
14												.97
15												19
16												15
17												5.9
18												3.5
19												2.5
20												2.0
21												11
22												15
23												7.1
24												4.2
25												2.9
26												2.1
27												2.4
28												2.0
29												1.9
30												1.7
31												---
TOTAL												161.88
MEAN												5.40
MAX												19
MIN												.08
CFSM												.49
IN.												.55

02108548 LITTLE ROCKFISH CREEK AT WALLACE, N. C.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	.40	6.0	9.7	5.3	7.5	9.0	1.2	8.9	3.2	.13	.69
2	1.2	.42	4.9	8.0	5.0	6.2	8.0	1.0	6.1	2.8	1.0	.35
3	1.2	.47	4.3	7.6	4.8	5.1	6.8	.74	4.5	1.8	.47	.27
4	.82	.44	3.9	8.0	4.8	6.0	6.0	.52	3.2	1.6	17	.20
5	.64	.40	3.4	7.3	4.7	9.4	5.8	.52	2.3	1.1	84	.14
6	.55	.40	3.2	6.9	4.2	11	6.0	.40	2.7	.58	16	.14
7	.47	.22	15	15	3.6	57	5.0	.64	2.0	.30	5.4	.89
8	.40	.23	28	15	3.5	70	4.2	.21	1.5	.17	2.6	174
9	3.2	.27	21	14	3.4	33	3.7	.19	1.4	11	1.3	151
10	2.1	.21	13	56	3.4	22	3.1	.13	.82	20	.66	55
11	2.0	.15	12	47	3.4	17	3.0	.09	.49	9.3	.34	27
12	1.2	.30	49	24	3.5	13	2.8	.09	.32	3.9	.19	14
13	.64	.27	63	18	3.6	25	2.5	.11	.25	2.9	.43	8.2
14	.49	1.4	35	20	3.6	50	2.3	.09	2.4	1.8	.22	5.5
15	.40	24	31	43	3.4	30	2.1	.11	18	1.2	1.5	13
16	.32	25	58	31	3.0	26	2.0	.10	8.2	.67	.41	103
17	1.1	10	42	20	2.5	11	1.8	.12	3.1	.34	1.2	42
18	.55	6.6	26	14	2.4	8.2	1.7	.13	1.8	.17	2.4	22
19	.61	5.3	19	11	2.6	11	1.6	.12	1.4	.11	12	13
20	.93	4.5	15	9.5	3.0	70	4.0	1.1	.82	.10	20	10
21	.67	4.2	14	8.6	3.2	66	3.4	.15	1.7	.10	10	7.9
22	.64	3.4	11	7.6	2.8	130	2.7	.38	.78	.10	5.6	4.8
23	.64	2.9	9.4	6.9	2.6	70	2.2	.12	5.5	.10	3.0	3.4
24	.64	2.5	8.3	7.6	16	45	4.0	7.5	2.6	.07	4.5	2.6
25	.86	2.3	7.8	9.8	27	25	3.5	127	3.4	.05	12	2.1
26	1.0	3.3	44	8.9	13	20	3.0	127	3.6	2.0	9.3	1.6
27	.38	5.8	44	8.3	9.4	15	2.6	38	2.2	.47	4.7	1.4
28	.32	7.3	25	7.8	9.1	13	2.0	23	1.4	.10	2.5	1.3
29	.28	10	19	7.1	---	11	1.8	14	.74	.09	1.5	.87
30	.52	8.0	14	6.2	---	10	1.5	9.3	.36	.10	1.1	.64
31	1.1	---	11	5.8	---	11	---	9.3	---	.15	.67	---
TOTAL	27.27	130.68	660.2	469.6	156.8	904.4	108.1	363.36	92.48	66.37	222.12	666.99
MEAN	.88	4.36	21.3	15.1	5.60	29.2	3.60	11.7	3.08	2.14	7.17	22.2
MAX	3.2	25	63	56	27	130	9.0	127	18	20	84	174
MIN	.28	.15	3.2	5.8	2.4	5.1	1.5	.09	.25	.05	.13	.14
CFSM	.08	.40	1.94	1.37	.51	2.66	.33	1.06	.28	.20	.65	2.02
IN.	.09	.44	2.23	1.59	.53	3.06	.37	1.23	.31	.22	.75	2.26

WTR YR 1977 TOTAL 3868.37 MEAN 10.6 MAX 174 MIN .05 CFSM .96 IN 13.08

02109500 WACCAMAW RIVER AT FREELAND, N. C.

LOCATION.--Lat 34°05'43", long 78°32'56", Brunswick County, Hydrologic Unit 03040206, on left bank 150 ft (46 m) 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.--706 mi² (1,829 km²).

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) above mean sea level. 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 354 of this report.

AVERAGE DISCHARGE.--38 years, 697 ft³/s (19.74 m³/s), 13.41 in/yr (341 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, 2,800 ft³/s (79.3 m³/s) Mar. 12, gage height, 14.00 ft (4.27 m); minimum, 21 ft³/s (0.59 m³/s) July 26, gage height, 1.43 ft (0.436 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	108	175	1170	767	531	1860	169	344	108	26	125
2	105	107	189	1130	740	540	1740	151	341	99	27	115
3	97	105	198	1080	704	540	1600	134	403	136	25	115
4	91	100	205	1040	672	545	1470	126	490	132	207	118
5	85	96	205	1020	640	618	1330	119	478	100	285	116
6	80	92	202	1020	603	728	1170	107	431	84	293	117
7	77	88	215	1030	563	943	1070	95	380	70	275	139
8	72	83	262	1060	526	1330	987	95	342	60	244	309
9	77	80	302	1090	491	1780	906	97	304	50	207	406
10	88	77	326	1130	462	2310	844	86	268	45	169	450
11	92	73	343	1130	438	2670	798	79	237	40	135	463
12	88	68	383	1110	416	2780	753	72	209	35	103	455
13	83	66	487	1090	395	2750	702	66	184	32	78	424
14	80	64	604	1060	377	2620	648	60	174	30	65	376
15	76	69	705	1050	358	2440	588	53	171	29	56	323
16	72	88	813	1060	341	2240	522	48	204	34	64	276
17	69	100	920	1090	326	2060	460	44	195	39	75	234
18	74	107	1020	1090	312	1900	403	40	197	35	67	198
19	75	109	1080	1070	300	1750	355	38	232	29	89	184
20	80	113	1110	1050	289	1630	316	39	234	28	185	198
21	110	114	1110	1000	278	1530	292	36	284	26	238	230
22	109	114	1070	952	265	1610	284	63	241	28	273	243
23	104	111	1040	917	254	1720	257	69	211	24	285	241
24	99	106	1010	859	265	1850	259	66	210	23	266	229
25	96	103	979	827	351	1960	277	110	206	22	248	209
26	103	100	995	811	422	2040	267	173	198	23	218	192
27	108	108	1050	807	475	2080	248	201	173	23	189	175
28	107	125	1120	806	509	2100	227	215	159	23	163	159
29	105	149	1180	805	---	2080	204	242	138	22	136	146
30	101	166	1200	800	---	2030	186	289	120	27	130	133
31	105	---	1200	787	---	1960	---	325	---	28	133	---
TOTAL	2820	2989	21698	30941	12539	53665	21023	3507	7758	1484	4954	7098
MEAN	91.0	99.6	700	998	448	1731	701	113	259	47.9	160	237
MAX	112	166	1200	1170	767	2780	1860	325	490	136	293	463
MIN	69	64	175	787	254	531	186	36	120	22	25	115
CFSM	.13	.14	.99	1.41	.64	2.45	.99	.16	.37	.07	.23	.34
IN.	.15	.16	1.14	1.63	.66	2.83	1.11	.18	.41	.08	.26	.37

CAL YR 1976 TOTAL 252029 MEAN 689 MAX 3400 MIN 35 CFSM .98 IN 13.28
WTR YR 1977 TOTAL 170476 MEAN 467 MAX 2780 MIN 22 CFSM .66 IN 8.98

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.--29.0 mi² (75.1 km²).

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). WSP 1723: Drainage area, 1951(M).

GAGE.--Water-stage recorder. Datum of gage is 1,211.47 ft (369.256 m) above mean sea level. 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 355 of this report.

AVERAGE DISCHARGE.--38 years, 49.3 ft³/s (1.396 m³/s), 23.09 in/yr (586 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)
Oct. 8	2200	*1260	35.7	*5.10	1.554	Apr. 24	0300	716	20.3	3.99	1.216
Mar. 13	0430	1000	28.3	4.63	1.411	Sept. 8	0200	502	14.2	3.34	1.018
Apr. 4	2400	858	24.3	4.33	1.320						

Minimum discharge, 17 ft³/s (0.48 m³/s) Aug. 1, 2, Sept. 5, 6, 7, gage height, 0.93 ft (0.283 m); minimum daily, 17 ft³/s (0.48 m³/s) Aug. 1, 2, Sept. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	48	41	28	30	44	76	56	53	29	17	19
2	23	47	39	32	30	40	69	55	40	28	17	18
3	21	45	36	36	30	38	77	54	36	26	36	18
4	20	43	35	35	30	66	127	75	34	26	21	17
5	20	41	34	36	30	65	506	67	33	25	25	17
6	19	39	45	36	25	105	210	60	34	24	35	17
7	211	38	188	37	28	92	134	60	38	24	21	36
8	644	36	91	32	27	71	104	56	31	23	19	260
9	578	36	67	32	28	60	88	51	32	22	23	71
10	175	35	58	32	28	54	78	48	29	27	20	46
11	96	34	54	26	28	52	70	47	29	35	21	36
12	72	40	56	28	30	67	65	44	30	28	23	31
13	60	35	50	30	36	504	61	43	28	26	21	28
14	52	33	46	30	32	190	59	41	38	23	35	32
15	46	34	83	30	31	113	56	40	33	23	27	30
16	43	33	77	32	29	88	53	40	79	21	22	58
17	56	32	64	28	28	73	50	38	43	21	37	44
18	44	31	58	28	28	66	49	37	45	20	49	36
19	40	31	53	28	28	59	49	36	36	19	29	36
20	45	31	54	28	28	64	48	35	33	19	25	38
21	40	30	50	32	27	56	48	34	31	19	24	30
22	38	30	45	32	26	78	44	37	30	19	25	27
23	37	29	45	32	27	65	88	58	38	22	22	26
24	37	29	42	31	55	60	276	41	36	19	27	25
25	77	29	41	31	43	56	112	40	43	19	23	24
26	84	29	45	32	37	53	85	42	35	21	21	24
27	60	37	40	31	50	51	73	41	35	19	22	23
28	52	44	40	31	49	49	66	37	33	18	22	22
29	48	69	40	29	---	51	63	37	31	19	24	21
30	48	49	37	26	---	130	59	40	29	20	20	21
31	60	---	38	28	---	97	---	38	---	18	20	---
TOTAL	2875	1117	1692	959	898	2657	2943	1428	1095	702	773	1131
MEAN	92.7	37.2	54.6	30.9	32.1	85.7	98.1	46.1	36.5	22.6	24.9	37.7
MAX	644	69	188	37	55	504	506	75	79	35	49	260
MIN	19	29	34	26	25	38	44	34	28	18	17	17
CFSM	3.20	1.28	1.88	1.07	1.11	2.96	3.38	1.59	1.26	.78	.86	1.30
IN.	3.69	1.43	2.17	1.23	1.15	3.41	3.78	1.83	1.40	.90	.99	1.45

CAL YR 1976 TOTAL 18236 MEAN 49.8 MAX 644 MIN 15 CFSM 1.72 IN 23.39
WTR YR 1977 TOTAL 18270 MEAN 50.1 MAX 644 MIN 17 CFSM 1.73 IN 23.44

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.--50.9 mi² (131.8 km²).

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,082.40 ft (329.916 m) above mean sea level.

REMARKS.--Records fair except those for period of no gage-height record, Jan. 20 to Feb. 28, which are poor. Corps of Engineers rainfall and gage-height radio telemeter at station. Suspended-sediment records for the current year are published on page 355 of this report.

AVERAGE DISCHARGE.--12 years, 105 ft³/s (2.974 m³/s), 28.01 in/yr (711 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,660 ft³/s (245 m²/s) June 15, 1969 (gage height, 8.33 ft or 2.539 m), 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 or 0.253 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Aug. 13, 1940 reached a stage of about 22 ft or 6.7 m (discharge, about 70,000 ft³/s or 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)
Oct. 8	2215	3430	97.1	5.39	1.643	Apr. 24	0400	1230	34.8	3.17	0.966
Dec. 7	0500	815	23.1	2.65	0.808	June 16	0815	822	23.3	2.66	0.811
Mar. 13	0545	*4310	122	*6.02	1.835	Sept. 8	0500	815	23.1	2.65	0.808
Apr. 5	0130	2220	62.9	4.32	1.317						

Minimum discharge, 26 ft³/s (0.74 m³/s) Sept. 7, gage height, 0.94 ft (0.287 m). Minimum daily, 28 ft³/s (0.79 m³/s) Sept. 4-6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	118	92	68	52	95	132	100	165	68	29	33
2	55	103	80	70	52	90	123	95	88	59	29	31
3	47	98	77	70	52	82	135	92	72	54	47	29
4	44	91	72	71	52	124	225	156	66	52	37	28
5	42	85	71	71	52	140	1360	135	62	50	62	28
6	40	82	81	70	52	208	472	110	60	48	73	28
7	484	80	467	70	50	180	245	100	69	46	42	45
8	1670	75	210	65	50	132	200	92	58	44	38	415
9	1550	73	140	71	52	112	163	90	58	42	57	134
10	377	73	123	76	53	95	144	88	56	42	40	85
11	191	73	110	55	54	93	135	86	52	73	67	66
12	143	81	120	55	60	120	126	84	51	60	63	52
13	117	72	110	57	70	1840	115	82	51	52	53	49
14	103	71	100	59	62	464	100	79	80	46	77	58
15	90	71	120	77	58	253	106	75	59	45	71	55
16	83	70	110	70	54	200	98	75	305	44	88	165
17	113	68	100	51	52	163	93	73	166	42	62	125
18	92	66	90	47	52	144	93	69	229	41	86	93
19	83	64	85	49	52	123	95	68	120	38	58	71
20	91	64	85	55	52	132	98	66	90	36	48	86
21	88	63	82	60	52	120	95	64	77	34	43	63
22	81	60	80	60	51	151	90	62	72	33	59	56
23	80	60	78	60	50	138	118	74	75	48	42	52
24	78	60	76	60	52	129	550	73	71	35	43	49
25	153	60	76	60	100	109	210	75	71	33	41	47
26	246	60	78	58	80	98	166	81	70	43	38	45
27	156	73	75	56	95	98	144	83	68	36	38	45
28	127	82	74	54	100	93	132	69	65	34	38	43
29	113	139	72	53	---	87	123	67	59	32	37	39
30	109	103	72	52	---	173	109	69	63	32	32	38
31	141	---	70	52	---	163	---	65	---	31	29	---
TOTAL	6867	2338	3276	1902	1663	6149	5995	2597	2648	1373	1567	2153
MEAN	222	77.9	106	61.4	59.4	198	200	83.8	88.3	44.3	50.5	71.8
MAX	1670	139	467	77	100	1840	1360	156	305	73	88	415
MIN	40	60	70	47	50	82	90	62	51	31	29	28
CFSM	4.36	1.53	2.08	1.21	1.17	3.89	3.93	1.65	1.73	.87	.99	1.41
IN.	5.02	1.71	2.39	1.39	1.22	4.49	4.38	1.90	1.94	1.00	1.15	1.57

CAL YR 1976 TOTAL 39348 MEAN 108 MAX 1670 MIN 27 CFSM 2.12 IN 28.76
WTR YR 1977 TOTAL 38528 MEAN 106 MAX 1840 MIN 28 CFSM 2.08 IN 28.16

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 400 ft (122 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.--93.9 mi² (243.2 km²).

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) above mean sea level.

REMARKS.--Records good except those for winter period, Jan. 9 to Feb. 10, which are poor. Slight diurnal fluctuation at low flow during growing season. Suspended-sediment records for the current year are published on page 355 of this report.

AVERAGE DISCHARGE.--38 years, 143 ft³/s (4.050 m³/s), 20.68 in/yr (525 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 (0.192 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)
Oct. 8	2230	3740	106	9.04	2.755	Apr. 5	0430	2710	76.7	7.55	2.301
Mar. 13	0700	*4060	115	*9.44	2.877						

Minimum discharge, 55 ft³/s (1.56 m³/s) Sept. 6, 7, gage height, 0.97 ft (0.296 m); minimum daily, 57 ft³/s (1.61 m³/s) Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	187	166	141	122	65	136	178	159	241	93	64	63
2	129	157	135	122	65	128	172	155	131	97	63	60
3	110	152	129	116	70	123	192	162	118	89	66	58
4	101	148	124	117	70	181	303	239	111	87	67	68
5	98	142	122	122	70	188	1400	216	107	85	186	59
6	96	138	130	120	70	280	415	180	117	83	82	57
7	523	137	523	122	75	234	293	168	142	81	68	94
8	2030	132	257	113	80	182	249	158	110	79	65	534
9	1850	130	189	110	85	161	221	148	113	77	69	142
10	426	130	167	115	95	149	206	144	105	78	72	99
11	263	127	158	95	107	148	194	142	101	86	64	84
12	207	143	169	90	111	150	185	139	103	126	62	76
13	179	129	157	90	125	1630	178	136	103	87	62	73
14	162	126	145	90	117	458	173	133	135	80	74	79
15	150	128	178	90	114	300	168	130	113	77	95	73
16	144	125	181	95	108	244	164	127	108	73	78	303
17	234	122	163	85	101	213	159	126	115	72	78	191
18	173	120	150	80	104	199	158	125	158	72	86	138
19	155	118	145	85	104	183	155	121	113	68	71	122
20	179	118	145	90	104	202	152	120	103	67	67	172
21	166	117	141	90	99	178	162	116	99	65	96	104
22	150	114	136	85	99	231	149	119	100	67	99	90
23	143	112	130	85	103	200	173	147	126	77	73	84
24	144	113	129	85	214	182	482	139	132	67	69	81
25	287	113	130	80	165	172	232	129	124	66	68	78
26	365	113	132	80	140	168	193	150	112	74	66	76
27	221	128	126	80	155	158	176	147	104	67	68	76
28	183	155	122	75	151	156	167	126	106	65	67	73
29	167	241	122	75	---	155	173	118	98	66	65	69
30	163	162	124	70	---	227	162	115	93	69	62	70
31	203	---	124	70	---	202	---	117	---	62	72	---
TOTAL	9588	4056	4924	2944	2966	7518	7384	4451	3541	2402	2344	3346
MEAN	309	135	159	95.0	106	243	246	144	118	77.5	75.6	112
MAX	2030	241	523	122	214	1630	1400	239	241	126	186	534
MIN	96	112	122	70	65	123	149	115	93	62	62	57
CFSM	3.29	1.44	1.69	1.01	1.13	2.59	2.62	1.53	1.26	.83	.81	1.19
IN.	3.80	1.61	1.95	1.17	1.18	2.98	2.93	1.76	1.40	.95	.93	1.33

CAL YR 1976 TOTAL 66957 MEAN 183 MAX 2030 MIN 79 CFSM 1.95 IN 26.53
WTR YR 1977 TOTAL 55464 MEAN 152 MAX 2030 MIN 57 CFSM 1.62 IN 21.97

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, 268 (revised) 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.--493 mi² (1,277 km²).

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 822: Drainage area. 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) above mean sea level. 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 good. Flow regulated by W. Kerr Scott Reservoir 5.5 mi (8.8 km) upstream since 1962 (see p. 257). Corps of Engineers gage-height radio telemeter at station. Suspended-sediment records for the current year are published on page 355 of this report.

AVERAGE DISCHARGE.--62 years (1903-8, 1920-77), 818 ft³/s (23.17 m³/s), 22.53 in/yr (572 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 or 10.52 m (present site and datum), from floodmark (discharge, 116,000 ft³/s or 3,290 m³/s) from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,380 ft³/s (265 m³/s) Oct. 8, gage height, 11.59 ft (3.533 m); minimum, 365 ft³/s (10.3 m³/s) Aug. 18, gage height, 2.18 ft (0.664 m); minimum daily, 412 ft³/s (11.7 m³/s) July 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	754	944	752	572	534	817	1260	718	1310	484	473	432
2	624	777	583	543	540	715	1070	870	910	526	477	421
3	621	669	530	567	546	666	1110	810	609	465	502	433
4	547	715	528	601	554	785	1480	1070	609	421	504	485
5	516	738	577	661	569	1100	4740	1180	566	412	654	423
6	567	644	655	638	540	1510	6270	850	585	452	533	440
7	1160	602	2640	628	526	1720	3370	878	660	456	506	507
8	4700	563	2540	617	528	1330	1750	857	565	453	520	2100
9	4540	578	1180	638	538	959	1340	891	531	463	511	589
10	4610	579	931	727	542	876	1180	726	498	467	511	571
11	5960	573	921	657	546	875	1120	712	514	479	503	529
12	5600	625	989	520	555	884	1040	658	468	521	504	510
13	2750	618	905	544	589	4670	891	622	480	473	516	509
14	903	579	780	591	570	5550	988	626	585	460	541	535
15	656	556	987	776	560	2600	902	580	669	468	513	525
16	640	532	1320	786	551	1560	874	609	684	458	448	1290
17	880	523	1190	550	537	1210	794	690	1280	459	464	884
18	908	520	917	526	542	1050	782	657	1360	460	504	1240
19	666	522	805	513	548	1080	869	560	833	461	427	1030
20	816	525	849	553	546	1080	904	576	626	470	446	835
21	827	550	854	543	532	1010	797	609	567	469	479	668
22	628	541	701	542	530	1160	733	556	523	482	484	525
23	578	520	678	539	535	1250	801	855	569	505	448	503
24	614	537	714	546	755	1090	2120	825	642	484	445	513
25	1020	544	725	556	919	967	2270	718	780	481	438	528
26	1900	537	718	549	811	919	1180	761	707	490	437	519
27	1770	586	795	608	813	787	989	781	527	475	442	516
28	955	716	723	734	879	735	840	712	555	474	441	512
29	820	1380	667	595	---	808	925	592	563	471	451	508
30	853	1420	602	567	---	1360	878	636	493	482	457	522
31	990	---	614	550	---	1880	---	623	---	468	467	---
TOTAL	49373	19713	28370	18537	16735	43003	44267	22808	20268	14589	15046	19602
MEAN	1593	657	915	598	598	1387	1476	736	676	471	485	653
MAX	5960	1420	2640	786	919	5550	6270	1180	1360	526	654	2100
MIN	516	520	528	513	526	666	733	556	468	412	427	421
(†)	+112	-5	+5	-5	+9	-3	0	+5	-5	-74	-82	+146
MEAN‡	1705	652	920	593	607	1384	1476	741	671	397	403	799
CFSM‡	3.46	1.32	1.87	1.20	1.23	2.81	2.99	1.50	1.36	.81	.82	1.62
IN‡	3.99	1.47	2.16	1.38	1.28	3.24	3.34	1.73	1.52	.93	.94	1.81

CAL YR 1976 TOTAL 341135 MEAN 932 MAX 5960 MIN 487 MEAN‡ 927 CFSM‡ 1.88 IN‡ 25.58
WTR YR 1977 TOTAL 312311 MEAN 856 MAX 6270 MIN 412 MEAN‡ 864 CFSM‡ 1.75 IN‡ 23.79

† 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°02'41", 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.--122 mi² (316 km²).

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) above mean sea level. Prior to May 1, 1964, nonrecording gage on downstream side of bridge at same site and datum.

REMARKS.--Records good except those for periods of ice effect, Jan. 9 to Feb. 10, which are poor. Suspended-sediment records for the current year are published on page 355 of this report.

AVERAGE DISCHARGE.--13 years, 192 ft³/s (5.437 m³/s), 21.37 in/yr (543 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)
Oct. 8	0500	*6180	175	*10.98	3.347	Apr. 5	0500	3800	108	8.02	2.444
Mar. 13	0600	5890	167	10.67	3.252						

Minimum discharge, 66 ft³/s (1.87 m³/s) Aug. 1, 2, gage height, 1.26 ft (0.384 m); minimum daily, 68 ft³/s (1.93 m³/s) Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	176	210	171	120	120	158	185	182	179	108	69	77
2	124	189	158	130	110	138	179	182	141	119	69	71
3	114	180	150	140	120	132	211	182	134	103	72	71
4	98	173	144	130	120	211	332	238	126	101	85	78
5	96	163	140	139	135	233	1920	231	124	101	290	69
6	93	157	151	140	130	321	545	191	136	97	94	68
7	662	154	643	140	125	303	391	194	157	92	77	93
8	3110	147	323	140	115	235	330	182	126	88	79	533
9	2730	144	241	140	120	206	294	168	129	86	81	143
10	553	144	228	150	130	189	279	165	119	86	77	104
11	336	141	219	130	157	179	264	165	117	101	74	89
12	256	158	240	120	166	183	249	159	122	152	72	82
13	225	141	207	130	179	2060	238	157	119	99	77	81
14	197	138	209	130	180	584	224	154	179	88	77	88
15	174	140	247	160	172	390	214	149	136	86	92	84
16	166	137	260	150	168	304	204	146	131	85	88	321
17	277	133	230	140	153	255	188	146	126	83	90	196
18	212	131	210	140	150	236	182	144	139	83	97	144
19	189	131	190	140	150	211	179	139	122	81	83	123
20	239	130	180	140	148	236	185	141	114	77	77	216
21	240	126	171	140	139	203	228	136	110	76	92	119
22	200	124	158	140	118	273	179	139	110	77	105	103
23	180	117	166	150	126	235	188	194	131	83	81	98
24	182	118	150	150	211	215	483	157	131	74	79	94
25	414	119	152	160	167	196	268	157	129	74	79	91
26	552	122	166	150	144	181	224	198	126	79	77	90
27	312	139	162	150	164	174	207	191	152	72	79	90
28	258	193	150	150	182	171	194	159	134	70	77	87
29	230	347	148	140	---	168	207	144	114	74	76	84
30	225	211	150	130	---	248	185	139	108	77	72	84
31	258	---	157	120	---	216	---	141	---	70	80	---
TOTAL	13078	4657	6271	4329	4099	9044	9156	5170	3921	2742	2717	3671
MEAN	422	155	202	140	146	292	305	167	131	88.5	87.6	122
MAX	3110	347	643	160	211	2060	1920	238	179	152	290	533
MIN	93	117	140	120	110	132	179	136	108	70	69	68
CFSM	3.46	1.27	1.66	1.15	1.20	2.39	2.50	1.37	1.07	.73	.72	1.00
IN.	3.99	1.42	1.91	1.32	1.25	2.76	2.79	1.58	1.20	.84	.83	1.12

CAL YR 1976 TOTAL 77932 MEAN 213 MAX 3110 MIN 72 CFSM 1.75 IN 23.76
WTR YR 1977 TOTAL 68855 MEAN 189 MAX 3110 MIN 68 CFSM 1.55 IN 20.99

02112250 YADKIN RIVER AT ELKIN, N. C.

LOCATION.--Lat 36°14'40", long 80°50'42", 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.--854 mi^2 (2,212 km^2).

PERIOD OF RECORD.--April 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 866.03 ft (263.966 m) above mean sea level. Prior to Aug. 28, 1964, nonrecording gage on upstream side of bridge at same datum.

REMARKS.--Records good except those for period of doubtful or no gage-height record, Jan. 3 to Feb. 12, May 2 to June 13, which are fair. Considerable regulation by W. Kerr Scott Reservoir (see p. 257). Corps of Engineers stage radio telemeter at station. Suspended-sediment records for the current year are published on page 356 of this report.

AVERAGE DISCHARGE.--13 years, 1,419 ft^3/s (40.19 m^3/s), 22.56 in/yr (573 mm/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,700 ft^3/s (700 m^3/s) Aug. 10, 1970, gage height, 23.52 ft (7.169 m); minimum, 338 ft^3/s (9.57 m^3/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 ft^3/s (4.87 m^3/s) was measured on Sept. 19, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,800 ft^3/s (561 m^3/s) Oct. 9, gage height, 19.70 ft (6.005 m); minimum, 597 ft^3/s (16.9 m^3/s) Sept. 5, gage height, 1.46 ft (0.445 m); minimum daily, 619 ft^3/s (17.5 m^3/s) Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1640	1630	1330	1040	884	1300	2030	1340	1280	840	640	685
2	1040	1420	1170	1040	917	1160	1590	1400	1510	871	643	634
3	934	1250	1040	1030	920	1090	1640	1330	1200	837	661	619
4	834	1220	1010	1050	940	1110	1920	1320	1030	787	687	654
5	793	1250	1010	1200	940	1600	9780	1780	970	740	1180	647
6	798	1220	1090	1150	920	2160	7760	1550	940	742	832	636
7	1160	1100	4750	1130	882	2580	5460	1470	1050	752	740	673
8	9820	1080	4360	1100	881	2140	2910	1500	990	747	724	4750
9	16300	1060	2240	1150	900	1540	2320	1400	940	744	831	1580
10	5880	1070	1700	1200	930	1350	2020	1330	910	752	757	1020
11	7010	1070	1560	1200	980	1330	1820	1290	900	773	743	903
12	6670	1100	1660	1100	1000	1330	1840	1290	800	894	730	820
13	4540	1120	1660	1050	1050	6540	1570	1200	870	805	748	797
14	2100	1070	1390	1100	1030	7390	1640	1180	1030	749	776	810
15	1360	1040	1590	1200	983	4200	1560	1170	1110	738	868	922
16	1230	1010	2210	1300	960	2470	1520	1130	1040	721	781	2100
17	1450	988	2010	1000	919	2050	1420	1170	1350	710	753	2310
18	1590	984	1720	1000	922	1690	1400	1210	1860	706	1020	1600
19	1350	975	1350	1020	930	1640	1400	1160	1390	712	739	1800
20	1500	979	1430	1030	932	1680	1570	1080	1070	695	721	1340
21	1500	974	1480	1020	912	1610	1520	1100	989	687	713	1220
22	1100	985	1260	1000	900	1750	1350	1080	913	688	878	938
23	1050	958	1220	968	910	1840	1310	1130	1010	748	738	863
24	1000	950	1230	1020	1190	1730	2600	1360	1020	709	771	858
25	3000	950	1240	1010	1450	1480	3420	1300	1120	681	704	844
26	2900	937	1270	1010	1340	1440	1970	1270	1180	685	686	842
27	1500	1030	1280	995	1240	1340	1690	1400	1000	676	682	836
28	1350	1190	1270	1080	1370	1250	1480	1280	1000	654	680	824
29	1420	2270	1210	981	---	1250	1490	1170	968	651	676	804
30	1410	2350	1100	913	---	1780	1550	1180	890	676	684	800
31	1630	---	1110	959	---	2570	---	1110	---	667	713	---
TOTAL	85859	35230	49950	33046	28132	64390	71550	39680	32330	22837	23499	34129
MEAN	2770	1174	1611	1066	1005	2077	2385	1280	1078	737	758	1138
MAX	16300	2350	4750	1300	1450	7390	9780	1780	1860	894	1180	4750
MIN	793	937	1010	913	881	1090	1310	1080	800	651	640	619
(†)	+112	-5	+5	-5	+9	-3	0	+5	-5	-74	-82	+146
MEAN‡	2882	1169	1616	1061	1014	2074	2385	1285	1073	663	676	1284
CFSM‡	3.37	1.37	1.89	1.24	1.19	2.43	2.79	1.50	1.26	.78	.79	1.50
IN‡	3.88	1.53	2.18	1.43	1.24	2.80	3.11	1.73	1.41	.90	.91	1.67

CAL YR 1976 TOTAL 535153 MEAN 1462 MAX 16300 MIN 692 MEAN‡ 1457 CFSM‡ 1.71 IN‡ 23.19
WTR YR 1977 TOTAL 520632 MEAN 1426 MAX 16300 MIN 619 MEAN‡ 1434 CFSM‡ 1.68 IN‡ 22.79

† 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.--Lat 36°18'58", long 80°48'36", Surry County, Hydrologic Unit 03040101, on right bank 18 ft (5 m) upstream from bridge 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.--80.4 mi² (208.2 km²).

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) above mean sea level. Prior to Aug. 29, 1964, nonrecording gage at same site and datum.

REMARKS.--Records good except those for period of ice effect, Jan. 11 to Feb. 10, and those for period of no gage-height record, Mar. 14 to June 5, which are poor. Suspended-sediment records for the current year are published on page 356 of this report.

AVERAGE DISCHARGE.--13 years, 128 ft³/s (3.625 m³/s), 21.62 in/yr (549 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,450 ft³/s (183 m³/s) Aug. 30, 1964 (gage height, 14.85 ft or 4.526 m); minimum, 35 ft³/s (0.99 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 or 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)
Oct. 9	0630	*2430	68.8	*6.66	2.030	Apr. 5	Unknown	2100	59.5	6.01	1.832
Mar. 13	0700	2220	62.9	6.23	1.899						

Minimum discharge, 36 ft³/s (1.02 m³/s) Aug. 3, Sept. 6, 7, gage height, 1.78 ft (0.543 m). Minimum daily, 37 ft³/s (1.05 m³/s) Aug. 2, Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	150	130	95	90	102	100	120	90	63	38	50
2	97	136	121	100	85	97	100	120	82	72	37	43
3	88	133	111	111	85	95	110	120	74	62	42	40
4	81	131	107	107	96	118	125	130	71	58	44	41
5	73	125	105	111	95	130	830	130	68	57	58	39
6	75	120	115	110	90	168	309	120	85	55	46	37
7	151	119	577	110	90	149	225	120	96	54	41	63
8	1220	116	212	106	90	128	190	120	78	52	50	269
9	1490	113	162	109	90	120	180	100	81	50	51	103
10	353	102	145	119	90	114	170	96	77	49	54	69
11	219	104	138	85	91	114	165	96	73	82	43	56
12	175	116	149	80	92	118	160	94	73	69	42	49
13	153	112	137	90	105	890	155	92	72	59	41	47
14	129	109	128	100	98	325	150	90	88	54	43	49
15	126	110	155	110	95	220	145	88	92	51	45	51
16	122	111	160	120	91	170	140	86	82	48	55	133
17	172	107	142	100	88	150	130	84	77	48	52	110
18	139	107	133	90	88	140	120	82	79	48	55	78
19	128	104	130	100	88	130	120	79	75	47	48	66
20	184	101	131	100	88	145	120	76	72	46	44	89
21	168	102	127	100	86	130	130	76	67	46	47	66
22	143	101	118	100	85	155	120	76	65	43	70	57
23	131	99	119	100	86	130	110	77	75	46	52	55
24	132	91	115	120	140	120	220	79	78	44	50	54
25	303	91	114	120	120	115	160	86	81	43	47	52
26	395	91	124	100	105	110	135	110	80	45	45	57
27	207	103	118	106	113	105	130	110	82	42	45	54
28	173	150	116	100	111	100	125	95	87	40	45	50
29	162	265	114	95	---	100	130	86	73	41	43	47
30	153	159	109	95	---	110	125	86	67	43	42	46
31	175	---	112	95	---	110	---	81	---	40	41	---
TOTAL	7438	3578	4474	3184	2671	4908	5129	3005	2340	1597	1456	2020
MEAN	240	119	144	103	95.4	158	171	96.9	78.0	51.5	47.0	67.3
MAX	1490	265	577	120	140	890	830	130	96	82	70	269
MIN	73	91	105	80	85	95	100	76	65	40	37	37
CFSM	2.99	1.48	1.79	1.28	1.19	1.97	2.13	1.21	.97	.64	.58	.84
IN.	3.44	1.66	2.07	1.47	1.24	2.27	2.37	1.39	1.08	.74	.67	.93

CAL YR 1976 TOTAL 48765 MEAN 133 MAX 1490 MIN 51 CFSM 1.65 IN 22.56
WTR YR 1977 TOTAL 41800 MEAN 115 MAX 1490 MIN 37 CFSM 1.43 IN 19.34

02113000 FISHER RIVER NEAR COPELAND, N. C.

LOCATION.--Lat 36°20'27", long 80°40'20", 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.--121 mi² (313 km²).

PERIOD OR RECORD.--October 1931 to current year.

REVISED RECORDS.--WSP 822: Drainage area. WSP 1303: 1933(M).

GAGE.--Water-stage recorder. Altitude of gage is 913 ft or 278 m (by barometer). Prior to Sept. 5, 1936, non-recording gage at same site and datum.

REMARKS.--Records fair. Suspended-sediment records for the current year are published on page 356 of this report.

AVERAGE DISCHARGE.--46 years, 181 ft³/s (5.126 m³/s), 20.31 in/yr (516 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,300 ft³/s (773 m³/s) Aug. 14, 1940 (gage height, 18.4 ft or 5.61 m, from floodmarks) from rating curve extended above 6,200 ft³/s (176 m³/s) on basis of slope-area measurement of peak flow; 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)
Oct. 9	0500	*6370	180	*11.07	3.374	Mar. 13	1100	3380	95.7	7.61	2.320
Dec. 7	0730	2550	72.2	6.57	2.003	Apr. 5	0730	3760	106	8.09	2.466

Minimum discharge, 30 ft³/s (0.85 m³/s) Aug. 2, 3, gage height, 1.92 ft (0.585 m). Minimum daily, 33 ft³/s (0.93 m³/s) Aug. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	155	204	179	130	130	147	160	169	116	74	35	63
2	115	181	163	130	130	141	159	165	103	79	33	61
3	100	172	154	130	130	136	177	162	95	73	33	51
4	92	166	145	141	130	156	206	180	91	66	39	60
5	90	157	141	147	150	222	1900	186	88	65	46	50
6	88	151	148	150	130	265	477	163	89	60	42	46
7	97	148	1210	149	110	243	324	169	109	58	40	70
8	1630	143	375	142	110	194	279	167	90	54	38	474
9	3620	140	254	145	110	175	250	141	92	52	40	163
10	525	141	218	166	140	164	234	135	88	51	45	102
11	294	137	203	100	160	162	220	134	83	70	40	82
12	231	148	220	120	150	156	208	132	83	76	46	70
13	198	140	205	140	153	1570	199	129	81	79	48	67
14	174	135	183	160	143	504	194	126	125	55	55	69
15	158	137	211	170	136	319	187	123	107	49	65	77
16	152	135	243	150	129	261	183	120	94	46	78	204
17	247	130	205	145	121	228	177	117	90	43	66	194
18	189	128	188	150	127	213	172	114	96	43	73	115
19	162	125	177	145	126	196	169	110	86	44	65	93
20	283	126	177	150	126	217	165	107	79	44	56	152
21	261	124	175	155	119	195	206	106	76	42	54	98
22	196	121	156	155	118	229	177	105	73	38	79	82
23	173	119	165	169	121	207	170	107	90	42	65	76
24	169	118	153	173	196	187	408	109	98	42	70	74
25	396	119	151	177	199	177	234	121	101	39	58	72
26	738	118	162	169	157	171	195	144	98	42	55	111
27	288	133	154	163	161	167	183	142	86	39	57	83
28	232	213	150	165	170	164	174	120	107	35	56	73
29	204	486	150	145	---	163	187	109	85	37	53	67
30	191	237	140	130	---	188	172	109	78	42	49	66
31	238	---	147	130	---	181	---	105	---	40	50	---
TOTAL	11686	4732	6702	4591	3882	7698	8146	4126	2777	1619	1629	3065
MEAN	377	158	216	148	139	248	272	133	92.6	52.2	52.5	102
MAX	3620	486	1210	177	199	1570	1900	186	125	79	79	474
MIN	88	118	140	100	110	136	159	105	73	35	33	46
CFSM	3.12	1.31	1.79	1.22	1.15	2.05	2.25	1.10	.77	.43	.43	.84
IN.	3.59	1.45	2.06	1.41	1.19	2.37	2.50	1.27	.85	.50	.50	.94

CAL YR 1976 TOTAL 71545 MEAN 195 MAX 3620 MIN 56 CFSM 1.61 IN 22.00
WTR YR 1977 TOTAL 60653 MEAN 166 MAX 3620 MIN 33 CFSM 1.37 IN 18.65

02113500 YADKIN RIVER AT SILOAM, N. C.

LOCATION.--Lat 35°16'42", long 80°33'18", 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 (54 km) upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--1220 mi² (3,160 km²).

PERIOD OF RECORD.--October 1976 to September 1977.

GAGE.--Water-stage recorder. Datum of gage is 782.02 ft (238.360 m) above mean sea level (North Carolina Department of Transporation bench mark). Prior to February 22, 1977, nonrecording gage at same site and datum.

REMARKS.--Records fair. Some regulation by W. Kerr scott Reservoir (see p. 257). Suspended-sediment records for the current year are published on page 356 of this report.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 14 or 15, 1940 reached a stage of 816.7 ft (248.93 m) above mean sea level, 34.7 ft (10.58 m) gage datum, from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30,500 ft³/s (864 m³/s) Oct. 9, gage height, 21.37 ft (6.514 m) from floodmarks; minimum, 732 ft³/s (20.7 m³/s) Sept. 6, gage height, 3.32 ft (1.012 m); minimum daily, 764 ft³/s (21.6 m³/s) Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2060	2110	2800	1360	1120	1600	2850	1800	1550	1090	858	855
2	1450	1840	2100	1240	1240	1500	2180	1750	2070	1130	853	821
3	1270	1700	1800	1380	1250	1410	2160	1830	1470	1090	857	791
4	1200	1590	1700	1420	1270	1410	2470	1820	1280	1020	919	797
5	1100	1550	1600	1470	1190	1900	15200	2400	1230	970	1280	823
6	1100	1620	1500	1490	1200	2390	9400	1990	1230	967	1230	764
7	1130	1550	8800	1450	1180	3220	7180	1840	1400	991	997	809
8	12400	1510	6100	1420	1140	2660	4190	1910	1310	1000	941	5820
9	23300	1450	3100	1560	1200	2030	3180	1810	1250	1010	1120	2900
10	7740	1410	2400	1570	1260	1710	2690	1640	1210	1080	1060	1360
11	7500	1410	1840	1380	1250	1650	2430	1560	1170	1020	1010	1150
12	7350	1410	2120	1230	1270	1690	2370	1560	1160	1150	1000	1030
13	5350	1510	2150	1300	1420	7530	2120	1490	1160	1160	1050	966
14	2800	1460	1790	1420	1360	9060	2070	1460	1390	1020	1070	965
15	1730	1460	2030	1500	1290	5760	2060	1450	1450	943	1130	1150
16	1570	1440	2740	1700	1260	3480	2000	1390	1380	911	1320	1760
17	1660	1340	2580	1300	1260	2830	1860	1430	1390	886	1240	3790
18	1900	1320	2150	1200	1250	2340	1800	1480	2050	880	1440	2060
19	1900	1320	1800	1210	1250	2190	1760	1410	1790	892	1210	1970
20	1810	1310	1900	1250	1200	2220	1930	1340	1410	884	1020	1600
21	1780	1320	1820	1250	1190	2220	1980	1350	1260	900	1010	1470
22	1600	1320	1710	1250	1200	2250	1800	1340	1180	855	1170	1180
23	1400	1290	1600	1250	1200	2490	1720	1410	1240	899	1100	1060
24	1350	1260	1620	1250	1340	2340	3040	1700	1290	892	1100	1020
25	2500	1250	1620	1250	1960	2040	4000	1620	1380	850	1030	1010
26	3400	1290	1660	1230	1700	1970	2660	1580	1470	843	958	1020
27	3720	1360	1660	1320	1520	1890	2170	1710	1320	870	938	1020
28	2280	1550	1630	1410	1690	1760	1940	1580	1340	861	924	978
29	2060	3200	1590	1340	---	1730	1880	1420	1250	866	892	947
30	1910	3700	1480	1290	---	2070	2010	1440	1170	895	879	939
31	2340	---	1450	1210	---	3010	---	1380	---	905	843	---
TOTAL	110660	47850	70840	41900	36660	82350	95100	49890	41250	29730	32449	42825
MEAN	3570	1595	2285	1352	1309	2656	3170	1609	1375	959	1047	1428
MAX	23300	3700	8800	1700	1960	9060	15200	2400	2070	1160	1440	5820
MIN	1100	1250	1450	1200	1120	1410	1720	1340	1160	843	843	764
(†)	+112	-5	+5	-5	+9	-3	0	+5	-5	-74	-82	+146

WTR YR 1977 TOTAL 681504 MEAN 1867 MAX 23300 MIN 764 MEAN‡ 1875 CFSM‡ 1.54 IN‡ 20.90

† 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) above mean sea level.

REMARKS.--Records good except those for January and February, which are poor. Suspended-sediment records for the current year are published on page 357 of this report.

AVERAGE DISCHARGE.--13 years, 299 ft³/s (8.468 m³/s), 17.58 in/yr (447 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft³/s (306 m³/s) June 21, 1972 (gage height, 14.72 ft or 4.487 m); minimum, 20 ft³/s (0.57 m³/s) Aug. 17, 18, Oct. 7, 8, 1966 (gage height, 0.65 ft or 0.198 m), result of regulation; minimum daily, 55 ft³/s (1.56 m³/s) Aug. 2, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1904, 21.4 ft (6.52 m) June 14, 1947 (result of failure of dams upstream, discharge about 31,000 ft³/s or 878 m³/s), 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)
Oct. 9	0700	*7320	207	*11.24	3.426	Mar. 13	1100	3720	105	6.61	2.015
Oct. 26	0200	3040	86.1	5.63	1.716	Apr. 5	0600	4950	140	8.36	2.548
Dec. 7	0800	3610	102	6.44	1.963						

Minimum discharge, 52 ft³/s (1.47 m³/s) Aug. 1, 2, 3, 8, gage height, 0.83 ft (0.253 m). Minimum daily, 55 ft³/s (1.56 m³/s) Aug. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	253	347	322	172	180	226	259	261	195	122	57	98
2	185	312	293	212	198	218	258	267	167	119	55	90
3	163	303	272	253	194	210	287	260	154	111	94	88
4	152	293	255	232	202	245	356	280	145	102	84	165
5	147	277	248	238	225	311	2850	263	141	103	74	94
6	146	266	269	228	168	427	809	253	145	94	88	86
7	157	261	1900	232	148	380	537	236	197	91	67	104
8	1850	255	609	210	144	300	449	252	148	84	63	609
9	5060	248	399	221	168	273	388	212	148	80	130	253
10	918	247	339	252	189	255	360	205	143	79	148	163
11	528	239	326	202	212	252	341	205	134	202	104	132
12	417	261	382	194	219	248	340	205	132	156	249	111
13	337	243	343	202	234	1730	326	198	131	159	317	111
14	300	236	300	236	227	802	321	191	204	105	187	116
15	268	241	355	275	212	496	303	187	192	88	319	116
16	259	235	386	252	200	406	291	183	151	80	168	226
17	420	227	327	175	172	350	278	183	154	75	281	245
18	334	226	300	202	180	334	276	182	151	92	203	213
19	277	218	285	207	189	304	282	174	135	101	143	146
20	499	217	295	207	193	351	284	170	125	82	119	195
21	468	213	300	198	180	304	312	162	123	74	106	144
22	331	211	257	198	179	390	284	159	115	67	172	122
23	288	207	265	198	185	331	270	170	142	74	281	117
24	286	206	250	206	307	295	696	165	151	65	153	114
25	674	207	244	208	305	278	379	183	171	67	123	111
26	1410	206	270	207	233	265	302	223	155	78	112	181
27	535	232	254	207	242	258	279	216	138	65	110	129
28	418	419	244	198	260	260	266	180	185	60	109	116
29	363	915	243	194	---	260	290	163	174	60	103	107
30	335	439	221	160	---	313	266	196	136	65	96	104
31	429	---	237	164	---	297	---	174	---	65	97	---
TOTAL	18207	8407	10990	6540	5745	11369	12939	6358	4582	2865	4412	4606
MEAN	587	280	355	211	205	367	431	205	153	92.4	142	154
MAX	5060	915	1900	275	307	1730	2850	280	204	202	319	609
MIN	146	206	221	160	144	210	258	159	115	60	55	86
CFSM	2.54	1.21	1.54	.91	.89	1.59	1.87	.89	.66	.40	.61	.67
IN.	2.93	1.35	1.77	1.05	.93	1.83	2.08	1.02	.74	.46	.71	.74

CAL YR 1976 TOTAL 117563 MEAN 321 MAX 5060 MIN 94 CFSM 1.39 IN 18.93
WTR YR 1977 TOTAL 97020 MEAN 266 MAX 5060 MIN 55 CFSM 1.15 IN 15.62

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.--43.8 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) above mean sea level (North Carolina State Highway Commission bench mark).

REMARKS.--Records fair. A Soil Conservation Service flood-control dam on upstream tributary (drainage area 4.7 mi² or 12.2 km²) with flood storage of 695 acre-ft (857,000 m³) was completed on June 21, 1977. On Sept. 30, 1977, reservoir permanent pool was half full. Suspended-sediment records for the current year are published on page 357 of this report.

AVERAGE DISCHARGE.--17 years, 45.6 ft³/s (1.291 m³/s), 14.47 in/yr (368 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,880 ft³/s (251 m³/s) Mar. 30, 1975, gage height, 19.60 ft (5.974 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)
Oct. 9	0700	*2390	67.7	*7.10	2.164
Dec. 7	0530	1820	51.5	5.62	1.713
Apr. 5	0600	2100	59.5	6.38	1.945

Minimum discharge, 1.3 ft³/s (0.037 m³/s) Aug. 2; minimum daily, 1.6 ft³/s (0.045 m³/s) Aug. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	37	41	21	22	24	24	20	28	7.0	2.3	5.2
2	21	30	33	28	22	23	24	20	16	7.6	1.6	5.2
3	16	27	28	23	23	22	25	19	13	5.3	13	4.9
4	13	26	26	23	26	27	35	19	12	4.5	4.9	5.5
5	12	23	24	24	26	28	836	23	11	5.0	3.9	4.9
6	12	23	26	23	23	68	117	26	11	4.5	3.9	4.9
7	12	23	578	25	22	56	57	29	16	3.9	3.3	32
8	75	21	196	23	22	37	44	24	11	3.4	3.3	210
9	860	21	84	24	23	32	36	18	13	3.4	6.0	42
10	118	21	53	30	25	29	32	16	11	5.1	3.9	19
11	35	20	43	29	27	28	29	16	10	3.3	12	13
12	27	21	49	23	25	27	27	15	10	14	18	10
13	23	20	47	24	37	36	26	15	9.9	7.1	13	9.9
14	20	20	39	28	30	31	24	14	53	5.7	14	9.9
15	18	21	46	36	26	26	23	14	20	5.3	8.8	21
16	17	20	63	32	24	25	22	14	14	5.1	12	16
17	19	19	47	31	22	23	21	14	13	4.9	15	17
18	18	19	39	29	22	23	21	13	12	4.7	17	12
19	17	19	35	27	26	22	174	12	11	4.6	10	11
20	51	19	45	28	22	25	36	12	9.9	4.0	7.7	9.9
21	36	19	55	27	20	23	33	11	8.8	3.5	7.7	9.4
22	24	18	39	26	20	34	26	11	7.4	2.8	16	8.8
23	21	18	36	26	21	30	26	13	11	3.0	8.2	9.4
24	22	18	31	27	32	26	42	13	12	2.9	8.2	9.4
25	145	18	33	28	31	24	32	16	13	2.8	6.6	9.4
26	107	18	42	28	26	23	26	21	20	2.6	6.0	9.4
27	46	23	33	29	28	22	24	15	11	2.6	6.6	9.9
28	33	112	32	26	27	23	21	12	9.8	2.6	6.0	9.9
29	29	236	29	23	---	23	23	10	9.8	2.6	5.5	8.8
30	29	68	27	22	---	32	21	64	8.0	3.3	5.2	8.8
31	56	---	27	22	---	27	---	18	---	2.6	5.2	---
TOTAL	1960	998	1926	815	700	899	1907	557	415.6	139.7	254.8	556.5
MEAN	63.2	33.3	62.1	26.3	25.0	29.0	63.6	18.0	13.9	4.51	8.22	18.6
MAX	860	236	578	36	37	68	836	64	53	14	18	210
MIN	12	18	24	21	20	22	21	10	7.4	2.6	1.6	4.9
CFSM	1.48	.78	1.45	.61	.58	.68	1.49	.42	.33	.11	.19	.44
IN.	1.70	.87	1.67	.71	.61	.78	1.66	.48	.36	.12	.22	.48

CAL YR 1976 TOTAL 11883.8 MEAN 32.5 MAX 860 MIN 5.3 CFSM .76 IN 10.33
WTR YR 1977 TOTAL 11128.6 MEAN 30.5 MAX 860 MIN 1.6 CFSM .71 IN 9.67

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.--1,680 mi² (4,350 km²), approximately.

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) above mean sea level, unadjusted. Prior to Nov. 6, 1968, nonrecording gage on downstream side of bridge at same site and datum.

REMARKS.--Records fair. Some regulation by W. Kerr Scott Reservoir (see p. 257). Corps of Engineers stage radio telemeter at station. Suspended-sediment records for the current year are published on page 357 of this report.

AVERAGE DISCHARGE.--13 years, 2,546 ft³/s (72.10 m³/s), 20.58 in/yr (523 mm/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 73,300 ft³/s (2,080 m³/s) June 21, 1972, gage height, 27.83 ft (8.483 m); 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) above mean sea level 35.8 ft (10.91 m), gage datum, from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharge. 44,700 ft³/s (1,270 m³/s) Oct. 9, gage height, 24.45 ft (7.452 m); minimum, 898 ft³/s (25.4 m³/s) Aug. 2, 3, gage height, 2.95 ft (0.899 m); minimum daily, 903 ft³/s (25.6 m³/s) Aug. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3380	2730	3070	1870	1600	2080	3350	2340	1720	1230	914	1020
2	2130	2310	2300	1700	1600	1940	2670	2220	2380	1250	903	997
3	1710	2160	2040	1860	1590	1810	2580	2280	1820	1240	910	954
4	1550	2010	1890	1890	1630	1800	2850	2240	1500	1120	980	969
5	1390	1970	1840	1900	1740	2320	19600	2800	1440	1070	1040	1000
6	1300	1920	1860	1990	1610	2910	11900	2660	1410	1040	1460	943
7	1340	1850	11300	1970	1500	4090	8850	2300	1610	1040	1040	961
8	10200	1770	8250	1930	1470	3430	5330	2550	1620	1020	953	6230
9	34700	1690	4930	1890	1490	2770	3930	2200	1460	1020	1070	5140
10	15600	1710	3220	2110	1570	2310	3370	2120	1430	1120	1140	1920
11	8240	1690	2780	1930	1640	2150	3070	1990	1330	1070	1050	1510
12	8030	1690	2770	1790	1660	2160	2930	1960	1300	1250	1160	1290
13	6630	1790	2950	1810	1780	6980	2760	1910	1290	1510	1250	1170
14	3680	1710	2590	1920	1840	11000	2580	1830	1600	1170	1190	1160
15	2150	1680	2510	2100	1710	7080	2600	1800	1830	1050	1400	1430
16	1870	1670	3560	2260	1640	4370	2510	1710	1640	1020	1520	1570
17	1930	1600	3360	1900	1550	3370	2410	1720	1530	990	1490	4600
18	2490	1570	2930	1600	1510	2900	2300	1780	2130	968	1550	2560
19	2140	1560	2550	1600	1530	2670	2460	1740	2190	995	1530	2260
20	2130	1540	2430	1600	1560	2670	2450	1660	1650	977	1090	2030
21	3000	1540	2610	1600	1510	2780	2540	1600	1400	957	1060	1920
22	2340	1510	2350	1650	1480	2760	2440	1600	1310	936	1200	1510
23	1970	1500	2170	1650	1490	3140	2260	1590	1320	952	1410	1270
24	1840	1470	2120	1650	1620	2860	3370	1960	1490	998	1260	1190
25	2000	1470	2090	1700	2540	2600	4780	1940	1560	950	1150	1180
26	7460	1470	2230	1750	2200	2410	3640	1880	1700	940	1050	1190
27	4750	1540	2210	1800	2020	2320	2740	2130	1620	955	1020	1300
28	3490	1940	2190	1740	2170	2230	2490	1920	1540	923	1030	1160
29	2550	5660	2110	1750	---	2170	2390	1730	1500	910	1010	1120
30	2330	4430	2000	1550	---	2410	2490	1960	1410	922	993	1100
31	2640	---	1920	1550	---	3330	---	1680	---	943	996	---
TOTAL	146960	59150	93130	56010	47250	99820	119640	61800	47730	32536	35819	52654
MEAN	4741	1972	3004	1807	1688	3220	3988	1994	1591	1050	1155	1755
MAX	34700	5660	11300	2260	2540	11000	19600	2800	2380	1510	1550	6230
MIN	1300	1470	1840	1550	1470	1800	2260	1590	1290	910	903	943
(†)	+112	-5	+5	-5	+9	-3	0	+5	-5	-74	-82	+146

CAL YR 1976 TOTAL 941958 MEAN 2574 MAX 34700 MIN 966 MEAN‡ 2569 CFSM‡ 1.53 IN‡ 20.83
WTR YR 1977 TOTAL 852499 MEAN 2336 MAX 34700 MIN 903 MEAN‡ 2344 CFSM‡ 1.40 IN‡ 19.00

† 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.--Lat 36°02'16", long 80°18'18", 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.--64.4 mi^2/s (166.8 km^2).

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) above mean sea level.

REMARKS.--Records good. Flow regulated by Salem Lake in the headwaters. The city of Winston-Salem diverted an average of 22.3 ft^3/s (0.63 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. Suspended-sediment records for the current year are published on page 357 of this report.

AVERAGE DISCHARGE.--6 years, 73.3 ft^3/s (2.076 m^3/s), 15.46 in/yr (393 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 or 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, 3,250 ft^3/s (92.0 m^3/s) Sept. 8, gage height, 14.47 ft (4.410 m); minimum, 11 ft^3/s (0.31 m^3/s) Sept. 4, gage height, 1.63 ft (0.497 m); minimum daily, 12 ft^3/s (0.34 m^3/s) Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	31	30	34	27	35	30	25	31	19	15	18
2	27	28	28	32	27	32	29	26	23	18	27	16
3	21	27	27	32	27	30	45	27	22	16	25	13
4	20	26	26	37	29	59	62	28	20	14	18	12
5	19	25	25	40	29	34	739	26	19	16	17	13
6	21	24	29	34	28	146	240	26	81	18	14	14
7	24	23	640	63	26	62	81	26	31	17	14	22
8	395	23	154	33	26	40	58	27	24	16	65	1540
9	1030	23	58	33	26	35	48	23	27	57	61	185
10	64	23	43	122	27	33	44	24	21	36	19	56
11	38	22	48	42	27	39	41	24	20	212	25	48
12	31	27	84	36	28	32	37	24	19	31	18	28
13	30	22	46	32	51	70	34	24	20	24	27	28
14	28	23	36	67	30	32	31	23	31	21	34	29
15	26	30	154	51	28	31	31	21	26	20	17	25
16	25	24	68	38	27	31	31	22	22	17	24	68
17	51	23	43	33	26	29	27	23	21	15	25	34
18	33	22	38	34	28	29	27	23	20	16	58	23
19	30	22	33	34	29	28	257	22	18	18	22	24
20	372	22	99	33	28	53	83	172	18	18	17	23
21	52	21	53	31	26	30	47	26	19	36	39	22
22	33	21	35	30	25	82	36	22	20	21	18	21
23	28	22	33	28	27	34	33	26	31	17	18	22
24	28	22	31	27	88	31	57	27	22	14	70	20
25	128	21	48	36	33	29	36	27	26	15	22	19
26	64	22	96	31	30	28	31	35	32	17	19	22
27	32	42	38	32	135	28	29	25	25	17	17	21
28	28	185	36	32	51	30	27	23	23	15	15	20
29	27	110	35	30	---	30	39	20	24	16	16	20
30	49	36	32	30	---	101	27	28	19	15	17	20
31	93	---	36	27	---	35	---	23	---	13	17	---
TOTAL	2883	992	2182	1194	989	1338	2337	918	755	815	810	2426
MEAN	93.0	33.1	70.4	38.5	35.3	43.2	77.9	29.6	25.2	26.3	26.1	80.9
MAX	1030	185	640	122	135	146	739	172	81	212	70	1540
MIN	19	21	25	27	25	28	27	20	18	13	14	12

CAL YR 1976 TOTAL 16085 MEAN 43.9 MAX 1030 MIN 13
WTR YR 1977 TOTAL 17639 MEAN 48.3 MAX 1540 MIN 12

02115860 MUDDY CREEK NEAR MUDDY CREEK, N. C.

LOCATION.--Lat 36°00'01", long 80°20'25", Forsyth County, Hydrologic Unit 03040101, on right bank 100 ft (30 m) upstream from bridge on Secondary Road 2995, 0.2 mi (0.3 km) downstream from Salem Creek, and 1.8 mi (2.9 km) east of community of Muddy Creek.

DRAINAGE AREA.--178 mi² (461 km²).

PERIOD OF RECORD.--July 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 682.67 ft (208.078 m) above mean sea level.

REMARKS.--Records fair. Records on falling stages, following peaks above 14 ft (4.27 m), may be affected by backwater and are subject to error. Some regulation by Salem Lake and considerable diurnal fluctuation from sewage effluent and waste water. The city of Winston-Salem diverted an average of 22.3 ft³/s (0.63 m³/s) from Salem Lake in the basin and 30.8 ft³/s (0.87 m³/s) from the Yadkin River for water supply. An average of about 35.4 ft³/s (1.00 m³/s) sewage effluent was returned to Salem Creek 3.5 mi (5.6 km) above the station. The creek channel was dredged in 1935-36 by the Work Projects Administration. Suspended-sediment records for the current year are published on page 357 of this report.

AVERAGE DISCHARGE.--13 years, 224 ft³/s (6.344 m³/s), 17.09 in/yr (434 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,500 ft³/s (411 m³/s) June 22, 1972 (gage height, 21.26 ft or 6.480 m); minimum, 21 ft³/s (0.59 m³/s) Oct. 6, 1968 (gage height, 1.26 ft or 0.384 m); minimum daily, 35 ft³/s (0.99 m³/s) Oct. 6, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1957 reached a stage of about 23 ft (7.01 m), from information by local resident.

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)
Oct. 9	0930	4570	129	15.96	4.865	Apr. 5	0730	3380	95.7	14.21	4.331
Dec. 7	0600	3520	99.7	14.45	4.404	Sept. 8	1730	*4840	137	*16.27	4.959

Minimum discharge, 51 ft³/s (1.44 m³/s) Sept. 3, gage height, 1.70 ft (0.518 m). Minimum daily, 59 ft³/s (1.67 m³/s) Sept. 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	234	156	163	132	131	184	145	110	135	86	65	77
2	133	142	147	126	133	167	139	115	119	81	73	74
3	93	133	137	137	134	161	156	119	109	69	99	63
4	89	132	128	142	142	210	196	120	101	65	82	59
5	92	125	116	149	149	192	2360	119	90	70	76	59
6	93	116	123	146	126	491	751	114	134	74	70	66
7	97	109	2250	184	122	378	294	108	134	74	65	80
8	565	111	758	156	125	232	228	121	102	72	73	3010
9	3860	118	518	150	129	194	189	104	108	101	183	1690
10	1240	119	293	366	135	178	171	105	102	171	82	260
11	246	119	269	214	138	184	157	105	93	285	141	185
12	182	124	367	168	138	163	153	105	87	107	83	141
13	158	112	308	165	201	212	150	105	93	99	84	129
14	142	104	196	222	163	158	143	100	116	90	92	127
15	129	121	453	259	149	153	139	91	116	85	72	121
16	119	124	433	213	142	149	139	94	103	77	89	170
17	130	115	247	150	135	144	125	100	100	70	85	158
18	124	113	195	167	135	141	128	100	95	72	144	112
19	118	114	171	156	137	133	380	101	83	76	95	113
20	745	107	258	155	128	165	223	311	87	75	77	111
21	306	99	325	147	127	136	159	111	90	85	128	106
22	170	103	188	144	129	251	143	93	91	88	94	101
23	140	110	174	129	130	174	138	103	112	75	86	100
24	125	108	162	139	286	149	170	107	102	62	159	94
25	229	101	147	153	205	142	162	113	103	67	93	85
26	376	98	368	149	161	135	136	130	104	73	84	91
27	182	138	201	150	325	127	128	119	105	73	78	98
28	154	347	176	158	265	131	126	102	99	69	70	95
29	142	619	165	134	---	136	143	90	106	71	72	93
30	134	223	146	123	---	268	120	371	94	69	75	93
31	291	---	146	134	---	170	---	144	---	60	76	---
TOTAL	10838	4360	9728	5117	4420	5808	7791	3830	3113	2691	2845	7761
MEAN	350	145	314	165	158	187	260	124	104	86.8	91.8	259
MAX	3860	619	2250	366	325	491	2360	371	135	285	183	3010
MIN	89	98	116	123	122	127	120	90	83	60	65	59

CAL YR 1976 TOTAL 66349 MEAN 181 MAX 3860 MIN 64
WTR YR 1977 TOTAL 68302 MEAN 187 MAX 3860 MIN 59

02115900 SOUTH FORK MUDDY CREEK NEAR CLEMMONS, N. C.

LOCATION.--Lat 36°00'22", long 80°18'07", Forsyth County, Hydrologic Unit 03040101, on right bank 5 ft (1.5 m) upstream from bridge on Secondary Road 2902, 1.9 mi (3.1 km) downstream from Leak Creek, and 4.2 mi (6.8 km) southeast of Clemmons.

DRAINAGE AREA.--42.2 mi² (109.3 km²).

PERIOD OF RECORD.--July 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 684 ft (208.5 m), from topographic map.

REMARKS.--Records good. Creek channel improvement by dredging was done in 1915-16 by the county and in 1934-35 by Work Projects Administration. Suspended-sediment records for the current year are published on page 358 of this report.

AVERAGE DISCHARGE.--13 years, 43.7 ft³/s (1.238 m³/s), 14.06 in/yr (357 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,980 ft³/s (84.4 m³/s) Aug. 10, 1970, gage height, 16.30 ft (4.968 m); minimum, 3.8 ft³/s (0.11 m³/s) Oct. 3, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--In the period 1930-64, three floods equalled or exceeded 15 ft (4.57 m). The highest was about 16.3 ft (4.97 m) on Aug. 13, 1959 as a result of dam failure (from information by local resident).

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)
Oct. 9	1430	*1110	31.4	*11.91	3.630	Apr. 5	1130	906	25.7	10.74	3.274
Dec. 7	0730	732	20.7	9.60	2.926	Sept. 8	2130	860	24.4	10.47	3.191

Minimum discharge, 6.8 ft³/s (0.19 m³/s) Sept. 6, 7, gage height, 2.52 ft (0.768 m); minimum daily, 6.9 ft³/s (0.20 m³/s) Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	27	27	27	21	41	29	21	20	12	8.1	9.0
2	12	24	25	26	20	34	28	21	17	12	8.1	8.5
3	12	23	23	26	22	31	31	21	16	11	9.5	8.1
4	12	22	22	26	24	36	40	22	16	11	10	7.8
5	11	21	21	27	25	34	620	22	15	10	8.5	7.4
6	11	20	21	27	22	78	126	20	27	9.8	7.9	7.1
7	11	20	431	32	21	76	62	19	29	9.0	7.9	6.9
8	111	19	157	28	22	46	47	19	17	8.3	9.2	546
9	926	19	84	29	22	38	39	18	16	8.7	9.8	261
10	124	19	53	90	22	34	35	18	15	29	8.2	42
11	43	19	46	50	23	34	33	18	15	135	9.1	33
12	30	20	74	40	24	32	31	18	15	46	8.2	20
13	24	19	64	31	39	49	30	17	14	18	7.9	18
14	24	19	42	40	29	35	28	17	14	15	11	18
15	22	20	96	51	26	32	27	17	15	14	8.2	16
16	21	20	101	42	25	30	27	16	14	13	11	21
17	22	19	55	30	23	28	25	17	14	12	11	24
18	18	19	41	31	23	28	24	16	14	11	14	17
19	17	18	36	28	23	26	65	16	13	11	12	16
20	276	19	53	28	24	32	48	66	13	10	11	15
21	97	18	60	26	22	27	30	21	12	9.7	12	14
22	40	18	37	26	22	44	27	18	12	11	11	14
23	29	17	35	26	22	32	25	20	15	10	11	14
24	26	18	32	25	40	29	28	18	14	9.6	14	14
25	40	18	32	27	33	27	25	19	16	8.8	12	13
26	68	18	73	26	28	26	23	21	17	9.3	11	13
27	32	22	43	27	92	26	22	20	14	8.8	11	13
28	26	44	37	28	80	26	22	19	14	8.1	11	13
29	24	85	34	23	---	25	23	17	13	8.4	10	12
30	24	36	30	26	---	48	21	18	12	9.8	10	14
31	43	---	31	23	---	34	---	18	---	8.2	9.6	---
TOTAL	2190	700	1916	992	819	1118	1641	628	468	507.5	313.2	1235.8
MEAN	70.6	23.3	61.8	32.0	29.3	36.1	54.7	20.3	15.6	16.4	10.1	41.2
MAX	926	85	431	90	92	78	620	66	29	135	14	546
MIN	11	17	21	23	20	25	21	16	12	8.1	7.9	6.9
CFSM	1.67	.55	1.46	.76	.69	.85	1.29	.48	.37	.39	.24	.97
IN.	1.93	.62	1.68	.87	.72	.98	1.44	.55	.41	.45	.28	1.09

CAL YR 1976 TOTAL 12001.8 MEAN 32.8 MAX 926 MIN 8.8 CFSM .78 IN 10.55
WTR YR 1977 TOTAL 12528.5 MEAN 34.3 MAX 926 MIN 6.9 CFSM .81 IN 11.02

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) above mean sea level (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. 257). Corps of Engineers stage radio telemeter at station.

AVERAGE DISCHARGE.--49 years, 2,952 ft³/s (83.60 m³/s), 17.58 in/yr (447 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, 36,300 ft³/s (1,030 m³/s) Oct. 10, gage height, 23.11 ft (7.044 m); minimum, (result of regulation), 490 ft³/s (13.9 m³/s) Aug. 5, gage height, 0.25 ft (0.076 m); minimum daily, 894 ft³/s (25.3 m³/s) Aug. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3290	3380	4030	2260	2060	2650	3750	2580	1940	1450	997	1070
2	2780	3040	2810	2070	1970	2450	3240	2390	2210	1360	894	1130
3	1940	2710	2450	2130	2050	2280	2870	2430	2320	1400	962	1010
4	1670	2520	2260	2250	2060	2210	3110	2440	1780	1330	951	908
5	1570	2430	2170	2230	2170	2480	12900	2550	1590	1230	991	1020
6	1490	2380	2140	2290	2180	3320	22900	3000	1520	1150	1300	1070
7	1480	2330	10500	2340	1950	4850	11200	2520	1810	1170	1320	905
8	3650	2210	13800	2340	1870	4340	7010	2620	1820	1150	1200	7110
9	22500	2160	7550	2250	1910	3600	4790	2470	1620	1100	1120	13300
10	33700	2140	4400	2730	1950	2920	4030	2320	1610	1270	1260	3650
11	16200	2130	3510	2600	2040	2680	3600	2150	1540	1540	1310	2310
12	8480	2130	3430	1970	2050	2640	3320	2080	1370	1380	1180	1750
13	7560	2160	3740	1980	2210	2990	3230	2060	1490	1510	1190	1520
14	5250	2150	3310	2270	2310	11900	2920	1960	1500	1550	1420	1450
15	3320	2120	3290	2700	2190	8710	2930	1910	2140	1240	1310	1510
16	2470	2130	4610	2870	2080	5590	2830	1880	1960	1130	1610	1990
17	2300	2070	4290	2320	2010	4060	2730	1820	1770	1020	1630	4060
18	2770	2030	3640	1800	1930	3580	2590	1800	1770	1070	1800	3670
19	2740	1990	3190	1900	1930	3170	2880	1870	2400	1030	1970	2660
20	3330	1970	2840	1890	1980	3140	2870	2130	2060	1100	1360	2540
21	3940	1970	3440	2020	1970	3210	2820	1790	1640	1000	1260	2120
22	3280	1940	2950	2090	1920	3350	2780	1720	1430	1000	1230	1960
23	2640	1950	2600	2060	1860	3600	2540	1690	1370	1010	1360	1510
24	2380	1900	2530	2090	2070	3290	2660	1820	1540	1040	1460	1360
25	2430	1880	2440	2190	2640	2990	4640	2130	1620	1090	1350	1360
26	6170	1900	2880	2220	2790	2710	4430	2060	1800	982	1190	1340
27	6250	1950	2790	2220	2650	2620	3090	2150	1840	949	1090	1410
28	4610	2220	2600	2270	2880	2510	2780	2140	1630	1020	1080	1370
29	3300	5470	2550	2110	---	2430	2590	2010	1660	983	1190	1300
30	2910	5610	2390	1850	---	2860	2590	2310	1580	901	1000	1270
31	3180	---	2300	1870	---	3450	---	2150	---	953	1060	---
TOTAL	169580	72970	117430	68180	59680	112580	136620	66950	52330	36108	39045	69633
MEAN	5470	2432	3788	2199	2131	3632	4554	2160	1744	1165	1260	2321
MAX	33700	5610	13800	2870	2880	11900	22900	3000	2400	1550	1970	13300
MIN	1480	1880	2140	1800	1860	2210	2540	1690	1370	901	894	905
(†)	+112	-5	+5	-5	+9	-3	0	+5	-5	-74	-82	+146

CAL YR 1976 TOTAL 1069680 MEAN 2923 MAX 33700 MIN 1170 MEAN‡ 2918 CFSM‡ 1.28 IN‡ 17.42
WTR YR 1977 TOTAL 1001106 MEAN 2743 MAX 33700 MIN 894 MEAN‡ 2751 CFSM‡ 1.21 IN‡ 16.42

† 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

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 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.--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, 113 micromhos June 7; minimum daily, 36 micromhos Mar. 15.
WATER TEMPERATURES: Maximum daily, 29.0°C July 9, 20, 21; minimum daily, 0.0°C on several days during January and February.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,240 mg/L Mar. 14; minimum daily mean, 7 mg/L Nov. 27, Jan. 2, 30.
SEDIMENT LOADS: Maximum daily, 56,300 tons (51,100 tonnes) Oct. 9; minimum daily, 35 tons (32 tonnes) Jan. 30.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
OCT										
10...	1315	36000	43	6.0	16.5	230	8.4	11	5	2.8
FEB										
10...	1130	1940	73	6.6	2.0	10	13.7	18	0	4.6
JUN										
16...	0730	2010	69	6.4	23.0	750	6.6	8	0	1.2
JUL										
27...	1230	950	94	6.2	24.0	10	7.7	18	0	4.8

DATE	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT										
10...	1.0	1.4	17	.2	3.2	7	0	6	11	6.3
FEB										
10...	1.6	6.7	41	.7	2.3	25	0	21	10	4.8
JUN										
16...	1.3	6.2	52	.9	3.1	18	0	15	11	5.2
JUL										
27...	1.4	10	51	1.0	2.8	23	0	19	23	6.5

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)
OCT										
10...	2.1	.1	5.3	20	26	.03	1940	.42	.06	.48
FEB										
10...	5.2	.1	14	51	54	.07	267	.29	.01	.30
JUN										
16...	4.8	.1	12	57	43	.08	309	.63	.11	.74
JUL										
27...	8.2	.1	11	69	56	.09	177	.49	.35	.84

DATE	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE IN BOT. MAT. (MG/KG)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA (NH4) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	DIS-SOLVED ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	SUS-PENDED KJEL. NITRO-GEN (N) (MG/L)	DIS-SOLVED KJEL. NITRO-GEN (N) (MG/L)
OCT										
10...	.47	--	.10	.02	.03	.84	.32	.94	.60	.34
FEB										
10...	.31	.0	.32	.32	.41	.33	.19	.65	.14	.51
JUN										
16...	.69	--	.38	.21	.27	1.2	.24	1.6	1.2	.45
JUL										
27...	.91	5.9	.34	.25	.32	.61	.12	.95	.58	.37

DATE	TOTAL KJEL. NITRO-GEN IN BOTTOM MAT. (MG/KG)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED-PHOS-PHORUS (P) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (P04) (MG/L)	TOTAL PHOS-PHORUS IN BOT-TOM MA-TERIAL (MG/KG)
OCT									
10...	--	1.4	6.3	.29	.01	.12	.01	.03	--
FEB									
10...	16000	.95	4.2	.15	.11	.11	.10	.31	210
JUN									
16...	--	2.3	10	.55	.12	.25	.10	.31	--
JUL									
27...	3200	1.8	7.9	.76	.51	.64	.59	1.8	480

DATE	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL CHRO-MIUM IN BOTTOM MA-TERIAL (UG/G)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL COPPER IN BOTTOM MA-TERIAL (UG/G)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL IRON IN BOTTOM MA-TERIAL (UG/G)	TOTAL LEAD (PB) (UG/L)
OCT												
10...	30	20	10	--	9	0	9	--	11000	70	--	14
FEB												
10...	<10	<10	0	40	2	0	2	<10	560	130	13000	2
JUN												
16...	20	20	0	--	12	10	2	--	22000	80	--	17
JUL												
27...	10	10	0	<10	3	3	0	<10	1300	90	3100	6

DATE	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL LEAD IN BOTTOM MA-TERIAL (UG/G)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ZINC IN BOTTOM MA-TERIAL (UG/G)	TOTAL ORGANIC CARBON (C) (MG/L)	DIS-SOL-VED ORGANIC CARBON (C) (MG/L)	ORGANIC CARBON IN BOT-TOM MA-TERIAL (C) (G/KG)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
OCT											
10...	8	6	--	90	80	10	--	7.5	5.1	--	.10
FEB											
10...	2	0	<10	0	0	0	30	10	5.2	2.1	.00
JUN											
16...	13	4	--	20	20	0	--	9.8	4.5	--	.00
JUL											
27...	6	0	<10	0	0	0	100	4.5	2.7	11	.00

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Feb. 10	1130	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	10	1	
		Chlamydomonas	16	2	
		Sphaecrocystis	10	1	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Achnanthes	5	1	
		Asterionella	5	1	
		Cocconeis	5	1	
		Cyclotella	37	4	
		Cymbella	21	2	
		Diatoma	21	2	
		Eunotia	5	1	
		Fragilaria	21	2	
		Gomphonema	21	2	
		Navicula	99	12	
		Nitzschia	21	2	
		Rhoicosphenia	5	1	
		Surirella	57	7	
		Synedra	42	5	
		Chrysophyceae			
		Dinobryon	10	1	
		CYANOPHYTA			
		Myxophyceae			
		Lyngbya	73	9	
		Oscillatoria	340	41	
		EUGLENOPHYTA			
		Euglenophyceae			
		Trachelomonas	10	1	
		TOTAL	840		
June 16	0730	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Coelastrum	180	22	
		Cosmarium	9	1	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Achnanthes	18	2	
		Caloneis	27	3	
		Cocconeis	18	2	
		Cymbella	55	7	
		Diatoma	37	4	
		Fragilaria	18	2	
		Frustulia	9	1	
		Gomphonema	46	6	
		Melosira	27	3	
		Meridion	9	1	
		Navicula	170	21	
		Nitzschia	37	4	
		Pinnularia	64	8	
		Surirella	37	4	
		Synedra	55	7	
		TOTAL	820		

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	54	48	48	59	56	55	60	66	76	92	85
2	53	51	49	48	63	59	54	59	71	82	98	88
3	58	54	53	49	63	64	55	65	68	84	92	92
4	61	61	55	50	65	65	54	65	70	79	91	98
5	61	61	55	51	69	63	72	64	74	69	98	88
6	68	61	53	55	65	60	46	61	73	71	95	87
7	73	60	64	55	61	54	48	63	113	67	85	86
8	75	58	49	80	61	51	44	65	71	72	80	72
9	42	56	46	59	64	51	50	57	74	84	80	55
10	42	57	47	56	64	55	49	59	80	87	73	60
11	50	63	50	64	66	64	47	71	78	70	73	65
12	44	63	55	55	67	64	49	69	86	74	80	64
13	40	66	51	61	67	60	49	72	86	76	93	74
14	44	61	47	62	60	39	55	73	80	78	86	79
15	46	50	51	112	61	36	57	73	68	90	69	77
16	54	60	55	65	62	43	57	69	71	88	67	77
17	59	58	51	58	65	48	60	65	73	93	71	81
18	57	58	50	66	65	52	57	66	78	88	73	77
19	52	58	51	69	68	53	58	72	71	87	75	59
20	54	59	49	71	69	56	63	73	59	92	73	63
21	60	57	50	67	62	50	59	71	61	88	83	65
22	57	54	49	61	59	52	64	72	69	96	73	68
23	57	53	51	62	63	52	65	68	79	90	82	73
24	57	55	53	59	67	56	71	69	85	93	79	85
25	57	60	50	59	69	58	53	69	83	90	95	83
26	62	57	51	71	64	56	45	72	81	86	80	77
27	48	53	46	71	62	62	50	74	69	98	97	77
28	48	49	46	66	60	59	56	75	74	100	88	75
29	50	51	48	69	---	58	63	70	71	94	79	81
30	56	46	48	65	---	60	60	64	70	102	82	85
31	62	---	48	66	---	59	---	65	---	96	85	---
MEAN	56	57	51	63	64	55	56	67	75	85	83	77

WTR YR 1977 MEAN 66 MAX 113 MIN 36

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	9.0	5.0	0.0	0.0	7.0	15.0	16.0	22.0	26.0	25.0	26.0
2	17.0	9.0	4.0	0.0	1.0	6.0	16.0	16.0	23.0	26.0	25.0	26.0
3	17.0	8.0	4.0	0.0	1.0	6.0	16.0	17.0	22.0	25.0	25.0	25.0
4	18.0	8.0	3.0	1.0	1.0	8.0	17.0	19.0	22.0	25.0	24.0	26.0
5	18.0	7.0	3.0	3.0	3.0	9.0	15.0	19.0	23.0	26.0	25.0	26.0
6	17.0	6.0	3.0	3.0	0.0	9.0	12.0	19.0	24.0	28.0	26.0	26.0
7	19.0	7.0	4.0	3.0	1.0	9.0	15.0	21.0	23.0	28.0	26.0	26.0
8	20.0	6.0	4.0	2.0	1.0	8.0	13.0	20.0	20.0	28.0	26.0	24.0
9	18.0	5.0	4.0	3.0	1.0	8.0	14.0	18.0	20.0	29.0	27.0	22.0
10	16.0	6.0	4.0	1.0	1.0	8.0	13.0	17.0	20.0	28.0	27.0	21.0
11	15.0	6.0	4.0	1.0	2.0	10.0	14.0	16.0	20.0	28.0	27.0	22.0
12	15.0	7.0	5.0	2.0	3.0	11.0	15.0	19.0	21.0	27.0	27.0	21.0
13	15.0	6.0	6.0	2.0	5.0	15.0	16.0	17.0	23.0	28.0	27.0	21.0
14	16.0	6.0	4.0	0.0	5.0	12.0	17.0	19.0	24.0	28.0	28.0	22.0
15	14.0	5.0	5.0	0.0	4.0	12.0	17.0	20.0	24.0	28.0	27.0	23.0
16	15.0	5.0	6.0	1.0	4.0	12.0	18.0	21.0	24.0	28.0	26.0	23.0
17	15.0	5.0	6.0	2.0	3.0	12.0	17.0	21.0	24.0	28.0	27.0	22.0
18	15.0	5.0	5.0	2.0	2.0	12.0	17.0	22.0	25.0	28.0	25.0	21.0
19	13.0	6.0	5.0	2.0	1.0	12.0	19.0	22.0	25.0	28.0	24.0	23.0
20	13.0	7.0	6.0	2.0	3.0	12.0	19.0	23.0	25.0	29.0	24.0	24.0
21	13.0	7.0	4.0	2.0	3.0	11.0	19.0	22.0	25.0	29.0	24.0	23.0
22	9.0	6.0	4.0	2.0	4.0	11.0	20.0	23.0	25.0	28.0	24.0	22.0
23	9.0	4.0	3.0	2.0	4.0	11.0	20.0	23.0	24.0	26.0	26.0	21.0
24	11.0	4.0	3.0	1.0	8.0	9.0	20.0	23.0	23.0	25.0	25.0	22.0
25	12.0	4.0	2.0	2.0	8.0	10.0	18.0	22.0	23.0	25.0	24.0	22.0
26	13.0	4.0	2.0	1.0	9.0	12.0	16.0	21.0	24.0	26.0	24.0	23.0
27	12.0	6.0	2.0	0.0	11.0	12.0	14.0	21.0	24.0	24.0	24.0	22.0
28	9.0	7.0	3.0	0.0	8.0	14.0	14.0	21.0	26.0	24.0	24.0	21.0
29	8.0	10.0	3.0	0.0	---	14.0	15.0	23.0	25.0	24.0	24.0	22.0
30	8.0	6.0	2.0	1.0	---	15.0	16.0	24.0	26.0	24.0	25.0	20.0
31	9.0	---	3.0	0.0	---	16.0	---	23.0	---	24.0	25.0	---
MEAN	14.0	6.0	4.0	1.5	3.5	10.5	16.0	20.5	23.5	26.5	25.5	23.0

WTR YR 1977 MEAN 14.5 MAX 29.0 MIN 0.0

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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	270	2400	105	958	213	2320	15	92	10	56	65	465
2	213	1600	61	501	81	615	7	39	10	53	30	198
3	110	576	30	220	88	582	14	81	10	55	26	160
4	78	352	22	150	68	415	15	91	10	56	24	143
5	48	203	25	164	26	152	15	90	20	117	38	254
6	40	161	37	238	19	110	15	93	30	177	128	1150
7	36	144	20	126	1180	40900	15	95	25	132	256	3350
8	272	6500	20	119	621	23100	22	139	25	126	156	1830
9	995	56300	15	87	400	8150	18	109	27	139	105	1020
10	300	27300	15	87	320	3800	48	354	20	105	65	512
11	225	9840	16	92	168	1590	64	449	16	88	42	304
12	280	6410	19	109	114	1060	60	319	17	94	46	328
13	300	6120	18	105	158	1600	55	294	25	149	72	581
14	160	2270	21	122	158	1410	138	846	29	181	1240	41100
15	120	1080	20	114	200	1780	78	569	25	148	480	11300
16	98	654	15	86	348	4330	40	310	19	107	350	5280
17	71	441	14	78	141	1630	38	238	16	87	215	2360
18	85	636	15	82	95	934	35	170	15	78	141	1360
19	90	666	14	75	105	904	35	180	15	78	105	899
20	172	1550	15	80	79	606	36	184	15	80	82	695
21	271	2880	11	59	91	845	35	191	10	53	75	650
22	170	1510	11	58	50	398	32	181	10	52	82	742
23	70	499	10	53	35	246	33	184	10	50	109	1060
24	45	289	11	56	41	280	40	226	35	196	110	977
25	54	354	10	51	25	165	55	325	91	649	75	605
26	622	12500	10	51	75	583	20	120	70	527	65	476
27	455	7680	7	37	46	347	20	120	79	565	53	375
28	294	3660	28	168	31	218	20	123	140	1090	48	325
29	110	980	433	7210	25	172	10	57	---	---	50	328
30	55	432	251	3800	25	161	7	35	---	---	85	656
31	88	756	---	---	20	124	10	50	---	---	100	931
TOTAL	---	156743	---	15136	---	99527	---	6354	---	5288	---	80414
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	115	1160	55	383	146	765	36	141	20	54	32	92
2	95	831	55	355	95	567	39	143	20	48	36	110
3	65	504	58	381	120	752	31	117	22	57	30	82
4	70	588	50	329	81	389	31	111	22	56	28	69
5	968	41500	68	468	55	236	24	80	30	80	26	72
6	658	41300	89	721	52	213	20	62	30	105	25	72
7	410	12400	95	646	90	440	16	51	35	125	18	44
8	320	6060	95	672	80	393	16	50	49	159	873	20700
9	300	3880	77	514	60	262	20	59	59	178	880	31600
10	270	2940	80	501	50	217	55	189	65	221	461	4540
11	145	1410	61	354	46	191	51	212	100	354	190	1190
12	110	986	46	258	45	166	60	224	60	191	100	472
13	90	785	40	222	34	137	80	326	61	196	70	287
14	80	631	40	212	54	219	75	314	119	456	80	313
15	80	633	35	180	510	2950	65	218	160	566	53	216
16	80	611	35	178	350	1850	60	183	158	687	80	430
17	75	553	35	172	105	502	38	105	200	880	405	5380
18	58	406	41	199	87	416	31	90	258	1250	351	3480
19	80	622	30	151	109	706	33	92	198	1050	210	1510
20	110	852	90	518	90	501	33	98	150	551	168	1150
21	110	838	110	532	60	266	30	81	85	289	90	515
22	90	676	40	186	50	193	30	81	74	246	76	402
23	69	473	35	160	37	137	30	82	80	294	81	330
24	91	654	31	152	40	166	28	79	85	335	51	187
25	300	3760	51	293	20	87	25	74	90	328	40	147
26	231	2760	55	306	50	243	38	101	89	286	35	127
27	120	1000	52	302	54	268	40	102	60	177	35	133
28	100	751	55	318	41	180	27	74	52	152	35	129
29	70	490	56	304	50	224	26	69	57	183	40	140
30	56	392	185	1150	45	192	19	46	42	113	38	130
31	---	---	255	1480	---	---	20	51	38	109	---	---
TOTAL	---	130446	---	12597	---	13828	---	3705	---	9776	---	74049

TOTAL LOAD FOR YEAR: 607863 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 YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)
OCT									
19...	1350	2800	45	6.9	10.0	10.1	26	1.4	1300
NOV									
23...	1420	1960	30	6.6	7.0	12.2	19	2.9	810
DEC									
13...	1350	3730	25	6.6	7.0	11.5	31	.5	280
JAN									
25...	1240	2210	40	7.1	2.5	12.1	<10	1.0	<10
FEB									
15...	1515	2210	30	6.9	7.0	12.5	<10	1.8	10
MAR									
23...	1240	3650	40	6.5	10.0	9.8	15	1.5	20
APR									
20...	1215	2760	80	6.8	20.5	8.1	36	3.7	3500
MAY									
26...	1315	2000	180	--	21.0	7.6	13	2.3	400
JUL									
06...	1156	1190	80	--	29.0	6.9	<10	.9	70
12...	1536	1380	75	6.6	30.0	5.8	23	2.6	100000
AUG									
09...	1410	1300	--	--	29.0	10.9	29	3.9	1700
SEP									
27...	--	1400	--	--	24.0	6.8	16	.7	90000

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 or 212 m (from topographic map).

REMARKS.--Records fair except those for April, May, June, 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. Suspended sediment records for the current year are published on page 358 of this report.

AVERAGE DISCHARGE.--9 years, 1.12 ft³/s (0.0317 m³/s), 14.49 in/yr (368 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 365 ft³/s (10.3 m³/s) May 30, 1975 (gage height, 6.65 ft or 2.027 m), 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; minimum, 0.02 ft³/s (0.001 m³/s) July 31, Aug. 6, 7, 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)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 9	0515	*185	5.24	*5.08	1.548	Apr. 5	0515	86	2.44	2.65	0.808
Dec. 7	0345	75	2.12	2.50	0.762	Sept. 8	0845	138	3.91	4.07	1.241

Minimum discharge, 0.02 ft³/s (0.001 m³/s) July 31, Aug. 6, 7. Minimum daily, 0.09 ft³/s (0.003 m³/s) July 25, 31, Aug. 1, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	.72	.79	.70	.56	1.2	.80	.58	.42	.23	.09	.15
2	.34	.61	.69	.67	.57	.96	.69	.58	.40	.22	.12	.15
3	.26	.55	.61	.69	.55	.87	1.6	.58	.40	.20	.16	.14
4	.24	.52	.56	.69	.66	1.1	1.8	.56	.40	.19	.14	.15
5	.23	.50	.53	.70	.62	.95	18	.56	.38	.17	.11	.16
6	.23	.47	.61	.70	.56	2.0	2.6	.56	.42	.16	.09	.15
7	.27	.47	15	.87	.55	2.2	1.6	.54	.40	.15	.18	.18
8	3.0	.43	2.7	.71	.54	1.4	1.3	.53	.36	.15	.25	24
9	35	.42	1.7	1.0	.54	1.1	1.2	.52	.36	.15	.19	2.8
10	1.4	.42	1.3	2.7	.54	.95	1.1	.50	.37	.16	.16	.95
11	.74	.43	1.1	1.4	.58	1.0	1.0	.50	.36	.18	.18	.55
12	.57	.47	2.1	1.0	.62	.94	.94	.48	.42	.16	.17	.40
13	.48	.41	1.5	.96	.97	1.5	.90	.47	.38	.17	.19	.36
14	.41	.45	1.1	1.2	.68	1.0	.85	.46	.40	.15	.22	.42
15	.38	.62	5.2	1.3	.64	.92	.80	.45	.38	.13	1.1	.39
16	.36	.56	3.1	1.1	.83	.84	.78	.44	.36	.12	.61	.49
17	.40	.55	1.8	.80	.64	.79	.76	.44	.36	.12	1.1	.46
18	.37	.60	1.2	.73	.59	.78	.73	.44	.36	.11	.56	.38
19	.36	.58	.98	.72	.63	.71	.70	.44	.37	.11	.26	.33
20	1.6	.52	1.5	.72	.60	.94	.67	.56	.40	.13	.21	.31
21	.74	.52	1.4	.72	.58	.82	.64	.45	.30	.13	.19	.28
22	.46	.49	.99	.72	.57	1.3	.62	.43	.35	.13	.18	.27
23	.36	.49	.90	.72	.56	.94	.60	.42	.45	.11	.23	.27
24	.40	.46	.79	.72	1.2	.82	.60	.58	.40	.10	.28	.27
25	.77	.44	.85	.71	.81	.78	.70	.54	.40	.09	.21	.26
26	1.1	.41	1.7	.68	.72	.72	.68	.53	.33	.13	.20	.26
27	.72	.50	1.1	.77	2.2	.70	.65	.53	.30	.10	.20	.26
28	.58	1.2	1.0	.73	1.9	.68	.64	.48	.24	.10	.18	.24
29	.54	1.8	.88	.65	---	.53	.62	.45	.23	.12	.17	.23
30	.59	1.0	.80	.59	---	2.3	.60	.43	.22	.12	.16	.24
31	1.1	---	.80	.58	---	1.2	---	.43	---	.09	.16	---
TOTAL	54.33	17.61	55.28	26.95	21.01	32.94	45.17	15.46	10.92	4.38	8.25	35.50
MEAN	1.75	.59	1.78	.87	.75	1.06	1.51	.50	.36	.14	.27	1.18
MAX	35	1.8	15	2.7	2.2	2.3	18	.58	.45	.23	1.1	24
MIN	.23	.41	.53	.58	.54	.53	.60	.42	.22	.09	.09	.14
CFSM	1.67	.56	1.70	.83	.71	1.01	1.44	.48	.34	.13	.26	1.12
IN.	1.92	.62	1.96	.95	.74	1.17	1.60	.55	.39	.16	.29	1.26

CAL YR 1976 TOTAL 293.96 MEAN .80 MAX 35 MIN .12 CFSM .76 IN 10.41
WTR YR 1977 TOTAL 327.80 MEAN .90 MAX 35 MIN .09 CFSM .86 IN 11.60

02118000 SOUTH YADKIN RIVER NEAR MOCKSVILLE, N. C.

LOCATION.--Lat 35°50'39", long 80°39'38", 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.--313 mi² (811 km²).

PERIOD OF RECORD.--October 1938 to current year.

GAGE.--Water-stage recorder. Datum of gage is 663.6 ft (202.265 m) above mean sea level.

REMARKS.--Records good except those in January and February, which are fair. The city of Statesville diverted an average of 7.7 ft³/s (0.22 m³/s) for water supply and waste-treatment dilution. The Alexander Water Corporation withdraws an average of 1.3 ft³/s (0.037 m³/s) for water supply. Suspended-sediment records for the current year are published on page 358 of this report.

AVERAGE DISCHARGE.--39 years, 337 ft³/s (9.544 m³/s), 14.62 in/yr (371 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,800 ft³/s (334 m³/s) Oct. 17, 1964 (gage height, 18.23 ft or 5.557 m); 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. 10	1500	*5840	165	*13.93	4.246	Sept. 10	0200	3390	96.0	10.65	3.246
Apr. 6	1800	3330	94.3	10.55	3.216						

Minimum discharge, 68 ft³/s (1.93 m³/s) Aug. 2, 3, gage height, 1.59 ft (0.485 m). Minimum daily, 68 ft³/s (1.93 m³/s) Aug. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	687	292	414	276	210	273	516	229	254	129	80	87
2	342	247	323	258	215	247	400	222	248	121	68	85
3	238	229	284	260	217	237	388	221	181	135	70	82
4	191	232	260	266	253	247	426	230	154	119	80	79
5	169	221	253	263	242	314	1830	225	144	108	84	77
6	159	211	247	268	234	384	2980	223	145	103	78	78
7	161	208	1880	281	197	591	1510	211	149	97	81	77
8	366	211	2100	281	187	462	610	197	167	93	106	1820
9	2830	198	959	273	200	372	488	202	148	92	182	2760
10	4900	195	561	387	237	328	422	181	144	111	128	1920
11	2350	193	456	331	232	311	392	184	140	116	92	426
12	510	195	450	242	229	311	363	182	138	98	89	293
13	378	195	486	265	268	331	337	178	144	146	111	231
14	317	195	411	265	298	340	319	175	191	162	93	214
15	273	190	585	265	273	311	305	170	203	113	97	216
16	245	195	1110	262	255	292	292	166	161	98	319	433
17	242	193	661	243	240	273	284	165	146	87	148	1600
18	245	185	483	249	229	263	274	163	138	82	124	1230
19	219	183	408	257	232	258	264	158	140	79	176	456
20	298	180	405	257	229	266	323	181	136	81	138	320
21	343	180	477	262	224	284	350	166	130	78	113	263
22	266	183	381	254	224	323	316	162	119	85	115	228
23	232	173	343	254	221	351	270	194	126	98	109	208
24	227	173	325	265	250	303	273	221	141	92	168	196
25	221	173	309	255	320	281	282	198	146	83	168	192
26	342	173	381	252	279	268	256	195	159	78	132	177
27	363	185	381	258	260	260	240	215	158	83	109	168
28	281	245	331	268	276	253	234	197	138	78	101	163
29	255	703	309	225	---	255	229	177	134	75	98	160
30	234	661	287	200	---	560	225	171	135	77	93	146
31	271	---	281	212	---	766	---	186	---	84	90	---
TOTAL	18155	6997	16541	8154	6731	10315	15398	5945	4657	3081	3640	14385
MEAN	586	233	534	263	240	333	513	192	155	99.4	117	480
MAX	4900	703	2100	387	320	766	2980	230	254	162	319	2760
MIN	159	173	247	200	187	237	225	158	119	75	68	77
CFSM	1.87	.74	1.71	.84	.77	1.06	1.64	.61	.50	.32	.37	1.53
IN.	2.16	.83	1.97	.97	.80	1.23	1.83	.71	.55	.37	.43	1.71

CAL YR 1976 TOTAL 116950 MEAN 320 MAX 4900 MIN 80 CFSM 1.02 IN 13.90
WTR YR 1977 TOTAL 113999 MEAN 312 MAX 4900 MIN 68 CFSM 1.00 IN 13.55

02118500 HUNTING CREEK NEAR HARMONY, N. C.

LOCATION.--Lat 36°00'01", long 80°44'45", Iredell County, Hydrologic Unit 03040102, on right bank at downstream side of 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.--153 mi² (396 km²).

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) above mean sea level, unadjusted. Prior to Apr. 5, 1951, nonrecording gage on upstream side of bridge at same datum.

REMARKS.--Records fair. Suspended-sediment records for the current year are published on page 358 of this report.

AVERAGE DISCHARGE.--27 years, 202 ft³/s (5.721 m³/s), 17.93 in/yr (455 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,700 ft³/s (360 m³/s) June 21, 1972, gage height, 24.30 ft (7.407 m), from high-water mark in well; 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)
Oct. 9	1300	*6120	173	*16.04	4.889	Sept. 8	1800	5860	166	15.60	4.755
Dec. 7	0830	3140	88.9	10.64	3.243	Sept. 16	2200	2660	75.3	9.58	2.920
Apr. 5	1200	4830	137	13.87	4.228						

Minimum discharge, 44 ft³/s (1.25 m³/s) Aug. 2, gage height, 0.46 ft (0.140 m); minimum daily, 45 ft³/s (1.27 m³/s) Aug. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184	171	187	165	125	134	235	152	184	77	47	60
2	132	150	156	160	124	125	203	154	144	79	45	58
3	109	141	140	170	140	119	207	148	105	77	48	55
4	94	137	130	170	146	145	219	149	95	71	57	53
5	89	131	125	177	158	178	2710	148	91	69	51	52
6	86	126	131	174	120	249	708	140	99	65	69	53
7	88	125	1590	181	100	294	395	132	168	62	55	59
8	458	123	665	169	100	219	309	138	104	60	56	3380
9	4140	119	398	165	120	182	263	124	101	58	69	1000
10	576	121	297	165	125	162	239	117	95	74	64	318
11	285	108	260	141	129	160	224	118	88	68	58	200
12	209	124	271	170	132	153	211	118	94	71	67	151
13	178	121	268	175	168	218	203	115	98	81	61	133
14	160	116	231	189	158	229	197	112	130	67	63	144
15	146	108	341	195	140	180	191	108	108	61	79	334
16	138	118	445	200	129	159	195	106	101	57	94	852
17	142	115	316	152	115	143	181	106	93	54	87	994
18	139	114	261	190	118	138	176	105	95	58	312	521
19	129	112	233	190	119	132	192	128	91	57	170	243
20	178	112	236	190	119	148	327	116	84	56	88	184
21	181	111	243	179	109	142	258	99	81	73	99	146
22	143	108	200	179	105	193	204	98	75	59	112	124
23	133	106	195	175	108	189	190	127	101	63	95	113
24	130	106	190	174	153	160	223	134	102	61	94	106
25	156	106	184	177	183	148	192	137	112	54	84	101
26	365	107	231	170	139	141	169	128	101	56	71	97
27	220	127	208	170	139	136	161	128	92	55	71	93
28	174	198	195	168	162	135	155	113	120	51	69	88
29	154	517	188	145	---	137	159	103	108	51	65	82
30	146	273	174	135	---	318	154	124	84	56	61	81
31	197	---	179	160	---	326	---	112	---	53	61	---
TOTAL	9659	4251	8868	5320	3683	5492	9450	3837	3144	1954	2522	9875
MEAN	312	142	286	172	132	177	315	124	105	63.0	81.4	329
MAX	4140	517	1590	200	183	326	2710	154	184	81	312	3380
MIN	86	106	125	135	100	119	154	98	75	51	45	52
CFSM	2.04	.93	1.87	1.12	.86	1.16	2.06	.81	.69	.41	.53	2.15
IN.	2.35	1.03	2.16	1.29	.90	1.34	2.30	.93	.76	.48	.61	2.40

CAL YR 1976 TOTAL 66299 MEAN 181 MAX 4140 MIN 56 CFSM 1.18 IN 16.12
WTR YR 1977 TOTAL 68055 MEAN 186 MAX 4140 MIN 45 CFSM 1.22 IN 16.55

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.--55.7 mi² (144 km²).

PERIOD OF RECORD.--May 1954 to current year.

REVISED RECORDS.--WSP 1503: 1955, 1956(M). WSP 1553: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 426.62 ft (130.034 m) above mean sea level, unadjusted. Suspended-sediment records for the current year are published on page 356 of this report.

REMARKS.--Records good except those below 1 ft³/s (0.03 m³/s), which are fair.

AVERAGE DISCHARGE.--23 years, 56.6 ft³/s (1.603 m³/s), 13.80 in/yr (351 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.

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)
Oct. 9	0800	2540	71.9	8.06	2.457	Jan. 10	0600	2870	81.3	8.37	2.551
Dec. 7	0630	2870	81.3	8.37	2.551	Mar. 30	0730	*5830	165	*12.03	3.667

No flow July 18-22, 25-31, Aug. 7-13, 29, Sept. 1-6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	14	70	29	17	78	196	7.9	5.6	10	.14	0
2	8.1	10	50	25	14	49	121	7.6	11	6.2	.18	0
3	4.9	9.1	38	24	15	37	126	7.0	4.5	1.9	.30	0
4	2.4	8.6	29	24	17	171	126	6.7	3.0	1.1	.28	0
5	1.3	7.9	25	24	18	198	419	7.7	2.4	.81	.11	0
6	.73	7.1	22	24	15	192	189	6.6	2.8	.54	.01	0
7	.52	6.7	1040	114	13	451	101	17	7.0	.39	0	.41
8	10	6.4	340	70	12	186	70	11	3.0	.30	0	397
9	863	5.9	176	135	11	102	53	6.5	2.2	.85	0	138
10	67	6.0	99	1350	12	68	43	5.5	1.7	1.4	0	23
11	24	6.1	109	236	13	56	36	5.1	1.5	.42	0	8.9
12	14	7.6	963	123	13	50	31	4.7	1.7	.30	0	4.8
13	9.6	8.1	344	80	19	571	27	4.4	18	.30	0	3.0
14	7.6	7.4	155	105	21	187	24	4.1	22	.28	.54	2.0
15	6.2	154	619	198	17	100	21	3.6	6.6	.20	9.8	1.4
16	5.1	114	436	122	15	66	19	3.4	3.8	.10	3.7	4.0
17	4.6	54	200	52	13	50	16	3.2	3.1	.02	8.2	15
18	6.6	37	115	35	12	43	15	3.0	5.2	0	9.1	9.0
19	5.5	26	77	35	13	36	16	2.8	3.0	0	3.0	5.5
20	715	22	85	34	14	233	30	6.5	2.0	0	1.1	3.6
21	188	18	132	28	13	136	18	3.8	1.5	0	.56	2.4
22	65	14	66	25	12	917	14	3.3	1.1	0	.34	1.6
23	36	12	57	24	11	234	13	4.3	1.1	.49	.24	1.3
24	25	11	47	25	24	124	19	3.7	1.2	.20	.26	1.1
25	21	10	40	27	38	78	15	3.7	1.5	0	.26	.94
26	57	9.8	140	28	25	58	12	8.5	1.3	0	.17	.79
27	31	9.7	91	28	125	48	10	7.0	1.1	0	.14	.71
28	20	63	63	30	218	41	9.1	6.9	.83	0	.07	.67
29	15	635	52	26	---	89	8.5	7.9	.66	0	0	.56
30	13	138	38	19	---	3010	8.1	4.1	.55	0	.29	.50
31	15	---	36	20	---	534	---	3.5	---	0	.07	---
TOTAL	2244.25	1438.4	5754	3119	760	8193	1805.7	181.0	120.94	25.80	38.86	626.18
MEAN	72.4	47.9	186	101	27.1	264	60.2	5.84	4.03	.83	1.25	20.9
MAX	863	635	1040	1350	218	3010	419	17	22	10	9.8	397
MIN	.52	5.9	22	19	11	36	8.1	2.8	.55	0	0	0
CFSM	1.30	.86	3.34	1.81	.49	4.74	1.08	.10	.07	.01	.02	.38
IN.	1.50	.96	3.84	2.08	.51	5.47	1.21	.12	.08	.02	.03	.42

CAL YR 1976 TOTAL 16239.43 MEAN 44.4 MAX 1040 MIN 0 CFSM .80 IN 10.85
WTR YR 1977 TOTAL 24307.13 MEAN 66.6 MAX 3010 MIN 0 CFSM 1.20 IN 16.23

02126000 ROCKY RIVER NEAR NORWOOD, N. C.

LOCATION.--Lat 35°08'50", long 80°10'26", 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.--1,370 mi² (3,550 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1929 to current year.

REVISED RECORDS.--WSP 822: Drainage area. 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) above mean sea level, (levels by Corps of Engineers).

REMARKS.--Water-discharge record good.

AVERAGE DISCHARGE.--48 years, 1,320 ft³/s (37.38 m³/s), 13.08 in/yr (332 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)
Oct. 9	Unknown	19500	552	a15.16	4.621	Jan. 10	1500	31200	884	20.98	6.395
Oct. 20	2400	16800	476	13.71	4.179	Mar. 13	1700	17600	498	14.16	4.316
Dec. 7	1500	19100	541	14.93	4.551	Mar. 22	1300	26700	756	18.85	5.745
Dec. 12	1500	23100	654	17.05	5.197	Mar. 30	2000	*40600	1150	*25.03	7.629
Dec. 16	0200	17700	501	14.18	4.322						

a From floodmark.

Minimum discharge, 59 ft³/s (1.67 m³/s) Sept. 6, 7, gage height, 0.30 ft (0.091 m); minimum daily, 65 ft³/s (1.84 m³/s) Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	220	471	2350	761	660	2630	10800	287	514	152	76	84
2	882	419	1330	665	620	1290	3310	271	1240	321	534	77
3	1250	360	988	605	600	870	2800	266	826	275	263	74
4	427	332	786	617	580	1790	3270	257	328	173	348	75
5	240	314	661	631	590	5670	6330	253	227	133	209	69
6	170	293	592	652	610	3570	5790	255	195	113	151	65
7	150	264	12200	1910	600	10900	2810	245	425	103	119	144
8	140	248	13500	2840	580	5830	1830	273	530	100	97	3680
9	7000	242	6750	1670	560	2800	1390	243	274	96	84	6630
10	13000	238	3030	24800	540	1800	1100	199	203	133	80	1890
11	4000	239	2430	14100	530	1380	956	188	180	101	95	585
12	1500	281	17000	3870	540	1200	858	189	163	99	86	316
13	650	409	12800	2420	550	11800	777	187	164	102	101	217
14	452	344	4810	1970	524	8240	720	185	264	139	122	177
15	368	1290	7300	4870	508	3010	700	179	434	121	94	162
16	303	5120	15200	3630	445	1930	635	168	365	111	234	2270
17	282	1710	6440	2220	410	1370	564	165	232	98	362	4600
18	298	955	3210	1360	377	1170	495	164	869	87	263	2500
19	307	713	2110	1140	377	1030	444	164	335	77	293	924
20	6130	588	1640	1020	380	5110	493	189	269	73	244	488
21	11800	511	2050	925	377	5120	545	206	353	80	161	330
22	2520	453	1730	844	358	22300	440	185	269	80	120	249
23	1120	401	1210	678	343	9820	397	171	189	82	100	205
24	742	363	1030	650	399	3460	421	172	167	77	93	180
25	599	341	890	640	815	2250	433	184	198	71	105	162
26	1010	321	1780	660	793	1630	397	365	203	68	123	181
27	985	312	2860	680	642	1290	351	444	181	72	98	165
28	593	361	1660	700	3460	1120	326	368	165	72	92	148
29	457	10600	1240	720	---	1600	312	360	147	73	81	143
30	397	6400	983	740	---	29400	298	243	150	79	75	140
31	412	---	838	700	---	29800	---	451	---	77	78	---
TOTAL	58404	34893	131398	79688	17768	181180	49992	7476	10059	3438	4981	26930
MEAN	1884	1163	4239	2571	635	5845	1666	241	335	111	161	898
MAX	13000	10600	17000	24800	3460	29800	10800	451	1240	321	534	6630
MIN	140	238	592	605	343	870	298	164	147	68	75	65
CFSM	1.38	.85	3.09	1.88	.46	4.27	1.22	.18	.24	.08	.12	.66
IN.	1.59	.95	3.57	2.16	.48	4.92	1.36	.20	.27	.09	.14	.73

CAL YR 1976 TOTAL 457455 MEAN 1250 MAX 17000 MIN 64 CFSM .91 IN 12.42
WTR YR 1977 TOTAL 606207 MEAN 1661 MAX 29800 MIN 65 CFSM 1.21 IN 16.46

02126000 ROCKY RIVER NEAR NORWOOD, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948, 1956-73, October 1976 to September 1977.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1955 to September 1967, October 1976 to September 1977.
WATER TEMPERATURES: October 1947 to September 1948, October 1955 to September 1967, October 1976 to September 1977.

REMARKS.--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 (Sta. No. 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; minimum daily, 0.0°C on several days during most winters.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,000 micromhos July 29; minimum daily, 57 micromhos Oct. 10.
WATER TEMPERATURES: Maximum daily, 35.0°C July 18; minimum daily, 0.0°C Jan. 24.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)
OCT												
13...	1430	588	150	6.3	16.0	75	8.5	34	12	8.2	3.2	14
NOV												
10...	1345	239	298	6.1	10.0	30	10.6	54	0	13	5.3	39
DEC												
10...	1430	2920	110	7.0	5.0	75	12.3	29	12	6.6	3.0	9.0
JAN												
10...	2000	29100	80	7.2	4.5	150	12.3	20	10	4.4	2.2	4.1
10...	2330	27200	60	6.9	4.5	130	12.5	22	12	4.5	2.5	3.9
11...	0630	18900	65	6.9	3.5	150	12.1	18	10	3.9	2.1	3.8
11...	1430	12300	72	6.9	4.0	--	12.3	--	--	--	--	--
11...	2230	6130	85	6.8	4.0	75	12.1	18	3	3.6	2.2	5.6
12...	1500	3470	102	6.5	3.5	300	12.8	24	9	5.2	2.7	7.3
20...	0900	918	158	7.1	.5	30	13.8	33	2	7.4	3.5	17
FEB												
14...	1415	549	280	6.6	8.0	20	10.6	37	0	8.0	4.2	37
APR												
26...	1200	400	220	6.4	19.0	15	9.0	43	0	9.4	4.8	29
JUL												
13...	1700	99	280	--	33.0	40	6.0	55	0	13	5.5	33

02126000 ROCKY RIVER NEAR NORWOOD, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT												
13...	45	1.1	3.3	26	0	21	21	21	15	.2	14	129
NOV												
10...	59	2.3	3.9	68	0	56	86	30	31	.4	19	215
DEC												
10...	38	.7	2.4	20	0	16	3.2	14	11	.1	11	68
JAN												
10...	28	.4	2.5	12	0	10	1.2	9.7	5.8	.1	5.1	70
10...	26	.4	2.5	12	0	10	2.4	9.6	5.8	.1	5.2	70
11...	28	.4	2.1	10	0	8	2.0	8.8	5.2	.2	5.7	60
11...	--	--	--	14	0	11	2.8	--	--	--	--	--
11...	37	.6	1.9	18	0	15	4.6	11	6.4	.1	8.0	72
12...	37	.6	1.9	18	0	15	9.1	12	8.5	.2	9.5	62
20...	51	1.3	2.0	38	0	31	4.8	17	16	.2	14	98
FEB												
14...	66	2.6	2.9	64	0	52	26	26	30	.1	16	161
APR												
26...	57	1.9	3.4	72	0	59	46	24	20	.1	11	136
JUL												
13...	54	1.9	5.6	83	0	68	--	26	27	.2	14	171

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA (NH4) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	DISSOLVED ORGANIC NITROGEN (N) (MG/L)
OCT												
13...	96	.18	205	.80	.02	.82	.81	.11	.07	.09	.56	.50
NOV												
10...	180	.29	139	.71	.02	.73	.73	.01	.06	.08	.61	.55
DEC												
10...	67	.09	536	.87	.02	.89	.87	.07	.05	.06	.33	.26
JAN												
10...	40	.10	5500	.72	.00	.72	.70	.14	.06	.08	1.7	.45
10...	40	.10	5140	--	--	--	--	--	--	--	--	--
11...	37	.08	3060	.62	.00	.62	.60	.10	.04	.05	1.1	.31
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	48	.10	1190	.80	.00	.80	.76	.09	.04	.05	.71	.30
12...	56	.08	581	--	--	--	--	--	--	--	--	--
20...	101	.13	243	.99	.01	1.0	1.0	.16	.15	.19	.40	.29
FEB												
14...	156	.22	239	.73	.01	.74	.74	.31	.33	.43	.66	.61
APR												
26...	141	.19	147	.66	.01	.67	.72	.03	.01	.01	.74	.57
JUL												
13...	169	.23	45.7	.61	.01	.62	.61	.04	.01	.01	.77	--

DATE	TOTAL KJELDAHL NITROGEN (N) (MG/L)	SUSPENDED KJEL. NITROGEN (N) (MG/L)	DISSOLVED KJEL. NITROGEN (N) (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL NITROGEN (NO3) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED PHOSPHORUS (P) (MG/L)	TOTAL ORTHO PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
OCT											
13...	.67	.10	.57	1.5	6.6	.20	.11	.13	.09	.28	1
NOV											
10...	.62	.01	.61	1.4	6.0	.34	.31	.34	.30	.92	--
DEC											
10...	.40	.09	.31	1.3	5.7	.16	.08	.08	.06	.18	--
JAN											
10...	1.8	1.3	.51	2.5	11	.30	.07	.10	.05	.15	3
10...	--	--	--	--	--	--	--	--	--	--	--
11...	1.2	.85	.35	1.8	8.1	.20	.05	.09	.03	.09	--
11...	--	--	--	--	--	--	--	--	--	--	2
11...	.80	.46	.34	1.6	7.1	.17	.06	.01	.04	.12	--
12...	--	--	--	--	--	--	--	--	--	--	--
20...	.56	.12	.44	1.6	6.9	.16	.13	.13	.12	.37	--
FEB											
14...	.97	.03	.94	1.7	7.6	.45	.40	.38	.34	1.0	--
APR											
26...	.77	.19	.58	1.4	6.4	.30	.27	.26	.24	.74	--
JUL											
13...	.81	--	--	1.4	6.3	.52	.41	.39	.36	1.1	--

02126000 ROCKY RIVER NEAR NORWOOD, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	SUS-PENDED COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)
OCT												
13...	0	1	0	0	0	40	40	0	1	1	0	7
NOV												
10...	--	--	--	--	--	20	20	0	--	--	--	6
DEC												
10...	--	--	--	--	--	10	4	6	--	--	--	9
JAN												
10...	2	1	0	0	0	20	20	0	3	3	0	15
10...	--	--	--	--	--	20	20	0	--	--	--	10
11...	--	--	--	--	--	20	20	0	--	--	--	11
11...	2	0	0	0	0	10	9	1	2	2	0	68
11...	--	--	--	--	--	10	10	0	--	--	--	18
20...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
14...	--	--	--	--	--	40	36	4	--	--	--	74
APR												
26...	--	--	--	--	--	410	400	10	--	--	--	6
JUL												
13...	--	--	--	--	--	<10	<7	3	--	--	--	6

DATE	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	SUS-PENDED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)
OCT											
13...	1	6	2500	310	4	4	0	150	100	50	.1
NOV											
10...	0	6	630	340	4	4	0	--	--	--	--
DEC											
10...	3	6	3100	170	6	4	2	--	--	--	--
JAN											
10...	11	4	41000	160	11	10	1	300	250	50	.1
10...	8	2	31000	120	8	8	0	--	--	--	--
11...	8	3	30000	110	12	10	2	--	--	--	--
11...	65	3	29000	120	13	13	0	200	160	40	.1
11...	16	2	22000	60	28	28	0	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
FEB											
14...	47	27	580	190	12	8	4	--	--	--	--
APR											
26...	1	5	610	160	4	2	2	--	--	--	--
JUL											
13...	1	5	--	60	12	1	11	--	--	--	--

DATE	SUS-PENDED MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	DIS-SOL-VED ORGANIC CARBON (C) (MG/L)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
OCT											
13...	.1	.0	0	0	0	30	30	0	7.4	5.8	.00
NOV											
10...	--	--	--	--	--	30	10	20	12	9.6	.00
DEC											
10...	--	--	--	--	--	30	10	20	8.4	8.8	.10
JAN											
10...	.1	.0	1	1	0	40	30	10	12	8.1	.10
10...	--	--	--	--	--	30	20	10	--	--	--
11...	--	--	--	--	--	30	20	10	12	8.3	.10
11...	.1	.0	0	0	0	110	100	10	--	--	--
11...	--	--	--	--	--	30	10	20	13	8.6	.10
20...	--	--	--	--	--	--	--	--	--	13	.00
FEB											
14...	--	--	--	--	--	30	0	30	6.8	6.8	.10
APR											
26...	--	--	--	--	--	20	10	10	7.5	6.2	.00
JUL											
13...	--	--	--	--	--	0	0	0	6.8	--	.10

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
July 13	1700	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Actinastrum	190	3	
		Coelastraceae	340	4	
		Crucigenia	190	3	
		Kirchneriella	160	2	
		Scenedesmus	150	2	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	77	1	
		Navicula	38	1	
		Synedra	120	2	
		CYANOPHYTA			
		Cyanophyceae			
		Anacystis	160	2	
		Oscillatoria	6,100	80	
		TOTAL	7,600		

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PERIPHYTON

Date	Length of exposure (days)	Biomass (g/m^2)		Chlorophyll a (mg/m^2)	Chlorophyll b (mg/m^2)	Biomass chlorophyll ratio	Sampling method
		Dry weight	Ash weight				
July 13	72	12.5	7.48				Polyethylene strip

02126000 ROCKY RIVER NEAR NORWOOD, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	230	235	107	117	158	113	73	323	240	411	745	663
2	520	204	128	133	163	123	98	343	218	428	230	762
3	153	194	143	128	179	152	103	314	150	428	396	730
4	148	204	153	128	199	160	103	265	150	396	410	676
5	148	158	163	133	209	107	103	245	208	386	410	706
6	184	280	173	163	209	113	98	323	240	370	505	666
7	209	286	90	158	214	102	98	372	255	356	495	590
8	224	286	92	128	194	99	130	343	213	307	495	186
9	100	291	92	117	168	106	132	333	210	308	600	86
10	57	270	102	66	184	125	132	343	210	302	683	113
11	66	250	117	61	240	143	129	323	257	298	733	137
12	94	265	87	83	245	147	122	284	318	238	673	162
13	138	321	75	94	245	93	122	294	376	257	763	175
14	194	275	84	107	245	84	137	392	431	320	744	214
15	219	255	100	98	199	99	186	441	455	280	643	240
16	143	117	89	88	175	118	196	441	243	348	870	127
17	260	122	80	90	204	135	196	431	296	310	430	245
18	265	153	91	97	230	157	211	451	336	408	370	113
19	265	166	100	117	255	157	211	363	213	480	386	109
20	204	189	99	138	260	115	196	441	188	479	406	127
21	83	204	102	148	260	101	250	588	208	595	361	152
22	102	214	112	163	226	76	230	470	277	667	436	176
23	128	199	117	173	220	79	235	412	307	701	400	245
24	143	189	112	158	227	98	269	432	292	730	355	284
25	148	204	107	143	273	118	269	343	361	698	368	338
26	163	240	102	138	233	99	230	333	459	658	495	387
27	143	250	100	163	195	130	225	333	480	755	510	377
28	153	245	94	168	147	127	235	333	416	900	445	382
29	179	102	97	163	---	127	274	314	477	1000	594	392
30	219	105	99	168	---	67	304	284	470	948	654	382
31	240	---	102	275	---	64	---	283	---	880	530	---
MEAN	178	216	107	132	213	114	177	361	298	505	520	331

WTR YR 1977 MEAN 263 MAX 1000 MIN 57

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.5	12.0	5.5	4.0	2.5	9.5	14.5	21.0	25.0	30.0	30.0	29.0
2	19.5	10.5	5.0	3.5	2.5	9.0	15.0	22.0	24.0	30.0	24.5	30.0
3	18.5	10.0	4.0	2.0	2.0	10.0	15.5	22.0	24.0	28.5	25.0	28.0
4	19.5	11.0	4.0	2.0	4.0	10.5	16.5	23.5	24.0	29.0	26.0	29.0
5	21.0	10.0	4.0	3.0	5.0	12.0	16.0	25.0	26.0	30.0	26.0	28.0
6	21.0	9.5	4.0	4.0	4.5	11.5	14.0	25.5	27.0	31.0	32.0	27.5
7	21.5	9.5	6.5	5.0	3.0	10.5	12.5	27.0	25.0	33.0	30.0	28.0
8	22.0	9.0	9.0	4.0	3.0	10.0	13.5	26.0	23.0	34.0	32.0	24.0
9	20.0	8.0	6.0	4.0	3.0	10.0	14.0	24.0	23.0	33.0	33.0	23.0
10	18.0	9.5	5.0	5.0	4.0	11.0	14.0	21.0	23.0	32.0	31.0	24.0
11	17.0	10.0	6.0	3.0	5.5	12.5	15.5	21.0	24.0	32.0	32.0	24.5
12	16.0	9.0	9.0	2.5	6.0	13.5	17.0	21.0	27.0	32.0	33.0	24.0
13	16.0	8.0	9.0	2.0	8.0	15.0	18.0	21.0	27.0	34.0	30.0	24.5
14	16.5	6.0	7.5	2.5	8.0	15.0	19.0	23.0	27.0	33.0	30.0	25.0
15	16.5	6.0	7.0	4.0	8.0	15.0	19.0	24.5	26.0	31.0	32.0	25.0
16	17.5	7.5	8.0	4.0	7.0	15.0	19.0	24.0	26.0	32.0	30.0	22.5
17	15.0	7.0	8.0	2.0	6.0	14.0	20.0	25.5	27.0	33.0	30.0	23.0
18	14.5	10.0	8.0	1.0	3.5	14.5	20.0	25.5	26.0	35.0	27.0	24.5
19	12.0	8.0	8.0	1.0	5.0	15.0	23.0	27.0	27.0	31.0	26.0	25.0
20	12.0	8.0	8.0	1.0	7.0	13.0	22.0	28.0	28.0	32.0	25.0	25.0
21	12.0	10.0	6.5	1.0	6.0	13.0	20.5	26.5	27.5	32.0	27.0	26.0
22	12.0	8.0	4.5	1.0	7.0	10.0	20.0	26.5	28.0	30.0	27.0	25.0
23	12.0	6.5	4.5	1.0	9.0	10.0	20.0	25.0	27.0	29.0	29.0	24.0
24	12.0	5.5	3.5	0.0	10.5	10.0	22.0	24.0	25.0	28.0	29.0	24.0
25	12.0	6.0	2.5	2.0	11.5	10.5	21.0	24.0	26.0	31.0	28.0	25.0
26	15.0	5.0	4.5	2.0	13.5	12.0	20.0	24.0	27.0	28.0	27.0	25.5
27	13.5	8.0	4.5	4.0	14.0	13.0	18.0	24.0	29.0	29.0	27.0	26.0
28	12.0	9.0	5.0	4.0	11.5	13.0	19.0	25.5	30.5	28.0	28.0	25.0
29	10.5	10.5	5.5	3.0	---	15.0	19.0	25.0	30.0	27.0	29.0	23.0
30	10.0	7.0	4.0	2.0	---	14.0	19.0	27.0	31.0	30.0	28.0	23.0
31	12.0	---	6.0	3.0	---	14.5	---	25.0	---	29.0	29.0	---
MEAN	15.5	8.5	6.0	2.5	6.5	12.5	18.0	24.5	26.5	31.0	29.0	25.5

WTR YR 1977 MEAN 17.0 MAX 35.0 MIN 0.0

02126000 ROCKY RIVER NEAR NORWOOD, N. C.--Continued

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE FOR SELECTED DAYS, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT				
13...	1430	588	48	76
NOV				
10...	1345	239	3	1.9
DEC				
10...	1430	2920	60	473
JAN				
10...	2000	29100	322	25300
10...	2330	27200	336	24700
11...	0630	18900	242	12300
11...	1430	12300	179	5950
11...	2230	6130	150	2480
12...	1500	3470	75	703
20...	0900	918	13	32
FEB				
14...	1415	549	7	10
APR				
26...	1200	400	14	15
JUL				
13...	1700	99	18	4.8
26...	1400	69	21	3.9

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)
OCT									
14...	1030	1150	150	6.5	15.0	9.0	17	1.6	3300
NOV									
18...	1100	948	100	6.5	9.0	11.1	22	2.9	1900
DEC									
16...	1300	15200	45	7.1	8.0	12.4	32	3.4	3900
JAN									
18...	1400	1270	50	7.2	2.0	13.8	14	1.1	20
FEB									
23...	1445	340	160	7.5	10.0	14.3	24	1.7	10
MAR									
16...	1400	1870	80	6.7	16.0	7.8	24	2.9	410
APR									
19...	1430	440	190	6.5	20.0	9.0	18	1.8	<10
MAY									
23...	1100	163	480	8.1	23.0	5.9	32	2.8	30
JUN									
29...	1130	145	500	8.0	30.0	5.8	33	2.1	40
JUL									
20...	1445	74	--	8.3	33.0	16.2	46	6.2	<10
AUG									
18...	1300	236	--	7.8	26.0	4.4	27	1.2	530

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) 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.--105 mi² (272 km²).

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) above mean sea level.

REMARKS.--Records fair. Suspended-sediment records for the current year are published on page 359 of this report.

AVERAGE DISCHARGE.--23 years, 110 ft³/s (3.115 m³/s), 14.23 in/yr (361 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)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 10	1200	2910	82.4	8.28	2.524	Mar. 30	1400	*4670	132	*10.59	3.228
Mar. 5	0030	2590	73.3	7.80	2.377	Sept. 8	2000	2710	76.7	7.99	2.435

Minimum discharge, 1.8 ft³/s (0.051 m³/s) July 30, gage height, 0.96 ft (0.293 m); minimum daily, 1.8 ft³/s (0.051 m³/s) July 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	53	63	63	69	120	250	52	28	10	2.2	3.6
2	17	34	46	59	69	83	166	52	28	10	9.3	3.6
3	11	25	40	56	69	70	149	50	26	8.3	12	3.2
4	11	22	36	58	59	434	236	49	23	7.8	6.5	3.1
5	9.3	21	34	59	58	850	586	49	21	7.0	5.4	2.7
6	8.2	20	34	61	53	231	335	49	20	6.6	4.8	2.7
7	8.0	19	387	132	50	579	168	45	24	5.9	3.7	3.4
8	10	19	212	144	49	264	135	44	22	5.5	3.5	1140
9	138	18	179	100	50	145	114	41	21	4.6	3.9	385
10	109	18	96	1860	49	109	102	39	19	24	5.8	73
11	31	18	96	400	52	97	97	37	16	18	5.1	40
12	18	22	1070	158	50	90	92	39	16	12	5.4	26
13	13	27	396	116	55	1060	86	36	16	11	11	19
14	12	33	153	116	64	335	83	35	21	8.7	8.2	15
15	10	80	396	261	53	160	78	34	24	8.7	5.4	13
16	9.7	179	713	160	50	118	93	32	22	7.4	8.2	13
17	13	71	227	113	48	100	81	31	18	5.9	39	13
18	15	49	127	104	46	92	72	30	17	4.9	90	22
19	13	42	95	116	49	85	70	28	16	3.7	106	16
20	383	39	88	100	53	194	67	28	13	3.4	29	13
21	270	37	154	92	52	185	67	27	12	3.1	12	11
22	60	34	111	86	48	1040	64	26	11	2.9	8.2	9.2
23	34	32	83	79	46	343	63	26	12	2.5	6.5	8.7
24	26	30	76	70	70	168	160	30	13	2.2	6.5	8.2
25	23	26	70	75	139	128	93	40	55	2.0	5.8	11
26	26	24	130	80	75	107	70	48	45	1.9	4.8	9.2
27	22	25	147	78	85	97	61	48	22	2.0	4.5	6.9
28	19	32	93	77	382	92	58	44	17	1.9	4.5	7.3
29	19	339	80	71	---	97	55	35	13	1.9	3.9	6.9
30	18	128	70	71	---	2760	52	31	11	1.8	3.7	6.5
31	28	---	66	69	---	726	---	30	---	1.9	3.5	---
TOTAL	1413.2	1516	5568	5084	1992	10959	3803	1185	622	197.5	428.3	1895.2
MEAN	45.6	50.5	180	164	71.1	354	127	38.2	20.7	6.37	13.8	63.2
MAX	383	339	1070	1860	382	2760	586	52	55	24	106	1140
MIN	8.0	18	34	56	46	70	52	26	11	1.8	2.2	2.7
CFSM	.43	.48	1.71	1.56	.68	3.37	1.21	.36	.20	.06	.13	.60
IN.	.50	.54	1.97	1.80	.71	3.88	1.35	.42	.22	.07	.15	.67

CAL YR 1976 TOTAL 35341.6 MEAN 96.6 MAX 1560 MIN 4.0 CFSM .92 IN 12.52
WTR YR 1977 TOTAL 34663.2 MEAN 95.0 MAX 2760 MIN 1.8 CFSM .91 IN 12.28

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.--6,870 mi² (17,790 km²), approximately.

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 822: Drainage area. 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) above mean sea level (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. 258).

AVERAGE DISCHARGE.--55 years (1906-11, 1927-77), 7,949 ft³/s (225.1 m³/s), 15.71 in/yr (399 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, 73,200 ft³/s (2,070 m³/s) Mar. 31, gage height, 12.36 ft (3.767 m); minimum, 239 ft³/s (6.77 m³/s) Oct. 25, gage height, 0.84 ft (0.256 m); minimum daily, 277 ft³/s (7.84 m³/s) May 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2780	7790	15500	11300	7380	10200	41100	1010	6270	2880	1730	3740
2	4420	8060	12500	2640	6530	10300	20400	5110	6550	363	1750	3530
3	893	7920	11300	6360	7910	10200	17000	6090	7050	334	3210	594
4	5980	5670	10700	5990	7770	10200	15500	6780	665	346	2370	386
5	7850	4870	6160	10000	4500	15200	16800	7820	386	3870	3010	398
6	5360	2470	3170	10000	2700	15000	25900	9010	5580	3130	437	4690
7	4470	2030	9660	10100	5580	18000	21000	1060	5800	3750	362	6160
8	9730	5620	30600	10300	5960	21300	21400	332	3230	4070	2310	10900
9	11200	7900	26000	10100	7330	16500	14300	4690	4370	2230	3100	26500
10	32300	3160	21000	22300	5300	15200	12000	2390	3880	465	3710	22900
11	54100	5540	15100	50000	2280	12600	11000	2760	391	367	2560	12500
12	33600	5780	31400	23900	320	11700	12500	4010	338	3100	4660	8530
13	17000	7850	40000	16300	360	24600	9870	4020	4170	2530	3600	4990
14	12000	3700	21600	15500	5950	32400	8940	668	5160	3190	588	6490
15	10000	8240	20100	16900	7320	17400	9090	336	3450	3030	3950	6630
16	8430	7970	39100	11900	7200	16200	9080	2380	3610	387	4110	7330
17	9090	9210	27900	10500	9330	14600	4520	1530	419	338	5330	7690
18	10100	7940	19000	11200	5780	13200	5580	6130	618	1270	6350	7490
19	10000	3410	16400	10200	2080	11400	8090	5640	448	2780	3400	8840
20	11400	4600	14100	9600	309	13400	7840	5120	4590	5230	899	6790
21	27900	3140	13100	9100	5630	20200	8750	316	4560	4810	388	5890
22	17900	5750	13800	7540	5970	37000	9750	277	1620	4780	3600	5530
23	14500	6680	13400	2810	5660	37900	10300	2820	1330	2790	3600	5620
24	11300	5380	13200	3730	9170	20800	7220	3360	2630	516	3840	1480
25	2470	440	12400	5640	5880	15200	5510	4950	484	1900	1810	517
26	8700	5090	12600	3980	3210	11700	8400	2580	378	2530	3780	5070
27	9010	761	13700	5710	3760	9660	9180	5600	4860	1920	964	5560
28	10000	988	13800	7960	9800	4250	8780	2480	3940	3080	454	2430
29	10100	8220	13400	4920	---	5360	8860	414	4210	3770	3150	5190
30	8420	18900	12900	2150	---	27300	1470	343	4010	1250	2240	5010
31	2630	---	12900	5600	---	70300	---	4780	---	554	4390	---
TOTAL	383633	175079	536490	334230	150969	569270	370130	104806	94997	71560	85652	199375
MEAN	12380	5836	17310	10780	5392	18360	12340	3381	3167	2308	2763	6646
MAX	54100	18900	40000	50000	9800	70300	41100	9010	7050	5230	6350	26500
MIN	893	440	3170	2150	309	4250	1470	277	338	334	362	386
(†)	+316	-91	-501	-460	+116	+582	+182	+410	-24	-756	-447	+630

CAL YR 1976	TOTAL	2860931	MEAN	7817	MAX	54100	MIN	279	MEAN‡ 7822	CFSM‡ 1.14	IN‡ 15.52
WTR YR 1977	TOTAL	3076191	MEAN	8428	MAX	70300	MIN	277	MEAN‡ 8421	CFSM‡ 1.23	IN‡ 16.70

† 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 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.--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.--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.
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, 125 micromhos Sept. 19; minimum daily, 50 micromhos Jan. 10.
WATER TEMPERATURES: Maximum daily, 33.0°C July 11; minimum daily, 1.5°C Jan. 20, 24.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	FECAL COLIFORM .7UM-MF (COL./100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
OCT												
06...	1150	6200	105	6.7	21.0	7	6.4	B2	B6	18	0	4.0
12...	1210	32000	77	6.4	20.0	45	--	B490	B240	21	3	5.0
NOV												
09...	1025	8910	82	6.0	10.0	25	10.4	B5	B16	19	1	4.3
JAN												
31...	1130	8720	80	6.8	4.5	17	11.4	B1	B10	21	4	4.9
FEB												
22...	1110	9200	88	6.8	5.0	10	12.4	<1	B12	19	0	4.8
MAR												
28...	1130	3500	76	7.1	14.5	20	8.6	57	28	23	7	5.5
APR												
19...	1130	8540	77	5.5	19.0	15	7.6	B5	B110	21	4	4.8
MAY												
24...	1100	349	82	5.3	21.0	5	5.6	B8	B210	19	2	4.5
JUN												
28...	1130	399	94	6.5	27.5	1	4.8	50	B1100	21	2	4.8
JUL												
25...	1045	385	85	6.8	27.5	1	6.5	60	60	18	0	4.1
AUG												
16...	1000	454	98	6.8	28.0	5	4.1	B2	B460	19	0	4.2
SEP												
12...	1045	9950	88	6.8	26.0	25	8.5	B79	B2500	18	0	4.2

B 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 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)
OCT												
06...	2.0	13	56	1.3	3.0	30	0	25	9.6	8.3	10	.1
12...	2.0	6.8	38	.7	2.7	22	0	18	14	6.6	5.4	.2
NOV												
09...	1.9	6.8	40	.7	3.0	22	0	18	35	7.2	6.1	.1
JAN												
31...	2.1	6.3	37	.6	2.1	21	0	17	5.3	7.7	5.7	.0
FEB												
22...	1.8	7.7	43	.8	2.0	25	0	21	6.3	8.6	6.7	.1
MAR												
28...	2.3	6.6	36	.6	1.7	20	0	16	2.5	6.6	6.1	.1
APR												
19...	2.1	6.4	38	.6	1.8	20	0	16	101	5.9	6.6	.1
MAY												
24...	1.8	7.7	44	.8	2.0	20	0	16	160	7.4	6.6	.1
JUN												
28...	2.2	10	47	.9	2.4	23	0	19	12	7.3	8.1	.1
JUL												
25...	2.0	7.8	44	.8	2.2	22	0	18	5.6	6.9	6.7	.1
AUG												
16...	2.0	11	52	1.1	2.5	28	0	23	7.1	7.1	8.6	.1
SEP												
12...	1.9	8.3	45	.8	2.9	24	0	20	6.1	6.3	6.3	.1

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
OCT											
06...	10	52	65	.07	870	.41	.65	1.1	4.7	.09	--
12...	10	64	50	.09	5530	.30	.57	.87	3.9	.08	1
NOV											
09...	9.8	79	50	.11	1900	.58	.34	.92	4.1	.07	--
JAN											
31...	12	70	51	.10	1650	.53	.38	.91	4.0	.07	--
FEB											
22...	12	56	56	.08	1390	.89	.77	1.7	7.3	.21	--
MAR											
28...	11	68	50	.09	643	.49	.53	1.0	4.5	.07	1
APR											
19...	11	58	49	.08	1340	.43	.56	.99	4.4	.09	--
MAY											
24...	10	64	50	.09	60.3	.49	.32	.81	3.6	.06	2
JUN											
28...	9.9	69	56	.09	74.3	.57	.61	1.2	5.2	.04	--
JUL											
25...	8.9	45	50	.06	46.8	.32	.53	.85	3.8	.07	--
AUG											
16...	10	62	59	.08	76.0	.26	.48	.74	3.3	.05	1
SEP											
12...	11	57	53	.08	1530	.01	.35	.36	1.6	.02	--

DATE	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	SUS-PENDED COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)
OCT											
12...	0	1	0	0	0	20	20	0	0	0	0
MAR											
28...	0	1	0	0	0	10	7	3	0	0	0
MAY											
24...	1	1	0	0	0	<10	<10	0	0	0	0
AUG											
16...	0	1	0	0	0	<10	<10	0	0	0	0

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	SUS-PENDED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
OCT											
12...	4	2	2	2100	70	4	4	0	110	100	10
MAR											
28...	2	0	2	780	130	7	0	7	70	0	70
MAY											
24...	4	1	3	1700	210	10	10	0	120	30	90
AUG											
16...	5	5	0	320	50	11	6	5	70	20	50

DATE	TOTAL MERCURY (HG) (UG/L)	SUS-PENDED MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT										
12...	.0	.0	.0	0	0	0	10	0	10	4.2
MAR										
28...	.1	.1	.0	0	0	0	0	0	10	--
MAY										
24...	.0	.0	.0	0	0	0	50	40	10	5.2
AUG										
16...	.0	.0	.0	0	0	0	0	0	0	6.0

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	TOTAL ALDRIN (UG/L)	ALDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL CHLORDANE (UG/L)	CHLORDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDD (UG/L)	DDD IN BOTTOM MATERIAL (UG/KG)	TOTAL DDE (UG/L)	DDE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDT (UG/L)
MAY 19...	1145	ND	ND	ND	2	ND	ND	ND	ND	ND
AUG 23...	1200	ND	--	ND	--	ND	--	ND	--	ND

DATE	DDT IN BOTTOM MATERIAL (UG/KG)	TOTAL DIAZINON (UG/L)	DIAZINON IN BOTTOM MATERIAL (UG/KG)	TOTAL DIELDRIN (UG/L)	DIELDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ENDRIN (UG/L)	ENDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ETHION (UG/L)	ETHION IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR (UG/L)
MAY 19...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 23...	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	HEPTACHLOR IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR EPOXIDE (UG/L)	HEPTACHLOR EPOXIDE IN BOTTOM MATERIAL (UG/KG)	TOTAL LINDANE (UG/L)	LINDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL MALATHION (UG/L)	MALATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHOXYCHLOR (UG/L)	METHOXYCHLOR IN BOTTOM MATERIAL (UG/KG)
MAY 19...	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 23...	--	ND	--	ND	--	ND	--	ND	--

DATE	TOTAL METHYL PARATHION (UG/L)	METHYL PARATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHYL TRITHION (UG/L)	METHYL TRITHION IN BOTTOM MATERIAL (UG/KG)	TOTAL PARATHION (UG/L)	PARATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL TOXAPHENE (UG/L)	TOXAPHENE IN BOTTOM MATERIAL (UG/KG)
MAY 19...	ND	ND	ND	ND	ND	ND	ND	ND
AUG 23...	ND	--	ND	--	ND	--	ND	--

DATE	TOTAL TRITHION (UG/L)	TRITHION IN BOTTOM MATERIAL (UG/KG)	TOTAL 2,4-D (UG/L)	2,4-D IN BOTTOM MATERIAL (UG/KG)	TOTAL 2,4,5-T (UG/L)	2,4,5-T IN BOTTOM MATERIAL (UG/KG)	TOTAL SILVEX (UG/L)	SILVEX IN BOTTOM MATERIAL (UG/KG)
MAY 19...	ND	ND	ND	ND	ND	ND	ND	ND
AUG 23...	ND	--	ND	--	ND	--	ND	--

ND Not detected.

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	TOTAL ALDRIN (UG/L)	ALDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL CHLORDANE (UG/L)	CHLORDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDD (UG/L)	DDD IN BOTTOM MATERIAL (UG/KG)	TOTAL DDE (UG/L)	DDE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDT (UG/L)
NOV										
09...	1025	ND	ND	ND	ND	ND	ND	ND	--	ND
FEB										
22...	1110	ND	--	ND	--	ND	--	ND	--	ND
MAY										
24...	1100	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG										
16...	1000	ND	--	ND	--	ND	--	ND	--	ND

DATE	DDT IN BOTTOM MATERIAL (UG/KG)	TOTAL DIAZINON (UG/L)	DIAZINON IN BOTTOM MATERIAL (UG/KG)	TOTAL DIELDRIN (UG/L)	DIELDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ENDRIN (UG/L)	ENDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ETHION (UG/L)	ETHION IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR (UG/L)
NOV										
09...	ND	ND	ND	ND	.9	ND	ND	ND	ND	ND
FEB										
22...	--	1.0	--	ND	--	ND	--	ND	--	ND
MAY										
24...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG										
16...	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	HEPTACHLOR IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR EPOXIDE (UG/L)	HEPTACHLOR EPOXIDE IN BOTTOM MATERIAL (UG/KG)	TOTAL LINDANE (UG/L)	LINDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL MALATHION (UG/L)	MALATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHOXYCHLOR (UG/L)	METHOXYCHLOR IN BOTTOM MATERIAL (UG/KG)
NOV									
09...	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB									
22...	--	ND	--	ND	--	ND	--	ND	--
MAY									
24...	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG									
16...	--	ND	--	ND	--	ND	--	ND	--

DATE	TOTAL TRITHION (UG/L)	TRITHION IN BOTTOM MATERIAL (UG/KG)	TOTAL 2,4-D (UG/L)	2,4-D IN BOTTOM MATERIAL (UG/KG)	TOTAL 2,4,5-T (UG/L)	2,4,5-T IN BOTTOM MATERIAL (UG/KG)	TOTAL SILVEX (UG/L)	SILVEX IN BOTTOM MATERIAL (UG/KG)
NOV								
09...	ND	ND	ND	ND	ND	ND	ND	ND
FEB								
22...	ND	--	ND	--	ND	--	ND	--
MAY								
24...	ND	ND	ND	ND	ND	ND	ND	ND
AUG								
16...	ND	--	ND	--	ND	--	ND	--

DATE	TOTAL METHYL PARATHION (UG/L)	METHYL PARATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHYL TRITHION (UG/L)	METHYL TRITHION IN BOTTOM MATERIAL (UG/KG)	TOTAL PARATHION (UG/L)	PARATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL TOXAPHENE (UG/L)	TOXAPHENE IN BOTTOM MATERIAL (UG/KG)
NOV								
09...	ND	ND	ND	ND	ND	ND	ND	ND
FEB								
22...	ND	--	ND	--	ND	--	ND	--
MAY								
24...	ND	ND	ND	ND	ND	ND	ND	ND
AUG								
16...	ND	--	ND	--	ND	--	ND	--

ND Not detected.

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Oct. 6	1150	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Cyclotella	3	3	
		Cymbella	8	10	
		Gomphonema	8	10	
		Melosira	3	3	
		Navicula	11	13	
		Nitzschia	14	16	
		Scenedesmus	33	39	
		TOTAL	86		
Oct. 12	1210	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Crucigenia	160	52	
		Scenedesmus	60	20	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Anacystis	40	13	
		Cyclotella	15	5	
		Melosira	10	3	
		Navicula	15	5	
		Nitzschia	5	2	
		TOTAL	300		
Nov. 9	1025	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	24	14	
		Scenedesmus	24	14	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Achnanthes	6	3	
		Cyclotella	12	7	
		Cymbella	6	3	
		Eunotia	6	3	
		Gomphonema	18	10	
		Melosira	6	3	
		Navicula	54	31	
		Nitzschia	6	3	
		Rhoicosphenia	6	3	
		Chrysophyceae			
		Chrysococcus	6	3	
		TOTAL	180		
Jan. 31	1130	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	23	1	
		Crucigenia	150	7	
		Dictyosphaerium	190	8	
		Kirchneriella	79	4	
		Scenedesmus	19	1	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	46	2	
		Melosira	460	21	
		Stephanodiscus	14	1	
		CYANOPHYTA			
		Myxophyceae			
		Anacystis	97	4	
		Oscillatoria	1,100	48	
		EUGLENOPHYTA			
		Euglenophyceae			
		Trachelomonas	19	1	
		TOTAL	2,200		

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Feb. 22	1110	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	620	11	
		Chodatella	49	1	
		Dictyosphaerium	74	1	
		Selenastrum	74	1	
		Tetrastrum	390	7	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Asterionella	170	3	
		Cyclotella	710	13	
		Fragilaria	490	9	
		Melosira	1,900	35	
		Nitzschia	170	3	
		CYANOPHYTA			
		Myxophyceae			
		Anacystis	440	8	
		Oscillatoria	150	3	
		EUGLENOPHYTA			
		Euglenophyceae			
		Trachelomonas	74	1	
		TOTAL	5,400		
May 24	1100	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	3	2	
		Dictyosphaerium	20	15	
		Scenedesmus	8	6	
		Schroederia	3	2	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Achnanthes	3	2	
		Cyclotella	3	2	
		Melosira	63	46	
		Navicula	15	11	
		Nitzschia	20	15	
		TOTAL	140		
June 28	1130	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	43	2	
		Dictyosphaerium	190	7	
		Golenkinia	14	1	
		Kirchneriella	86	3	
		Oocystis	57	2	
		Scenedesmus	400	15	
		Selenastrum	29	1	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	160	6	
		Gomphonema	14	1	
		Gyrosigma	14	1	
		Navicula	86	3	
		Nitzschia	110	4	
		Pinnularia	43	2	
		Synedra	330	12	
		Xanthophyceae			
		Centritractus	14	1	
		CYANOPHYTA			
		Myxophyceae			
		Oscillatoria	820	30	
		EUGLENOPHYTA			
		Euglenophyceae			
		Euglena	14	1	
		Trachelomonas	86	3	
		TOTAL	2,800		

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
July 25	1045	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	19	1	
		Cosmarium	37	2	
		Pandorina	37	2	
		Scenedesmus	50	3	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Amphora	19	1	
		Diatoma	19	1	
		Gryosigma	12	1	
		Melosira	25	1	
		Navicula	130	8	
		Nitzschia	74	4	
		CYANOPHYTA			
		Cyanophyceae			
		Agmenellum	74	4	
		Anacystis	62	4	
		Oscillatoria	1,100	65	
		EUGLENOPHYTA			
		Euglenophyceae			
		Trachelomonas	31	2	
		TOTAL	1,700		
Aug. 16	1000	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Dictyosphaerium	20	2	
		Scenedesmus	50	4	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Melosira	76	6	
		CYANOPHYTA			
		Cyanophyceae			
		Agmenellum	100	8	
		Anacystis	200	15	
		Phormimidium	840	64	
		EUGLENOPHYTA			
		Euglenophyceae			
		Euglena	10	1	
		TOTAL	1,300		

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Sept. 12	1045	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	6	1	
		Scenedesmus	25	5	
		Treubaria	6	1	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Diatoma	6	1	
		Gomphonema	6	1	
		Melosira	13	2	
		Navicula	25	5	
		Nitzschia	6	1	
		Surirella	6	1	
		Synedra	19	3	
		CYANOPHYTA			
		Cyanophyceae			
		Lyngbya	140	25	
		Oscillatoria	290	53	
		TOTAL	550		

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PERIPHYTON

Date	Length of exposure (days)	Biomass (mg/m^2) Dry weight	Biomass (mg/m^2) Ash weight	Chlorophyll a (mg/m^2)	Chlorophyll b (mg/m^2)	Biomass chlorophyll ratio	Sampling method
Oct. 6	13	16150	20620	0.721	0.430	6187	Polyethylene strip
July 25	26	21800	12680	.213	.150	12680	

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	70	82	62	80	98	66	76	98	100	93	104
2	90	69	71	62	82	92	68	77	103	100	93	105
3	117	78	71	61	84	88	71	78	108	100	97	98
4	107	79	69	67	79	84	70	84	103	103	88	99
5	87	73	68	67	77	85	69	84	103	100	90	99
6	94	71	69	65	78	80	69	78	94	98	92	101
7	92	72	67	65	78	78	74	84	98	97	92	96
8	74	71	73	65	77	94	72	88	98	98	95	98
9	63	73	67	58	86	75	71	82	94	102	96	100
10	84	75	67	50	84	78	72	84	94	104	97	87
11	61	81	67	67	91	78	73	82	92	109	98	87
12	70	72	67	56	82	78	73	86	90	104	100	88
13	67	75	67	57	83	72	73	98	96	98	102	94
14	69	68	61	58	84	67	73	98	94	99	100	87
15	71	65	63	60	84	67	75	103	92	98	104	85
16	73	66	64	61	102	70	73	98	90	97	102	87
17	75	77	61	62	92	72	74	98	88	103	99	89
18	77	94	61	65	89	74	75	94	88	98	106	90
19	77	86	65	68	86	81	77	94	87	96	113	125
20	71	86	65	69	82	70	77	93	92	96	110	104
21	75	87	65	71	84	70	76	90	95	92	113	98
22	75	78	62	71	86	69	76	95	97	90	111	93
23	70	78	63	78	93	67	73	90	98	84	112	93
24	67	82	63	74	89	67	74	90	102	81	112	89
25	73	82	62	78	88	69	78	86	104	83	103	97
26	71	81	61	90	89	70	76	95	108	85	106	90
27	78	83	62	86	88	70	80	96	98	84	110	91
28	72	76	61	80	88	76	76	98	103	86	106	95
29	72	74	64	82	---	77	74	98	103	93	104	95
30	71	92	63	84	---	82	76	104	100	90	100	99
31	71	---	63	83	---	64	---	98	---	92	100	---
MEAN	77	77	66	68	85	76	73	90	97	95	101	95

WTR YR 1977 MEAN 84 MAX 125 MIN 50

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	15.0	10.0	5.0	3.0	11.0	16.5	20.5	24.5	28.0	30.0	29.0
2	22.5	14.5	9.0	5.0	3.0	11.0	16.5	20.0	25.5	29.0	26.5	29.0
3	23.0	15.0	9.0	5.0	3.0	10.0	16.5	19.5	25.0	30.5	27.0	31.0
4	23.5	15.0	9.0	5.0	4.0	10.0	16.0	21.0	26.5	31.5	28.0	30.0
5	22.0	14.5	8.0	4.5	4.0	10.0	16.0	21.0	28.0	29.5	30.0	29.0
6	22.0	14.0	8.0	5.0	4.0	11.0	16.0	22.0	26.0	32.5	30.0	29.0
7	22.0	14.0	8.5	6.0	5.0	11.0	17.0	21.5	25.5	30.0	30.0	29.0
8	23.0	13.0	8.0	5.5	5.0	12.0	17.0	25.5	25.0	30.0	29.0	27.0
9	23.5	12.0	8.0	5.5	5.0	12.0	18.0	22.5	24.5	31.0	30.0	26.5
10	21.5	11.0	7.5	6.0	5.5	11.0	19.0	22.5	24.5	32.0	30.0	27.0
11	21.5	11.0	8.0	4.5	6.0	12.0	19.0	22.5	27.0	33.0	29.0	27.0
12	19.0	11.0	8.0	4.0	7.0	12.0	18.0	22.5	29.0	31.0	29.0	26.5
13	21.0	11.0	9.0	4.0	7.0	14.0	19.0	22.0	25.0	30.0	30.0	26.5
14	21.0	10.5	9.0	4.0	6.5	15.0	20.0	24.5	26.0	30.5	29.5	26.5
15	20.0	10.0	8.0	4.0	7.0	15.0	19.5	26.0	26.5	31.0	29.5	26.5
16	21.0	10.0	8.0	4.0	7.5	16.0	20.0	23.5	26.5	32.5	29.5	26.5
17	19.0	10.5	9.0	3.0	7.0	14.0	20.0	24.5	26.5	32.5	29.5	26.0
18	19.0	10.5	8.5	3.0	6.5	15.0	20.0	24.0	29.0	32.0	28.0	26.5
19	17.5	10.0	9.0	2.0	8.0	14.5	20.5	23.5	30.0	31.5	29.0	25.5
20	17.5	10.0	9.0	1.5	8.0	14.0	20.5	24.5	27.0	31.5	29.0	26.5
21	17.5	11.0	7.0	2.0	8.0	13.0	21.0	24.5	28.0	30.5	29.0	27.0
22	16.0	10.5	7.0	2.0	7.5	13.0	20.0	24.5	30.0	30.0	28.0	26.5
23	16.0	10.0	6.5	2.0	7.5	13.0	19.5	23.5	28.0	31.0	28.0	26.5
24	16.0	10.0	6.0	1.5	9.0	13.0	21.0	23.0	28.0	30.0	28.5	27.0
25	16.5	10.0	6.0	2.0	10.0	14.0	21.0	24.0	28.0	29.0	28.5	27.0
26	17.0	10.0	6.5	3.0	11.0	14.0	19.5	23.0	28.0	27.0	27.0	26.5
27	16.0	10.5	7.0	3.0	11.0	14.0	19.0	23.5	28.0	30.0	29.5	26.5
28	15.0	10.5	7.0	3.0	11.0	16.0	19.0	24.0	30.0	27.0	29.0	26.5
29	16.0	10.5	6.0	3.0	---	15.5	19.0	23.5	28.0	27.0	29.0	26.5
30	15.0	10.5	6.0	3.5	---	15.0	20.5	27.0	28.5	28.0	27.5	25.0
31	16.0	---	6.0	3.5	---	16.0	---	24.5	---	29.0	28.5	---
MEAN	19.5	11.5	8.0	3.5	6.5	13.0	19.0	23.0	27.0	30.5	29.0	27.0

WTR YR 1977 MEAN 18.0 MAX 33.0 MIN 1.5

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE FOR SELECTED DAYS, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT					
06...	1150	6200	18	301	97
12...	1210	32000	51	4410	99
NOV					
09...	1025	8910	30	722	100
JAN					
31...	1130	8720	16	377	100
FEB					
22...	1110	9200	13	323	100
MAR					
28...	1130	3500	19	180	98
APR					
19...	1130	8540	17	392	100
MAY					
24...	1100	349	9	8.5	100
JUN					
28...	1130	399	28	30	86
JUL					
25...	1045	385	20	21	98
AUG					
16...	1000	454	10	12	97
SEP					
12...	1045	9950	147	3950	100

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)	CHEM-ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	BIO-CHEM-ICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLI-FORM (COL. PER 100 ML)
OCT									
18...	1445	10000	70	6.5	15.0	7.6	<10	.3	40
NOV									
17...	1430	9200	60	6.4	11.0	8.1	15	.6	<10
DEC									
14...	1500	19900	50	6.3	9.0	9.6	26	1.5	530
JAN									
24...	1430	8080	50	6.5	4.0	7.9	13	.5	10
FEB									
15...	1500	8720	60	6.8	8.0	10.8	<10	.9	<10
MAR									
10...	1445	13500	60	6.6	12.0	11.4	18	1.0	310
APR									
20...	1315	8630	80	6.8	21.0	7.7	<10	1.0	<10
MAY									
11...	1430	4840	70	6.8	21.0	8.0	18	2.7	<10
JUN									
20...	1500	8770	90	6.9	28.0	5.3	13	2.1	50
JUL									
26...	1440	406	--	6.3	26.0	5.8	<10	.4	<10
AUG									
22...	1500	8220	120	--	28.0	6.0	10	1.1	150
SEP									
28...	1030	516	100	6.7	24.0	4.8	11	.2	<10

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.--178 mi² (461 km²).

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 except those for period of no gage-height record, Oct. 1 to Nov. 4, which are poor. Suspended sediment records for the current year are published on page 359 of this report.

AVERAGE DISCHARGE.--38 years, 262 ft³/s (7.420 m³/s), 19.99 in/yr (508 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)
Jan. 12	1330	878	24.9	6.11	1.862	Mar. 23	1100	*1040	29.5	*6.31	1.923
Mar. 15	1900	974	27.6	6.23	1.899						

Minimum discharge, 46 ft³/s (1.30 m³/s) July 21, gage height, 1.61 ft (0.491 m); minimum daily, 47 ft³/s (1.33 m³/s) July 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	160	406	260	250	284	771	180	204	71	50	57
2	107	150	370	246	240	283	755	176	188	70	61	55
3	115	140	275	236	231	257	580	171	236	91	89	54
4	110	136	207	237	231	226	487	162	190	77	115	52
5	100	135	190	244	236	274	475	161	128	69	94	51
6	95	131	184	254	232	361	512	153	118	65	75	52
7	90	129	225	286	218	494	530	141	172	63	66	55
8	100	128	334	339	205	559	510	134	177	57	59	150
9	130	126	422	366	200	548	443	129	127	55	86	338
10	150	125	446	518	203	485	381	121	115	88	129	564
11	140	126	407	677	208	395	347	121	105	92	213	505
12	120	139	430	850	209	321	321	122	100	90	168	308
13	110	173	526	717	212	401	303	120	103	93	98	131
14	100	172	666	532	216	605	290	114	99	90	82	105
15	95	232	691	493	209	900	278	109	107	74	82	97
16	93	368	665	496	198	792	270	103	117	65	80	118
17	90	429	668	517	190	543	264	101	102	59	86	141
18	100	374	671	478	184	430	258	96	98	55	173	131
19	110	264	560	403	190	377	243	91	93	51	240	163
20	170	193	454	345	207	389	268	104	86	49	199	178
21	250	178	400	314	209	483	260	144	84	47	111	125
22	250	168	378	304	196	800	246	155	81	60	89	101
23	220	168	363	289	185	1020	250	127	97	65	79	90
24	190	158	353	285	211	957	245	136	94	55	73	86
25	170	153	315	285	294	729	249	254	124	50	70	84
26	150	151	327	298	350	553	252	350	137	48	68	81
27	150	164	364	309	332	467	259	365	109	52	67	80
28	140	192	377	317	309	419	215	401	92	51	66	79
29	140	278	365	311	---	396	190	393	82	49	64	76
30	140	373	329	291	---	424	184	314	74	51	61	72
31	150	---	281	267	---	517	---	277	---	51	59	---
TOTAL	4183	5813	12649	11764	6355	15689	10636	5525	3639	2003	3052	4179
MEAN	135	194	408	379	227	506	355	178	121	64.6	98.5	139
MAX	250	429	691	850	350	1020	771	401	236	93	240	564
MIN	90	125	184	236	184	226	184	91	74	47	50	51
CFSM	.76	1.09	2.29	2.13	1.28	2.84	1.99	1.00	.68	.36	.55	.78
IN.	.87	1.21	2.64	2.46	1.33	3.28	2.22	1.15	.76	.42	.64	.87

CAL YR 1976 TOTAL 89321 MEAN 244 MAX 911 MIN 65 CFSM 1.37 IN 18.67
WTR YR 1977 TOTAL 85487 MEAN 234 MAX 1020 MIN 47 CFSM 1.32 IN 17.87

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.--1,220 mi^2 (3,160 km^2), approximately.

WATER-DISCHARGE RECORDS

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) above mean sea level (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.--Water-stage record excellent.

AVERAGE DISCHARGE.--48 years, 1,333 ft^3/s (37.75 m^3/s), 14.84 in/yr (377 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,400 ft^3/s (379 m^3/s) Sept. 24, 1945, gage height, 10.64 ft (3.243 m); minimum, 66 ft^3/s (1.87 m^3/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 ft^3/s (708 m^3/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 ft^3/s (419 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,580 ft^3/s (130 m^3/s) Mar. 25, gage height, 8.14 ft (2.481 m); minimum, 139 ft^3/s (3.94 m^3/s) July 26, gage height, 1.27 ft (0.387 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	360	864	1000	2210	1780	1250	3900	680	3480	542	143	362
2	370	851	979	2090	1730	1300	3650	659	3170	502	165	315
3	380	811	969	2020	1670	1360	3320	636	2790	460	226	281
4	350	754	969	1980	1610	1430	3030	613	2470	425	311	250
5	346	688	969	1900	1570	1520	2830	588	2240	376	495	231
6	335	626	979	1830	1520	1580	2690	559	2070	338	514	224
7	326	575	1040	1830	1470	1770	2580	530	2070	304	436	218
8	325	538	1110	1790	1410	1920	2500	504	2040	277	388	278
9	336	508	1140	1740	1350	2080	2450	488	1940	256	352	563
10	424	489	1200	1810	1290	2210	2400	485	1790	238	315	809
11	486	472	1300	1920	1250	2230	2280	458	1630	218	265	867
12	503	458	1530	2200	1200	2210	2130	432	1470	210	221	859
13	472	449	1680	2610	1170	2390	1980	402	1300	215	196	839
14	467	445	1740	2990	1140	2690	1840	373	1150	238	196	875
15	460	584	1870	3320	1100	2970	1720	349	1270	254	207	969
16	450	631	2110	3570	1070	3120	1600	330	1210	252	249	1120
17	444	672	2400	3830	1040	3060	1480	315	950	247	296	1230
18	442	716	2760	4000	1010	2920	1380	307	783	238	347	1250
19	428	771	3120	3920	990	2750	1260	296	654	224	569	1220
20	438	827	3340	3740	974	2730	1150	296	554	204	651	1150
21	477	896	3420	3580	959	2860	1050	302	512	184	687	1050
22	505	964	3440	3340	950	3440	944	298	466	168	690	896
23	538	1040	3400	3080	929	3960	867	296	445	156	682	774
24	579	1120	3260	2790	964	4380	847	370	462	149	687	711
25	617	1170	3050	2570	1040	4560	803	746	494	144	719	672
26	660	1190	2960	2400	1080	4520	762	1360	563	141	743	635
27	686	1210	2820	2270	1130	4400	731	2880	649	154	759	583
28	713	1180	2660	2140	1200	4240	716	4290	664	179	756	530
29	756	1140	2560	2030	---	4150	708	4380	641	168	654	450
30	805	1060	2450	1930	---	4110	699	4220	593	161	502	405
31	849	---	2330	1850	---	4030	---	3870	---	150	438	---
TOTAL	15327	23699	64555	79280	34596	88140	54297	32312	40520	7772	13859	20616
MEAN	494	790	2082	2557	1236	2843	1810	1042	1351	251	447	687
MAX	849	1210	3440	4000	1780	4560	3900	4380	3480	542	759	1250
MIN	325	445	969	1740	929	1250	699	296	445	141	143	218
CFSM	.41	.65	1.71	2.10	1.01	2.33	1.48	.85	1.11	.21	.37	.56
IN.	.47	.72	1.97	2.42	1.05	2.69	1.66	.99	1.24	.24	.42	.63

CAL YR 1976 TOTAL 406342 MEAN 1110 MAX 3760 MIN 198 CFSM .91 IN 12.39
WTR YR 1977 TOTAL 474973 MEAN 1301 MAX 4560 MIN 141 CFSM 1.07 IN 14.48

02134500 LUMBER RIVER AT BOARDMAN, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947, 1957, 1968-73, 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to current year.
WATER TEMPERATURES: October 1946 to September 1947, October 1974 to current year.

REMARKS.--Miscellaneous chemical data published for water years 1948-50, 1955-56, 1958-67.

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, 255 micromhos July 29, 1977; minimum daily, 39 micromhos Apr. 2, July 25, 1975.
WATER TEMPERATURES: Maximum daily, 30.0°C July 30, 31, 1976, July 15, 1977; minimum daily, 1.0°C Jan. 19, 1976, Jan. 24, 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 255 micromhos July 29; minimum daily, 43 micromhos Mar. 30.
WATER TEMPERATURES: Maximum daily, 30.0°C July 15; minimum daily, 1.0°C Jan. 24.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
DEC										
01...	1100	980	73	6.1	4.5	60	10.0	13	9	2.7
MAR										
18...	1200	2920	65	5.6	15.0	20	6.3	10	7	2.3
MAY										
19...	1030	320	153	6.8	22.0	160	8.8	9	0	1.8
26...	1130	1120	92	5.4	20.0	70	5.9	9	4	2.4
29...	1600	4400	52	6.2	22.0	100	4.5	10	8	2.5
JUL										
26...	1330	144	198	6.5	26.0	140	6.0	10	0	2.4

DATE	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
DEC										
01...	1.4	7.7	54	.9	1.5	4	0	3	5.1	14
MAR										
18...	1.1	8.0	59	1.1	1.3	4	0	3	16	8.1
MAY										
19...	1.1	25	82	3.6	2.0	24	0	20	6.1	13
26...	.7	12	71	1.8	1.4	6	0	5	38	14
29...	1.0	4.5	45	.6	1.4	3	0	2	3.0	10
JUL										
26...	.9	35	85	4.9	2.6	44	0	36	22	15

DATE	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)
DEC										
01...	8.6	.1	8.7	69	47	.09	183	.06	.00	.06
MAR										
18...	9.0	.0	1.4	60	33	.08	473	.07	.01	.08
MAY										
19...	19	.0	4.6	--	79	.11	68.3	.54	.01	.55
26...	11	.0	4.0	74	49	.10	224	.45	.01	.46
29...	6.9	.0	3.9	64	32	.09	760	.50	.01	.51
JUL										
26...	26	.0	5.4	148	113	.20	57.5	.61	.01	.62

02134500 LUMBER RIVER AT BOARDMAN, N.C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE IN BOT. MAT. (MG/KG)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA (NH4) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	DIS-SOLVED ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	SUS-PENDED KJEL. NITRO-GEN (N) (MG/L)	DIS-SOLVED KJEL. NITRO-GEN (N) (MG/L)
DEC										
01...	.05	--	.00	.00	.00	.49	.36	.49	.13	.36
MAR										
18...	.07	--	.02	.01	.01	.48	.35	.50	.14	.36
MAY										
19...	--	4.4	.02	--	--	.76	--	.78	.75	.03
26...	.46	--	.05	.12	.15	.63	.53	.68	.03	.65
29...	.51	--	.01	.02	.03	.71	.56	.72	.14	.58
JUL										
26...	.63	--	.03	.04	.05	.38	.51	.41	.00	.55

DATE	TOTAL KJEL. NITRO-GEN IN BOTTOM MAT. (MG/KG)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED-PHOS-PHORUS (P) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (P04) (MG/L)	TOTAL PHOS-PHORUS IN BOT-TOM MA-TERIAL (MG/KG)
DEC									
01...	--	.55	2.4	.04	.04	.02	.02	.06	--
MAR									
18...	--	.58	2.6	.06	.05	.03	.03	.09	--
MAY									
19...	2700	1.3	5.9	.26	.23	.20	--	--	180
26...	--	1.1	5.0	.15	.11	.09	.14	.43	--
29...	--	1.2	5.4	.06	.09	.04	.04	.12	--
JUL									
26...	--	1.0	4.6	.37	.36	.30	.30	.92	--

DATE	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL CHRO-MIUM IN BOTTOM MA-TERIAL (UG/G)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL COPPER IN BOTTOM MA-TERIAL (UG/G)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL IRON IN BOTTOM MA-TERIAL (UG/G)	TOTAL LEAD (PB) (UG/L)
DEC												
01...	20	17	3	--	7	4	3	--	290	250	--	6
MAR												
18...	<10	<10	0	--	4	1	3	--	310	270	--	5
MAY												
19...	20	16	4	10	7	1	6	<10	640	380	1000	7
26...	20	20	0	--	4	0	4	--	490	260	--	20
29...	10	4	6	--	3	0	3	--	360	270	--	10
JUL												
26...	30	20	10	--	6	2	4	--	700	700	--	5

DATE	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL LEAD IN BOTTOM MA-TERIAL (UG/G)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ZINC IN BOTTOM MA-TERIAL (UG/G)	TOTAL ORGANIC CARBON (C) (MG/L)	DIS-SOL-VED ORGANIC CARBON (C) (MG/L)	ORGANIC CARBON IN BOT-TOM MA-TERIAL (C) (G/KG)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
DEC											
01...	4	2	--	50	40	10	--	5.3	5.0	--	.10
MAR											
18...	5	0	--	30	30	0	--	4.7	3.2	--	.00
MAY											
19...	--	--	<10	20	10	10	40	8.1	4.3	13	.00
26...	16	4	--	70	60	10	--	5.9	2.9	--	.00
29...	4	6	--	50	40	10	--	5.8	2.8	--	.00
JUL											
26...	3	2	--	10	10	0	--	7.2	3.4	--	.00

02134500 LUMBER RIVER AT BOARDMAN, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Dec. 1	1100	CHRYSOPHYTA			Depth Integrating Sampler
		Bacillariophyceae	11	100	
		TOTAL	11		
Mar. 18	1200	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	8	7	
		Chlamydomonadaceae	15	14	
		Mougeotia	8	7	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	30	28	
		Navicula	4	3	
		Nitzschia	45	41	
		TOTAL	110		
May 19	1030	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	81	16	
		Arthrodesmus	4	1	
		Chlamydomonas	4	1	
		Crucigenia	30	6	
		Dictyosphaerium	130	25	
		Scenedesmus	44	9	
		Tetraedron	4	1	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	4	1	
		Gomphonema	7	1	
		Meridion	7	1	
		Navicula	11	2	
		Nitzschia	7	1	
		Surirella	4	1	
		CYANOPHYTA			
		Myxophyceae			
		Agmenellum	15	3	
		Anacystis	74	15	
		Oscillatoria	74	15	
		EUGLENOPHYTA			
		Cryptophyceae			
		Cryptomonas	4	1	
		Euglenophyceae			
		Euglena	4	1	
		TOTAL	500		
May 26	1130	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Oocystaceae	17	4	
		Oocystis	17	4	
		Scenedesmus	76	19	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cocconeis	4	1	
		Cyclotella	4	1	
		Cymbella	8	2	
		Epithemia	4	1	
		Navicula	17	4	
		Nitzschia	8	2	
		Chrysophyceae			
		Dinobryon	4	1	
		CYANOPHYTA			
		Myxophyceae			
		Agmenellum	67	17	
		Anacystis	34	9	
		Oscillatoria	42	11	
		Raphyidiopsis	80	20	
		EUGLENOPHYTA			
		Euglenophyceae			
		Euglena	4	1	
		Trachelomonas	8	2	
		TOTAL	390		

02134500 LUMBER RIVER AT BOARDMAN, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
May 29	1600	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Ankistrodesmus	4	3	
		Pediastrum	34	24	
		Scenedesmus	23	16	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Cyclotella	8	5	
		Cymbella	4	3	
		Epithemia	4	3	
		Navicula	8	5	
		Nitzschia	23	16	
		Pinnularia	4	3	
		CYANOPHYTA			
		Myxophyceae			
		Raphidopsis	34	24	
		TOTAL	150		

02134500 LUMBER RIVER AT BOARDMAN, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	162	84	71	59	56	67	51	84	57	98	209	133
2	163	71	77	64	56	80	53	74	66	103	179	153
3	158	74	79	59	54	78	52	69	71	100	143	158
4	122	84	79	56	59	76	54	74	71	88	194	163
5	91	88	79	56	59	78	52	90	61	73	191	168
6	99	92	78	56	59	73	50	92	68	74	133	143
7	133	93	69	59	59	64	56	98	62	70	133	107
8	133	92	69	59	57	63	55	98	61	67	133	94
9	133	79	71	62	57	64	55	108	70	62	122	143
10	133	80	71	66	67	69	56	88	69	63	122	102
11	128	98	72	61	68	67	51	94	69	61	136	99
12	105	102	77	61	73	69	50	108	69	63	148	95
13	102	102	66	61	75	66	47	118	76	60	163	89
14	121	112	65	63	69	57	48	127	63	125	163	91
15	117	96	66	61	64	56	57	127	62	164	139	90
16	117	79	66	60	65	56	60	127	69	164	138	88
17	117	96	68	56	75	58	59	98	83	166	112	84
18	107	95	68	51	79	59	59	98	87	165	128	99
19	100	94	80	50	77	59	55	142	96	129	117	79
20	101	94	61	54	78	56	57	164	98	123	112	72
21	112	92	57	55	69	55	67	165	90	182	112	69
22	122	81	53	55	70	51	71	187	103	198	102	77
23	112	72	56	57	68	50	74	154	129	225	96	82
24	102	73	53	53	77	51	76	120	127	225	100	86
25	95	74	54	52	80	51	73	112	129	235	104	86
26	100	74	59	55	82	56	66	99	130	204	104	90
27	97	73	50	59	84	52	73	71	88	168	104	83
28	102	72	51	61	72	49	80	51	78	233	101	86
29	102	65	53	61	---	46	81	55	80	255	102	100
30	99	67	56	66	---	43	86	55	92	245	102	120
31	99	---	57	62	---	47	---	55	---	240	99	---
MEAN	116	85	66	58	68	60	61	103	82	143	130	104

WTR YR 1977 MEAN 90 MAX 255 MIN 43

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	13.0	8.0	5.0	3.5	10.0	16.5	17.0	22.5	28.0	26.0	25.0
2	22.0	12.0	8.5	5.0	3.0	9.0	19.0	19.0	23.0	27.0	27.0	26.0
3	20.5	11.0	8.0	5.5	3.0	11.0	19.0	17.5	22.0	26.0	25.0	26.0
4	22.0	12.0	7.5	4.5	5.0	12.0	20.0	20.0	23.0	27.0	25.0	25.0
5	22.0	12.0	7.0	5.5	6.0	13.0	19.5	20.0	23.0	28.0	25.0	25.0
6	22.0	11.0	7.0	5.0	6.0	14.0	16.0	21.0	23.0	29.0	25.0	26.0
7	21.5	10.0	10.0	6.5	4.0	13.0	14.0	23.0	21.0	29.0	25.0	26.0
8	22.5	11.0	11.0	8.0	2.5	11.0	15.0	22.0	19.0	28.5	26.5	26.0
9	22.0	10.0	6.0	6.0	5.0	11.0	14.5	20.5	20.0	29.0	26.5	25.0
10	21.5	10.5	5.0	6.0	5.0	11.5	14.5	18.0	19.0	29.0	28.0	23.0
11	19.0	12.0	8.0	2.0	6.5	14.0	15.0	17.0	19.5	29.0	28.0	24.0
12	15.0	12.0	11.0	5.5	9.0	15.5	17.0	16.5	21.0	27.5	29.0	21.0
13	18.0	11.0	10.0	4.5	6.5	17.0	16.0	20.0	22.0	28.5	27.5	22.0
14	18.0	11.0	7.5	4.5	7.0	18.0	17.5	21.0	22.5	28.0	27.5	22.5
15	19.0	8.0	9.0	5.0	8.0	17.0	18.5	21.0	23.0	30.0	26.5	23.0
16	19.0	10.0	10.0	5.0	7.5	19.0	19.0	20.0	24.0	28.0	28.0	22.0
17	17.5	11.0	8.0	2.5	7.0	17.5	20.0	24.0	24.0	28.0	27.0	22.5
18	19.5	11.0	11.0	3.0	5.5	15.5	19.0	23.0	24.0	27.0	25.0	24.0
19	15.5	10.5	10.0	4.0	7.0	15.5	19.0	22.5	24.0	28.0	28.0	23.0
20	16.5	12.5	10.0	3.0	8.0	16.5	20.0	24.0	24.5	27.5	23.0	24.0
21	16.0	11.0	10.0	3.0	7.0	14.0	20.0	22.0	25.5	28.0	28.0	23.5
22	15.0	10.0	6.0	3.0	6.0	13.5	20.0	23.0	25.0	28.0	24.5	22.0
23	14.0	9.0	8.0	2.0	8.0	13.0	20.0	23.0	26.0	27.0	24.0	21.0
24	14.0	8.0	5.5	1.0	10.5	12.0	20.0	22.0	24.0	27.0	24.0	21.0
25	16.0	6.0	5.5	3.0	10.5	12.5	19.0	21.0	25.0	26.0	24.0	21.0
26	16.0	10.0	7.0	3.0	12.0	14.5	18.5	20.0	26.0	26.0	23.0	22.0
27	15.0	12.0	6.0	4.0	14.0	13.0	17.5	20.5	26.0	24.0	24.0	22.0
28	13.0	12.0	7.0	5.5	12.0	17.0	18.0	22.0	27.0	25.0	25.0	23.0
29	12.0	14.0	8.5	5.5	---	17.0	17.0	22.5	26.0	25.0	24.0	21.0
30	13.0	9.0	6.5	5.0	---	17.0	17.0	21.5	26.0	25.0	25.0	21.0
31	13.0	---	9.0	3.5	---	18.0	---	22.0	---	26.0	24.0	---
MEAN	18.0	11.0	8.0	4.5	7.0	14.5	18.0	21.0	23.5	27.5	25.5	23.5

WTR YR 1977 MEAN 17.0 MAX 30.0 MIN 1.0

02134500 LUMBER RIVER AT BOARDMAN, N. C.--Continued

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE FOR SELECTED DAYS, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT				
04...	1620	351	6	5.7
DEC				
01...	1100	980	3	7.9
28...	1035	2730	4	29
JAN				
25...	0830	2590	3	21
FEB				
15...	0820	1130	2	6.1
MAR				
18...	1200	2920	13	102
22...	0820	3360	5	45
MAY				
19...	1030	320	20	17
26...	1130	1120	24	73
29...	1600	4400	9	107
JUL				
26...	1330	144	22	8.6

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)
OCT									
13...	1310	465	80	6.0	18.0	6.5	42	1.5	10
NOV									
08...	1300	535	60	6.2	10.0	7.3	26	.3	50
DEC									
08...	1320	1070	50	5.6	9.0	7.2	32	1.1	10
JAN									
12...	1340	2230	40	5.6	5.0	7.5	23	.7	90
FEB									
09...	1230	1350	40	6.1	4.0	11.8	22	.6	10
MAR									
08...	1300	1940	50	5.9	12.0	9.7	33	1.0	20
APR									
14...	1200	1860	50	--	20.0	7.0	36	1.1	10
MAY									
09...	1200	487	100	6.5	21.0	6.5	42	1.5	100
JUN									
13...	1330	1290	60	6.0	24.0	6.2	45	1.7	20
JUL									
14...	1220	239	140	7.4	29.0	5.8	<10	1.0	190
AUG									
17...	1220	308	130	6.8	28.0	6.4	26	.7	50
SEP									
21...	1230	1050	80	5.8	25.0	5.0	64	.8	20

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.--171 mi² (443 km²) 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) above mean sea level.

REMARKS.--Records good. 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 359 of this report.

AVERAGE DISCHARGE.--36 years, 341 ft³/s (9.657 m³/s), 27.08 in/yr (688 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,700 ft³/s (558 m³/s) Aug. 28, 1949, gage height, 15.02 ft (4.578 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. 9	0700	3980	113	7.11	2.167	Apr. 5	0430	5180	147	8.61	2.624
Mar. 13	0430	*12500	354	*13.51	4.118	Sept. 8	0500	4000	113	7.14	2.176

Minimum discharge, 77 ft³/s (2.18 m³/s) Aug. 3, gage height, 0.91 ft (0.277 m); minimum daily, 108 ft³/s (3.06 m³/s) Aug. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	253	304	289	265	184	253	622	337	365	198	113	124
2	195	292	280	256	184	236	537	346	298	196	108	117
3	182	280	265	265	184	225	607	438	274	183	122	116
4	174	265	250	262	192	345	709	715	260	178	122	113
5	166	241	241	265	200	328	3350	558	251	173	139	113
6	163	208	310	265	179	569	1290	444	252	167	131	111
7	651	214	1320	283	176	581	906	400	267	162	112	220
8	1900	226	552	262	176	442	745	361	232	156	135	2150
9	2550	229	420	274	179	377	641	325	232	165	140	605
10	750	238	376	286	182	338	581	322	218	177	173	350
11	489	211	356	235	184	353	535	296	212	174	132	260
12	380	250	412	259	192	1320	494	308	241	163	116	207
13	325	205	342	256	240	6230	466	323	218	154	113	194
14	304	214	325	262	216	1390	447	312	289	147	135	295
15	283	229	821	271	211	869	423	304	264	145	196	365
16	229	238	740	262	202	686	400	265	265	137	222	1040
17	244	229	556	220	190	571	379	241	301	144	193	830
18	253	226	472	259	180	517	370	243	307	142	188	704
19	259	205	432	247	179	459	398	250	250	128	149	466
20	277	179	412	240	179	497	386	232	235	122	133	332
21	265	176	384	235	171	439	354	236	219	137	141	277
22	238	171	339	225	172	640	338	231	216	156	179	246
23	195	176	304	220	174	517	515	296	300	164	154	226
24	200	187	292	220	317	462	818	282	235	133	169	215
25	295	189	289	220	257	425	471	386	260	132	148	205
26	432	192	349	220	229	398	401	435	234	140	146	198
27	307	253	298	210	281	377	376	494	217	129	177	188
28	283	283	286	210	284	364	353	375	211	124	161	179
29	268	440	283	192	---	377	355	336	206	127	161	170
30	238	319	268	184	---	1200	344	323	193	132	137	170
31	349	---	280	197	---	835	---	342	---	120	130	---
TOTAL	13097	7069	12543	7527	5694	22620	18611	10756	7522	4705	4575	10786
MEAN	422	236	405	243	203	730	620	347	251	152	148	360
MAX	2550	440	1320	286	317	6230	3350	715	365	198	222	2150
MIN	163	171	241	184	171	225	338	231	193	120	108	111
CFSM	2.47	1.38	2.37	1.42	1.19	4.27	3.63	2.03	1.47	.89	.87	2.11
IN.	2.85	1.54	2.73	1.64	1.24	4.92	4.05	2.34	1.64	1.02	1.00	2.35

CAL YR 1976 TOTAL 134346 MEAN 367 MAX 3700 MIN 122 CFSM 2.15 IN 29.23
WTR YR 1977 TOTAL 125505 MEAN 344 MAX 6230 MIN 108 CFSM 2.01 IN 27.30

02138500 LINVILLE RIVER NEAR NEBO, N. C.

LOCATION.--Lat 35°47'43", long 81°53'27", 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.--67.2 mi² (174.0 km²).

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). WSP 1723: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,204.87 ft (367.244 m) above mean sea level. 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 good except those for period of no gage-height record, Mar. 11-29, and those for winter periods, which are poor. Suspended-sediment records for the current year are published on page 359 of this report.

AVERAGE DISCHARGE.--55 years, (1922-77), 147 ft³/s (4.163 m³/s), 29.71 in/yr (755 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)
Oct. 7	2400	2860	81.0	5.04	1.536	Apr. 5	0530	3440	97.4	5.43	1.655
Oct. 8	1630	3020	85.5	5.15	1.570	May 26	0200	1840	52.1	4.22	1.286
Oct. 9	0700	3560	101	5.51	1.679	Sept. 8	0930	1690	47.9	4.08	1.244
Mar. 13	about 0600	*6840	194	*7.07	2.155						

Minimum discharge, 36 ft³/s (1.02 m³/s) Sept. 5, 6, gage height, 0.89 ft (0.271 m); minimum daily, 37 ft³/s (1.05 m³/s) Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	167	99	63	60	206	295	138	321	139	39	50
2	70	150	101	76	63	178	242	133	247	111	38	47
3	58	144	91	76	63	160	302	144	202	98	39	44
4	52	129	84	94	64	197	361	371	177	90	40	40
5	47	112	84	94	69	258	2090	284	159	85	46	38
6	46	107	95	91	60	392	684	213	146	79	60	37
7	583	102	586	91	60	384	437	189	181	76	69	49
8	2290	97	318	67	60	267	333	178	143	71	47	943
9	2350	91	210	74	60	219	269	156	130	70	50	296
10	641	85	177	76	55	195	230	143	127	83	137	164
11	328	83	159	68	58	183	207	134	111	71	63	122
12	234	92	155	68	64	310	189	127	111	70	58	98
13	190	92	159	68	76	3400	175	119	104	68	54	83
14	163	80	142	78	87	700	165	112	149	60	80	99
15	142	78	250	104	88	400	155	107	134	54	78	120
16	129	78	334	103	77	300	143	115	183	50	66	188
17	135	76	232	80	68	250	136	101	162	48	57	223
18	136	72	196	68	64	230	131	94	155	48	83	173
19	112	71	174	70	76	200	128	88	151	44	89	133
20	109	67	162	76	74	190	156	85	134	42	60	232
21	116	66	162	78	65	190	139	85	125	55	52	153
22	102	64	125	85	60	230	120	86	109	50	49	121
23	94	59	137	86	76	200	161	120	158	46	47	105
24	92	61	118	83	325	200	392	115	143	44	45	94
25	111	62	115	79	325	170	215	126	175	43	50	86
26	190	61	127	74	223	160	176	1080	143	50	47	80
27	149	77	98	73	254	155	159	494	124	47	47	75
28	128	89	104	71	292	150	148	402	119	44	46	70
29	118	166	107	57	---	150	154	394	117	45	49	64
30	115	137	76	57	---	501	155	301	104	45	48	61
31	167	---	94	63	---	466	---	314	---	43	45	---
TOTAL	9299	2815	5071	2391	2966	11191	8647	6548	4544	1969	1778	4088
MEAN	300	93.8	164	77.1	106	361	288	211	151	63.5	57.4	136
MAX	2350	167	586	104	325	3400	2090	1080	321	139	137	943
MIN	46	59	76	57	55	150	120	85	104	42	38	37
CFSM	4.46	1.40	2.44	1.15	1.58	5.37	4.29	3.14	2.25	.95	.85	2.02
IN.	5.15	1.56	2.81	1.32	1.64	6.19	4.79	3.62	2.52	1.09	.98	2.26

CAL YR 1976 TOTAL 68216 MEAN 186 MAX 4640 MIN 35 CFSM 2.77 IN 37.76
WTR YR 1977 TOTAL 61307 MEAN 168 MAX 3400 MIN 37 CFSM 2.50 IN 33.94

02141150 LOWER CREEK AT MULBERRY STREET AT LENOIR, N. C.

LOCATION.--Lat 35°54'20", long 81°31'59", Caldwell County, Hydrologic Unit 03050101, on left bank at upstream side of bridge on Mulberry Street, 1,100 ft (335 m) downstream from Zacks Fork Creek, and 0.8 mi (1.3 km) southeast of courthouse, Lenoir.

DRAINAGE AREA.--31.8 mi² (82.4 km²).

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,071.45 ft (326.578 m) above mean sea level.

REMARKS.--Records fair except those above 1,000 ft³/s (28.3 m³/s) and those for July and August, which are poor. Records on falling stages following periods of heavy overbank flow are affected by variable backwater. They are subject to error. At times slight fluctuation and diversions by commercial and recreational developments. Over the years various creek channel alterations have been made. Suspended-sediment records for the current year are published on page 360 of this report.

AVERAGE DISCHARGE.--11 years, 40.9 ft³/s (1.158 m³/s), 17.47 in/yr (444 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,430 ft³/s (97.1 m³/s) Aug. 10, 1970, gage height, 11.03 ft (3.362 m) in gage well, 11.50 ft (3.505 m), from outside gage; minimum, 5.8 ft³/s (0.16 m³/s) July 17, 1970; minimum daily, 7.7 ft³/s (0.22 m³/s) July 17, 20, 1970; minimum gage height, 0.55 ft (0.168 m) Oct. 1, 1968, July 17, 1970.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Aug. 13, 1940 reached a stage of 1,087.0 ft (331.32 m) above mean sea level, at mouth of Zacks Fork Creek 1,100 ft (335 m) upstream, discharge, 20,000 ft³/s (566 m³/s) on basis of contracted-opening measurement of peak flow.

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. 9	0230	*1570	44.5	*9.54	2.908	Sept. 8	0515	682	19.3	4.62	1.408
Mar. 13	0400	570	16.1	4.05	1.234	Sept. 16	1445	920	26.1	6.00	1.829
Apr. 5	0545	1120	31.7	7.45	2.271						

Minimum discharge, 9.5 ft³/s (0.27 m³/s) Sept. 3, 4, gage height, 0.69 ft (0.210 m); minimum daily, 11 ft³/s (0.31 m³/s) Aug. 29, 30, Sept. 3, 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	30	34	26	22	29	52	24	27	18	13	12
2	22	28	30	27	22	27	44	24	21	17	13	12
3	20	27	28	26	23	26	51	24	20	16	19	11
4	18	26	26	27	24	36	107	35	20	16	15	11
5	18	25	25	28	24	33	600	26	19	16	20	11
6	17	24	47	28	24	90	103	24	26	15	20	13
7	85	24	252	30	24	63	65	24	22	14	15	27
8	686	23	70	27	24	45	53	23	19	13	15	280
9	935	23	48	28	24	38	45	22	18	14	16	35
10	103	22	40	32	22	34	42	21	17	15	16	24
11	58	22	37	23	22	35	39	21	17	19	15	20
12	42	24	42	22	24	41	37	21	18	17	16	18
13	35	22	36	23	32	241	34	21	17	15	16	17
14	31	22	32	26	26	73	32	21	22	14	22	25
15	28	22	177	28	25	52	31	20	18	14	19	19
16	27	22	92	26	23	43	30	20	82	14	18	365
17	32	21	57	22	22	37	29	20	25	13	19	84
18	26	21	46	22	22	35	28	20	23	13	34	52
19	25	21	40	22	22	32	29	20	21	13	15	33
20	30	21	42	23	22	36	27	20	19	12	14	27
21	26	20	37	24	21	33	26	19	18	12	14	23
22	24	20	33	25	21	53	27	48	20	12	13	21
23	23	20	31	25	21	40	31	47	23	14	15	20
24	23	20	29	25	45	35	50	26	20	12	17	19
25	100	20	29	25	31	32	29	23	23	12	14	19
26	78	21	36	25	28	30	27	22	21	13	13	18
27	43	25	31	26	38	28	26	22	19	14	13	18
28	34	60	30	25	33	28	25	21	24	13	12	17
29	30	82	29	24	---	185	25	22	21	13	11	17
30	32	44	27	24	---	162	25	25	18	16	11	17
31	37	---	27	22	---	79	---	27	---	14	12	---
TOTAL	2715	802	1540	786	711	1751	1769	753	678	443	495	1285
MEAN	87.6	26.7	49.7	25.4	25.4	56.5	59.0	24.3	22.6	14.3	16.0	42.8
MAX	935	82	252	32	45	241	600	48	82	19	34	365
MIN	17	20	25	22	21	26	25	19	17	12	11	11
CFSM	2.75	.84	1.56	.80	.80	1.78	1.86	.76	.71	.45	.50	1.35
IN.	3.18	.94	1.80	.92	.83	2.05	2.07	.88	.79	.52	.58	1.50

CAL YR 1976 TOTAL 13113 MEAN 35.8 MAX 935 MIN 10 CFSM 1.13 IN 15.34
WTR YR 1977 TOTAL 13728 MEAN 37.6 MAX 935 MIN 11 CFSM 1.18 IN 16.06

02142000 LOWER LITTLE RIVER NEAR ALL HEALING SPRINGS, N. C.

LOCATION (REVISED).--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.--31.2 mi^2 (80.8 km^2).

PERIOD OF RECORD.--October to December 1952 (monthly discharge only), January 1953 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,070 ft (326 m), by barometer. Prior to June 13, 1953, non-recording gage at same site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 360 of this report.

AVERAGE DISCHARGE.--25 years, 37.1 ft^3/s (1.051 m^3/s), 16.15 in/yr (410 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,850 ft^3/s (137 m^3/s) Aug. 10, 1970, gage height, 15.68 ft (4.779 m); minimum, 2.9 ft^3/s (0.082 m^3/s) Sept. 20, 21, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 550 ft^3/s (16 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 8	2400	*1990	56.4	*11.76	3.584	Sept. 8	0900	1850	52.4	11.44	3.487
Apr. 5	0530	1040	29.5	8.80	2.682	Sept. 16	1500	1320	37.4	9.99	3.045

Minimum discharge, 6.6 ft^3/s (0.187 m^3/s) Aug. 8, gage height, 0.98 ft (0.299 m); minimum daily, 7.2 ft^3/s (0.204 m^3/s) Aug. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	31	43	27	26	31	58	29	32	15	7.7	12
2	24	28	36	26	27	29	49	28	22	17	7.6	11
3	20	28	32	27	26	28	57	31	20	14	8.9	11
4	18	26	29	27	25	37	65	28	19	14	9.4	11
5	17	25	27	28	25	36	496	26	18	13	8.7	11
6	17	24	31	28	24	64	131	28	20	12	11	11
7	44	23	164	28	24	63	89	25	21	12	7.9	27
8	723	22	89	27	24	49	71	24	18	12	7.2	802
9	869	22	62	29	23	41	60	23	19	14	7.9	109
10	118	22	50	29	23	37	54	23	17	16	7.5	61
11	68	21	44	29	24	36	49	23	16	26	8.4	43
12	49	23	46	29	25	36	46	22	17	16	10	33
13	40	21	40	31	31	101	43	21	16	16	35	29
14	34	21	36	32	27	67	41	21	21	14	25	31
15	30	21	95	33	26	50	39	21	18	13	17	32
16	28	21	92	32	25	43	37	20	17	12	13	443
17	28	20	66	31	25	37	35	20	17	12	12	161
18	26	20	53	29	24	35	34	20	18	12	42	83
19	26	20	45	29	24	32	35	20	16	11	17	57
20	31	20	45	28	23	35	35	19	15	10	14	46
21	27	19	41	28	23	32	33	19	14	9.9	19	37
22	25	19	36	26	22	44	32	19	15	10	14	32
23	25	18	35	28	22	37	33	27	19	12	18	29
24	24	18	33	27	38	34	43	24	18	10	15	28
25	76	18	33	26	32	32	33	25	24	9.7	14	26
26	97	19	38	26	29	31	31	24	22	10	13	25
27	53	23	34	26	34	30	30	22	17	9.3	13	24
28	39	64	33	26	33	29	30	21	17	9.0	13	23
29	34	100	31	26	---	30	29	27	16	9.5	13	22
30	32	59	29	26	---	101	29	25	15	10	12	22
31	37	---	29	26	---	82	---	22	---	8.4	12	---
TOTAL	2716	816	1497	870	734	1369	1847	727	554	388.8	433.2	2292
MEAN	87.6	27.2	48.3	28.1	26.2	44.2	61.6	23.5	18.5	12.5	14.0	76.4
MAX	869	100	164	33	38	101	496	31	32	26	42	802
MIN	17	18	27	26	22	28	29	19	14	8.4	7.2	11
CFSM	2.81	.87	1.55	.90	.84	1.42	1.97	.75	.59	.40	.45	2.45
IN.	3.24	.97	1.78	1.04	.88	1.63	2.20	.87	.66	.46	.52	2.73

CAL YR 1976 TOTAL 13188.6 MEAN 36.0 MAX 869 MIN 9.2 CFSM 1.15 IN 15.72
WTR YR 1977 TOTAL 14244.0 MEAN 39.0 MAX 869 MIN 7.2 CFSM 1.25 IN 16.98

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.--16.1 mi² (41.7 km²).

PERIOD OF RECORD.--June 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 648.7 ft (197.72 m) above mean sea level.

REMARKS.--Records fair except those for period of no gage-height record, Oct. 4-15, which are poor. Occasional diversions for irrigation by upstream golf course. The minimum for the year may be affected by diversion. Suspended sediment records for the current year are published on page 360 of this report.

AVERAGE DISCHARGE.--12 years, 17.6 ft³/s (0.498 m³/s), 14.85 in/yr (377 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. 9	0800	*3480	98.6	a*11.30	3.444	Dec. 15	1400	612	17.3	6.31	1.923
Dec. 7	0745	1260	35.7	8.70	2.652	Feb. 27	1600	520	14.7	5.80	1.768
Dec. 12	0700	508	14.4	5.72	1.743	Mar. 30	0545	1300	36.8	8.79	2.679

a From highwater mark.

Minimum discharge, 0.60 ft³/s (0.017 m³/s) July 25, 26, gage height, 0.80 ft (0.244 m); minimum daily, 0.77 ft³/s (0.022 m³/s) Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	6.5	14	11	8.9	21	34	5.5	20	7.3	1.2	.89
2	16	5.8	12	10	8.5	16	24	5.8	11	4.5	1.4	.77
3	6.2	5.8	12	11	9.3	12	37	5.1	5.8	2.9	3.5	.83
4	3.9	5.5	10	11	10	20	29	4.8	4.5	2.5	3.8	.82
5	3.1	5.5	9.3	12	9.3	19	101	4.8	4.3	2.4	2.0	.82
6	3.1	5.1	12	11	8.5	34	31	4.3	11	2.6	1.7	.82
7	9.4	5.5	497	36	7.3	64	22	4.3	12	2.4	1.6	1.1
8	31	5.1	106	17	6.5	22	18	4.5	4.8	2.3	1.4	86
9	1600	5.1	39	39	6.5	18	16	4.3	6.2	2.3	1.4	17
10	65	5.1	22	214	6.9	16	14	4.1	3.8	2.2	1.0	5.9
11	20	5.1	24	34	6.5	16	13	4.3	3.5	2.1	1.8	3.2
12	10	7.7	240	20	6.9	15	12	4.1	4.5	2.1	1.2	2.4
13	7.4	5.5	60	16	15	111	11	3.8	7.3	2.0	1.0	4.3
14	6.2	5.5	25	28	10	29	10	4.3	3.8	2.0	1.0	2.3
15	5.8	25	225	35	8.9	20	9.7	4.1	3.5	2.0	1.2	2.1
16	5.1	12	64	22	6.9	17	9.3	3.8	8.1	1.9	1.7	25
17	5.8	8.9	28	15	6.5	14	8.5	3.8	3.3	1.9	2.1	21
18	5.5	7.3	20	13	6.5	13	8.1	3.6	3.0	1.5	2.2	6.6
19	4.8	6.5	17	11	6.9	12	9.3	3.6	2.9	1.5	2.2	4.1
20	55	6.2	29	11	6.9	56	9.7	13	2.9	1.5	1.4	3.2
21	18	5.8	28	11	6.5	33	7.7	5.1	2.7	1.5	1.2	2.8
22	10	5.5	17	9.7	6.5	182	7.3	4.5	2.5	1.7	1.1	2.7
23	7.7	5.1	16	9.3	7.3	35	7.3	9.7	3.3	1.4	1.1	2.5
24	6.5	5.1	14	11	20	22	11	5.8	2.8	1.4	1.1	2.6
25	6.5	5.1	13	11	13	18	8.1	7.3	3.3	1.3	1.2	2.6
26	8.1	5.1	34	11	11	16	6.9	16	3.0	1.4	1.1	2.8
27	6.5	5.5	19	12	150	14	6.5	11	2.7	1.3	1.1	2.7
28	5.8	44	16	12	50	17	6.2	6.9	3.0	1.3	1.1	2.7
29	5.5	136	14	11	---	32	6.2	5.1	3.6	1.7	.95	2.4
30	5.5	21	12	8.9	---	823	6.2	4.5	3.3	2.1	.94	2.5
31	8.5	---	12	9.7	---	94	---	4.5	---	2.0	.91	---
TOTAL	1971.9	382.9	1660.3	693.6	427.0	1831	500.0	176.3	156.4	67.0	46.60	215.45
MEAN	63.6	12.8	53.6	22.4	15.3	59.1	16.7	5.69	5.21	2.16	1.50	7.18
MAX	1600	136	497	214	150	823	101	16	20	7.3	3.8	86
MIN	3.1	5.1	9.3	8.9	6.5	12	6.2	3.6	2.5	1.3	.91	.77
CFSM	3.95	.80	3.33	1.39	.95	3.67	1.04	.35	.32	.13	.09	.45
IN.	4.56	.88	3.84	1.60	.99	4.23	1.16	.41	.36	.15	.11	.50

CAL YR 1976 TOTAL 7137.80 MEAN 19.5 MAX 1600 MIN 1.1 CFSM 1.21 IN 16.49
WTR YR 1977 TOTAL 8128.45 MEAN 22.3 MAX 1600 MIN .77 CFSM 1.39 IN 18.78

02143000 HENRY FORK NEAR HENRY RIVER, N. C.

LOCATION.--Lat 35°41'06", long 81°24'03", 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.--80 mi² (207 km²), approximately.

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) above mean sea level. July 1925 to November 1931, at site 450 ft (137 m) upstream at same datum.

REMARKS.--Records good. The mill above the station which in previous years caused diurnal fluctuation and some regulation continued inactive. An average of 2.0 ft³/s (0.057 m³/s) was diverted for water supply by town of Morganton and wasted into Catawba River. Suspended-sediment records for the current year are published on page 360 of this report.

AVERAGE DISCHARGE.--41 years (1925-31, 1942-77), 131 ft³/s (3.710 m³/s), 22.24 in/yr (565 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. 9	0500	*5680	161	*11.48	3.499	Apr. 5	0700	3020	85.5	7.45	2.271

Minimum discharge, 30 ft³/s (0.85 m³/s) Aug. 8, Sept. 7, gage height, 0.94 ft (0.287 m); minimum daily, 32 ft³/s (0.91 m³/s) Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	140	143	110	90	123	223	111	108	84	36	39
2	80	115	119	105	90	109	181	111	87	71	34	37
3	65	103	107	112	85	101	190	119	78	65	38	35
4	58	96	97	110	94	165	194	172	74	60	45	33
5	54	89	92	112	96	220	1780	140	71	59	40	33
6	53	85	102	111	90	262	457	118	73	56	36	32
7	158	82	983	118	85	295	283	109	93	54	33	39
8	1660	79	385	109	90	202	230	104	72	52	34	470
9	3260	77	227	115	85	161	197	99	70	59	35	183
10	434	77	174	139	90	141	180	96	67	54	37	114
11	212	75	154	110	90	133	168	95	64	51	39	75
12	150	83	176	100	90	132	158	94	69	50	40	58
13	124	76	177	105	120	305	152	92	68	51	37	53
14	108	73	156	116	115	235	147	90	113	47	33	86
15	96	75	584	125	105	174	143	88	94	46	41	75
16	89	74	491	120	98	150	137	85	114	44	69	963
17	90	72	269	135	92	135	132	84	111	42	125	532
18	85	70	201	113	91	129	129	81	102	41	89	274
19	80	68	168	107	90	122	135	80	79	40	55	151
20	89	68	168	110	89	145	134	80	74	38	46	109
21	89	68	169	103	85	129	129	86	69	39	43	88
22	79	65	145	100	83	167	122	80	66	47	43	77
23	78	65	139	96	84	160	128	90	90	52	41	70
24	76	65	132	102	115	142	166	91	73	43	47	66
25	121	65	127	102	109	130	137	96	131	40	52	62
26	280	65	153	99	96	122	125	97	83	41	43	62
27	145	83	140	100	117	117	119	120	72	39	44	59
28	111	162	134	101	143	114	115	95	75	37	52	57
29	98	465	127	100	---	118	114	85	121	39	46	54
30	96	214	118	95	---	492	113	80	89	47	41	54
31	157	---	119	95	---	361	---	123	---	41	39	---
TOTAL	8404	2994	6476	3375	2707	5491	6618	3091	2550	1529	1433	4040
MEAN	271	99.8	209	109	96.7	177	221	99.7	85.0	49.3	46.2	135
MAX	3260	465	983	139	143	492	1780	172	131	84	125	963
MIN	53	65	92	95	83	101	113	80	64	37	33	32
CFSM	3.39	1.25	2.61	1.36	1.21	2.21	2.76	1.25	1.06	.62	.58	1.69
IN.	3.91	1.39	3.01	1.57	1.26	2.55	3.08	1.44	1.19	.71	.67	1.88

CAL YR 1976 TOTAL 47787 MEAN 131 MAX 3260 MIN 29 CFSM 1.64 IN 22.22
WTR YR 1977 TOTAL 48708 MEAN 133 MAX 3260 MIN 32 CFSM 1.66 IN 22.65

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.--25.4 mi² (65.8 km²).

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) above mean sea level.

REMARKS.--Records good.

AVERAGE DISCHARGE.--16 years, 49.4 ft³/s (1.399 m³/s), 26.41 in/yr (671 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,220 ft³/s (204 m³/s) Oct. 17, 1975 (gage height, 19.74 ft or 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 or 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. 8	2230	*3660	104	*14.57	4.441	Apr. 5	0530	1440	40.8	8.06	2.457
Nov. 28	2100	642	18.2	4.79	1.460	Sept. 16	1400	1480	41.9	8.25	2.515
Dec. 7	0600	650	18.4	4.82	1.469						

Minimum discharge, 8.7 ft³/s (0.25 m³/s) Aug. 7, 11. Minimum gage height, 1.58 ft (0.482 m) Sept. 3, 4, 5, 6. Minimum daily, 9.3 ft³/s (0.26 m³/s) Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	55	54	38	27	46	75	32	29	19	10	11
2	23	41	44	37	27	39	61	32	25	18	9.9	10
3	19	38	39	37	26	35	81	31	22	17	12	9.7
4	17	34	35	36	29	93	86	32	20	16	12	9.4
5	16	31	32	37	29	99	658	30	20	15	10	9.3
6	16	29	42	37	26	87	145	29	23	14	9.6	14
7	71	28	359	41	26	96	88	27	25	14	9.8	18
8	957	27	116	37	26	67	72	27	20	13	13	282
9	925	26	68	39	27	53	61	26	19	19	12	78
10	122	26	54	44	27	47	55	26	18	18	11	41
11	62	25	49	35	27	45	53	26	18	14	9.6	25
12	45	29	63	37	30	49	50	25	20	14	13	19
13	38	25	65	35	50	138	48	25	18	14	23	18
14	34	25	54	39	43	82	46	24	40	13	18	54
15	32	26	248	43	38	59	45	24	25	13	13	34
16	33	25	164	39	34	50	44	23	26	12	12	517
17	33	24	87	36	31	44	43	23	27	11	12	141
18	26	24	64	42	30	43	41	22	24	11	11	66
19	26	23	54	39	30	40	40	22	20	10	13	42
20	30	23	60	40	29	49	39	25	19	10	13	31
21	28	23	60	34	28	42	38	28	17	17	13	26
22	26	22	51	32	27	59	36	28	18	13	14	23
23	24	22	49	31	27	54	44	34	23	12	12	21
24	25	22	45	32	39	46	50	26	21	12	14	20
25	67	22	44	32	34	42	40	29	29	11	12	19
26	109	22	60	31	31	39	36	30	21	11	11	18
27	51	28	54	31	48	37	34	33	19	10	10	17
28	38	190	49	32	61	36	33	26	28	10	11	17
29	34	231	46	26	---	41	33	24	32	12	10	15
30	36	84	41	31	---	322	32	25	21	13	10	15
31	67	---	42	28	---	134	---	28	---	11	11	---
TOTAL	3068	1250	2292	1108	907	2113	2207	842	687	417	374.9	1620.4
MEAN	99.0	41.7	73.9	35.7	32.4	68.2	73.6	27.2	22.9	13.5	12.1	54.0
MAX	957	231	359	44	61	322	658	34	40	19	23	517
MIN	16	22	32	26	26	35	32	22	17	10	9.6	9.3
CFSM	3.90	1.64	2.91	1.41	1.28	2.69	2.90	1.07	.90	.53	.48	2.13
IN.	4.49	1.83	3.36	1.62	1.33	3.09	3.23	1.23	1.01	.61	.55	2.37

CAL YR 1976 TOTAL 17131.0 MEAN 46.8 MAX 957 MIN 9.3 CFSM 1.84 IN 25.09
WTR YR 1977 TOTAL 16886.3 MEAN 46.3 MAX 957 MIN 9.3 CFSM 1.82 IN 24.73

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.--68.4 mi² (177.2 km²).

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 or 224 m (by barometer).

REMARKS.--Records good.

AVERAGE DISCHARGE.--26 years, 91.1 ft³/s (2.580 m³/s), 18.09 in/yr (459 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)
Oct. 9	1430	*5460	155	*8.39	2.557	Mar. 30	1700	2450	69.4	5.85	1.783

Minimum discharge, 9.0 ft³/s (0.25 m³/s) Aug. 14, 15, gage height, 0.67 ft (0.204 m). Minimum daily, 9.0 ft³/s (0.25 m³/s) Aug. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	61	103	76	66	71	200	55	51	29	14	13
2	36	55	87	73	67	66	149	55	76	28	12	13
3	30	54	78	75	68	62	209	52	40	24	16	13
4	28	53	69	77	68	79	181	51	37	21	23	11
5	25	46	65	80	69	86	835	49	36	21	19	13
6	25	45	75	76	62	96	270	47	35	19	15	13
7	27	47	968	108	63	133	164	46	34	18	12	14
8	696	46	264	85	63	98	131	44	30	17	10	341
9	3450	46	154	90	64	84	108	42	29	16	12	72
10	752	46	116	229	65	77	97	41	28	16	12	41
11	159	45	98	144	66	80	90	42	27	18	14	32
12	113	48	237	103	67	79	85	42	28	18	14	27
13	89	44	200	93	90	135	82	41	33	29	10	23
14	74	44	124	105	74	92	79	40	36	25	9.0	33
15	65	52	526	118	69	77	72	39	36	20	12	29
16	59	50	296	100	65	71	66	38	32	18	16	457
17	57	47	159	77	64	66	64	38	35	16	20	851
18	55	47	116	80	62	65	63	36	33	14	33	214
19	51	46	97	74	61	61	61	36	31	13	27	95
20	63	45	146	82	64	89	61	39	28	12	20	68
21	58	45	166	78	60	76	61	40	26	13	18	53
22	50	43	110	77	56	126	59	38	22	12	17	45
23	48	42	97	73	57	89	60	38	30	16	15	42
24	47	42	90	76	89	78	68	39	29	13	20	39
25	56	43	86	78	82	72	61	47	36	15	23	38
26	71	44	113	74	71	69	55	52	30	12	20	36
27	52	57	93	74	74	67	5[illegible]	68	29	13	17	35
28	48	145	88	75	83	68	5[illegible]	46	26	13	20	34
29	47	540	85	70	---	78	52	40	50	12	17	31
30	49	158	81	65	---	1680	5[illegible]	36	33	16	15	31
31	87	---	82	68	---	622	---	37	---	15	14	---
TOTAL	6524	2126	5069	2753	1909	4692	3644	1354	1026	542	516.0	2757
MEAN	210	70.9	164	88.8	68.2	151	121	43.7	34.2	17.5	16.6	91.9
MAX	3450	540	968	229	90	1680	835	68	76	29	33	851
MIN	25	42	65	65	56	61	52	36	22	12	9.0	11
CFSM	3.07	1.04	2.40	1.30	1.00	2.21	1.77	.64	.50	.26	.24	1.34
IN.	3.55	1.16	2.76	1.50	1.04	2.55	1.98	.74	.56	.29	.28	1.50

CAL YR 1976 TOTAL 30307.0 MEAN 82.8 MAX 3450 MIN 13 CFSM 1.21 IN 16.48
WTR YR 1977 TOTAL 32912.0 MEAN 90.2 MAX 3450 MIN 9.0 CFSM 1.32 IN 17.90

02144000 LONG CREEK NEAR BESSEMER CITY, N. C.

LOCATION.--Lat 35°18'23", long 81°14'03", 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.--31.4 mi^2 (81.3 km^2).

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) above mean sea level.

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 1.8 ft^3/s (0.051 m^3/s) was diverted during the year. Suspended-sediment records for the current year are published on page 361 of this report.

AVERAGE DISCHARGE.--25 years, 36.0 ft^3/s (1.020 m^3/s), 15.57 in/yr (395 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,500 ft^3/s (184 m^3/s) Oct. 16, 1971, gage height, 9.10 ft (2.774 m), from rating curve extended above 2,100 ft^3/s (59.5 m^3/s) on basis of contracted-opening measurement of peak flow; minimum, 0.4 ft^3/s (0.011 m^3/s) Oct. 7, 1954; minimum daily, 0.8 ft^3/s (0.023 m^3/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 ft^3/s (23 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 9	0930	*3890	110	*8.46	2.579	Dec. 15	1230	829	23.5	4.95	1.509
Dec. 7	0330	1030	29.2	5.45	1.661	Mar. 30	1200	2750	77.9	7.85	2.393

Minimum discharge, 2.4 ft^3/s (0.068 m^3/s) Aug. 14, Sept. 4, 5, gage height, 0.91 ft (0.277 m); minimum daily, 2.5 ft^3/s (0.071 m^3/s) Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	24	35	32	30	33	80	25	26	12	4.0	3.3
2	15	21	31	30	27	30	61	25	20	11	4.6	3.0
3	13	20	28	32	28	29	74	24	15	9.7	7.2	2.9
4	13	20	26	32	29	39	74	23	14	9.0	8.1	2.7
5	12	19	25	35	29	37	331	24	13	8.7	5.8	2.5
6	11	19	42	33	27	42	80	22	14	8.0	5.1	2.8
7	12	18	585	63	27	68	59	21	17	7.5	4.3	3.1
8	246	18	155	40	27	44	51	20	13	6.9	4.0	222
9	1900	18	67	58	26	38	46	18	13	7.0	5.1	21
10	92	18	49	240	27	35	43	18	12	6.4	4.0	12
11	47	17	44	75	27	35	41	18	12	6.3	3.5	9.5
12	35	21	185	51	28	34	39	18	13	6.1	3.2	7.6
13	28	18	89	45	42	78	37	17	14	6.1	2.8	7.3
14	24	19	54	61	32	46	36	16	17	5.8	2.6	8.6
15	24	28	404	67	30	37	34	16	14	5.6	2.7	7.2
16	23	24	123	51	29	35	33	15	13	5.1	3.4	66
17	27	23	64	42	28	31	32	15	12	4.7	11	60
18	21	22	51	39	29	31	31	15	12	4.5	14	18
19	20	20	45	36	29	30	30	16	12	4.3	7.3	12
20	31	18	75	36	28	58	30	15	13	4.1	4.9	10
21	24	18	64	34	27	49	31	14	11	4.3	4.9	9.2
22	20	17	44	33	26	166	28	14	10	4.8	4.3	8.6
23	18	17	40	32	26	58	31	16	13	4.7	4.0	8.7
24	18	17	37	34	46	46	32	16	12	4.2	4.3	8.2
25	23	17	36	35	35	40	29	43	14	3.7	4.6	7.9
26	33	17	58	34	31	37	27	31	14	3.9	4.1	7.8
27	20	25	43	34	39	35	26	27	12	4.3	4.3	7.9
28	18	65	39	35	40	36	24	20	11	4.1	5.0	8.3
29	18	163	36	31	---	41	25	18	10	4.4	4.1	7.3
30	20	50	33	30	---	1580	25	16	9.8	5.7	3.7	7.4
31	35	---	34	32	---	174	---	16	---	4.7	3.4	---
TOTAL	2863	811	2641	1462	849	3072	1520	612	405.8	187.6	154.3	562.8
MEAN	92.4	27.0	85.2	47.2	30.3	99.1	50.7	19.7	13.5	6.05	4.98	18.8
MAX	1900	163	585	240	46	1580	331	43	26	12	14	222
MIN	11	17	25	30	26	29	24	14	9.8	3.7	2.6	2.5
CFSM	2.94	.86	2.71	1.50	.96	3.16	1.61	.63	.43	.19	.16	.60
IN.	3.39	.96	3.13	1.73	1.01	3.64	1.80	.73	.48	.22	.18	.67

CAL YR 1976 TOTAL 15245.1 MEAN 41.7 MAX 1900 MIN 5.9 CFSM 1.33 IN 18.06
WTR YR 1977 TOTAL 15140.5 MEAN 41.5 MAX 1900 MIN 2.5 CFSM 1.32 IN 17.94

02146300 IRWIN CREEK NEAR CHARLOTTE, N. C.

LOCATION.--Lat 35°11'51", long 80°54'10", 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.--30.5 mi^2 (79.0 km^2).

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) above mean sea level (city of Charlotte bench mark).

REMARKS.--Records fair except those for period of no gage-height record, Dec. 18 to Feb. 6, which are poor. 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 0.91 ft^3/s (0.026 m^3/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. Suspended-sediment records for the current year are published on page 361 of this report.

AVERAGE DISCHARGE.--15 years, 43.3 ft^3/s (1.226 m^3/s), 19.28 in/yr (490 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,880 ft^3/s (251 m^3/s) May 30, 1975, gage height, 18.04 ft (5.499 m); minimum, 3.9 ft^3/s (0.11 m^3/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 ft^3/s (117 m^3/s). Flood of Apr. 11, 1962 reached a stage of 15.18 ft (4.627 m), from floodmarks, discharge, 4,740 ft^3/s (134 m^3/s), on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft^3/s (34 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 9	0515	*6740	191	*16.38	4.993	Mar. 13	0200	1460	41.3	8.27	2.521
Dec. 7	0300	2740	77.6	11.63	3.545	Mar. 30	0600	3870	110	13.48	4.109
Dec. 15	1115	1500	42.5	8.39	2.557	Sept. 8	0615	2380	67.4	10.74	3.274

Minimum discharge, 6.6 ft^3/s (0.19 m^3/s) Sept. 2, 3, 4, 5, gage height, 0.62 ft (0.189 m); minimum daily, 7.1 ft^3/s (0.20 m^3/s) Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	14	34	21	21	28	58	19	75	64	9.7	8.7
2	62	14	25	21	20	25	45	19	19	20	51	7.7
3	16	13	20	22	20	23	123	18	16	12	41	8.3
4	15	13	19	23	21	82	46	18	16	12	16	8.1
5	12	13	17	24	20	32	163	28	16	11	12	7.1
6	12	12	41	46	19	91	42	17	152	13	11	8.5
7	153	12	711	100	17	111	36	16	42	12	10	142
8	750	12	184	31	17	37	34	16	20	12	11	606
9	2490	12	67	150	18	29	31	15	20	11	11	56
10	84	13	43	210	18	26	28	15	18	12	12	19
11	49	12	85	54	18	30	26	16	16	11	14	15
12	37	53	442	36	17	29	25	15	47	11	9.8	13
13	34	14	91	32	34	337	24	15	22	11	9.1	11
14	27	24	47	98	18	48	23	15	14	44	8.4	12
15	20	174	422	65	17	37	23	15	42	17	9.5	12
16	19	32	94	39	16	34	21	15	32	12	17	129
17	36	17	50	35	17	30	20	15	27	12	24	78
18	20	15	35	30	16	27	19	15	17	12	24	18
19	20	14	30	28	17	23	20	15	14	12	12	15
20	248	13	70	27	16	186	24	51	25	12	13	13
21	47	13	40	26	16	128	18	17	14	14	10	13
22	30	14	27	25	17	346	19	17	14	12	10	13
23	21	14	26	24	16	56	19	27	32	11	8.7	11
24	19	13	24	28	69	39	43	19	12	11	9.5	12
25	40	15	45	33	21	35	23	56	34	14	10	12
26	33	14	74	29	17	31	24	120	24	12	8.7	12
27	18	16	30	26	141	28	24	38	13	11	7.5	13
28	15	307	27	25	44	26	23	24	12	11	8.6	13
29	15	217	25	24	---	228	27	20	12	17	8.4	9.8
30	18	43	24	22	---	1510	19	20	12	11	7.9	10
31	29	---	22	22	---	127	---	17	---	10	8.8	---
TOTAL	4417	1162	2891	1376	718	3819	1070	743	829	467	423.6	1306.2
MEAN	142	38.7	93.3	44.4	25.6	123	35.7	24.0	27.6	15.1	13.7	43.5
MAX	2490	307	711	210	141	1510	163	120	152	64	51	606
MIN	12	12	17	21	16	23	18	15	12	10	7.5	7.1
CFSM	4.66	1.27	3.06	1.46	.84	4.03	1.17	.79	.91	.50	.45	1.43
IN.	5.39	1.42	3.53	1.68	.88	4.66	1.31	.91	1.01	.57	.52	1.59

CAL YR 1976 TOTAL 16674.6 MEAN 45.6 MAX 2490 MIN 6.6 CFSM 1.50 IN 20.34
WTR YR 1977 TOTAL 19221.8 MEAN 52.7 MAX 2490 MIN 7.1 CFSM 1.73 IN 23.44

02146500 LITTLE SUGAR CREEK NEAR CHARLOTTE, N. C.

LOCATION.--Lat 35°09'13", long 80°51'18", Mecklenburg County, Hydrologic Unit 03050103, on right bank 10 ft (3 m) upstream from bridge on Tyvola Road at sewage-disposal plant of city of Charlotte, 1,500 ft (457 m) downstream from Briar Creek, and 4.8 mi (7.7 km) south of city hall, Charlotte.

DRAINAGE AREA.--41.0 mi² (106 km²).

PERIOD OF RECORD.--July 1924 to current year.

REVISED RECORDS.--WSP 1052: 1939-44. WSP 1503: 1924-27(M), 1928-30, 1931(M), 1932-34. WSP 1723: Drainage area. WSP 1904: 1959-61.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 568.58 ft (173.303 m) above mean sea level (city of Charlotte bench mark). Prior to Apr. 26, 1927, nonrecording gage and Apr. 26, 1927 to Sept. 30, 1958, water-stage recorder at site 1,000 ft (305 m) upstream at datum 2.7 ft (0.82 m) higher.

REMARKS.--Records good except those for period of no gage-height record, Apr. 1 to May 4, which are poor. At times small amounts of cooling and wash water, diverted into the basin from Catawba River through city of Charlotte storm sewers. Since 1911 the creek channel has been dredged and improved. The drainage area is urbanized and has an impervious area of about 20 percent. Suspended-sediment records for the current year are published on page 361 of this report.

AVERAGE DISCHARGE.--53 years, 47.4 ft³/s (1.342 m³/s), 15.70 in/yr (399 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,440 ft³/s (239 m³/s) June 15, 1973 gage height, 17.6 ft (5.36 m) in gage well, 18.2 ft (5.55 m), from floodmarks; minimum, 1.2 ft³/s (0.034 m³/s) Sept. 27, 1954.

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)
Oct. 9	0500	*6960	197	*16.32	4.974	Mar. 13	0215	2720	77.0	9.96	3.036
Dec. 7	0300	4230	120	12.28	3.743	Mar. 30	0515	4950	140	13.38	4.078
Dec. 15	1130	2400	68.0	9.44	2.877	Sept. 8	0645	3190	90.3	10.67	3.252

Minimum discharge, 3.0 ft³/s (0.085 m³/s) Sept. 4, 5, gage height, 1.97 ft (0.600 m); minimum daily, 3.2 ft³/s (0.091 m³/s) Sept. 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	14	27	23	23	28	55	17	133	127	5.3	3.7
2	157	12	24	22	23	25	42	17	19	33	7.5	3.8
3	13	13	21	25	24	23	205	16	13	11	52	3.5
4	11	15	19	24	24	127	92	16	12	9.7	14	3.2
5	9.0	13	18	25	23	39	288	62	12	10	7.0	3.2
6	8.8	11	56	42	22	132	38	18	261	8.9	5.8	3.7
7	172	11	1030	136	20	158	33	16	57	8.5	5.1	95
8	735	11	150	31	19	41	30	15	19	7.9	4.7	798
9	3160	11	77	279	19	35	28	14	15	7.5	4.5	80
10	30	11	51	518	19	32	26	13	12	7.2	4.5	17
11	17	11	133	54	19	37	24	13	11	12	12	9.5
12	14	74	645	39	18	37	23	13	85	23	4.6	7.2
13	12	14	95	34	39	591	21	13	31	8.6	4.0	6.6
14	12	26	43	141	22	53	21	13	16	41	6.2	13
15	10	250	629	67	19	37	20	12	39	12	14	7.1
16	10	33	103	40	20	32	19	12	23	7.5	39	254
17	30	21	48	36	19	28	18	12	30	6.9	101	88
18	12	18	35	33	19	27	17	12	33	6.7	46	15
19	9.3	16	30	30	19	25	18	11	11	6.9	11	10
20	399	16	89	29	18	334	21	31	35	6.4	13	8.5
21	30	15	43	29	18	240	17	12	11	7.2	11	7.4
22	16	14	28	28	19	469	18	18	11	7.5	5.6	6.8
23	13	13	28	27	19	58	18	60	39	6.0	5.5	6.5
24	12	13	25	29	117	41	35	19	11	5.4	6.0	6.4
25	25	13	45	34	27	35	21	44	33	5.2	5.5	6.2
26	28	13	98	29	22	32	22	136	29	6.3	5.1	10
27	12	19	32	27	149	29	22	41	11	5.8	5.0	7.4
28	12	425	30	27	43	29	21	25	10	5.3	4.6	9.2
29	12	304	26	26	---	508	22	14	11	11	4.1	5.6
30	15	34	24	24	---	2150	17	62	11	11	4.1	5.5
31	39	---	24	24	---	141	---	17	---	5.5	4.1	---
TOTAL	5058.1	1464	3726	1932	842	5573	1252	794	1044	437.9	421.8	1501.0
MEAN	163	48.8	120	62.3	30.1	180	41.7	25.6	34.8	14.1	13.6	50.0
MAX	3160	425	1030	518	149	2150	288	136	261	127	101	798
MIN	8.8	11	18	22	18	23	17	11	10	5.2	4.0	3.2
CFSM	3.98	1.19	2.93	1.52	.73	4.39	1.02	.62	.85	.34	.33	1.22
IN.	4.59	1.33	3.38	1.75	.76	5.06	1.14	.72	.95	.40	.38	1.36

CAL YR 1976 TOTAL 20430.5 MEAN 55.8 MAX 3160 MIN 4.7 CFSM 1.36 IN 18.54
WTR YR 1977 TOTAL 24045.8 MEAN 65.9 MAX 3160 MIN 3.2 CFSM 1.61 IN 21.82

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) above mean sea level (city of Charlotte bench mark).

REMARKS.--Records good except those below 2.0 ft³/s (0.057 m³/s), which are fair. Several small sewage-treatment plants divert water into the basin from the Catawba River (city water supply). 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 12 percent, expected development by 1995, about 22 percent. Suspended-sediment records for the current year are published on page 361 of this report.

AVERAGE DISCHARGE.--15 years, 38.6 ft³/s (1.093 m³/s), 13.69 in/yr (348 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,510 ft³/s (156 m³/s) Oct. 9, 1976 (gage height, 15.34 ft or 4.676 m); 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 or 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)
Oct. 9	0715	*5510	156	*15.34	4.676	Jan. 10	0500	1910	54.1	10.78	3.286
Oct. 20	1400	1440	40.8	9.45	2.880	Mar. 13	0415	1550	43.9	9.83	2.996
Nov. 29	0015	1570	44.5	9.91	3.021	Mar. 22	0115	1700	48.1	10.24	3.121
Dec. 7	0545	2650	75.0	12.30	3.749	Mar. 30	0915	3400	96.3	13.46	4.103
Dec. 12	0545	1500	42.5	9.66	2.944						

Minimum discharge, 1.2 ft³/s (0.034 m³/s) Sept. 2, 3, 4, 5, gage height, 0.83 ft (0.253 m). Minimum daily, 1.2 ft³/s (0.034 m³/s) Sept. 4

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	13	30	18	17	30	90	12	43	12	2.2	1.4
2	59	12	23	17	17	21	48	11	14	13	2.5	1.3
3	10	11	19	18	17	19	117	11	10	5.4	9.5	1.3
4	6.2	11	17	19	17	134	58	12	8.8	4.5	5.4	1.2
5	5.5	11	16	20	17	68	369	15	8.2	4.2	3.1	2.3
6	5.2	9.9	23	24	15	117	128	10	64	3.9	2.7	2.0
7	39	10	1080	82	15	205	68	9.2	36	3.7	2.4	2.5
8	440	9.8	145	32	13	55	48	8.6	11	3.5	2.0	130
9	2550	9.0	72	148	14	35	35	7.8	9.0	3.4	1.9	61
10	67	9.3	41	772	15	28	30	7.5	7.2	3.2	1.8	11
11	30	9.1	76	84	15	27	26	7.5	6.7	7.0	1.7	5.3
12	18	29	645	50	15	26	22	7.5	27	9.9	1.6	3.8
13	14	12	136	34	16	458	21	7.3	14	3.9	1.4	3.4
14	12	14	54	87	15	69	20	7.0	8.2	3.4	1.3	6.8
15	10	169	521	88	15	41	20	6.7	8.8	3.2	2.3	8.6
16	9.3	48	139	46	15	32	18	6.3	6.5	3.0	9.8	125
17	19	24	62	32	14	26	17	6.2	6.0	2.8	20	49
18	12	18	39	27	15	24	16	6.0	12	2.6	18	13
19	9.5	15	32	25	15	21	18	5.9	6.1	2.6	5.7	9.2
20	646	14	46	21	15	366	26	8.2	24	2.5	4.2	6.1
21	88	13	42	21	13	197	16	7.4	8.9	2.4	3.9	5.1
22	32	11	27	20	13	633	16	6.3	5.8	2.7	2.5	5.6
23	21	10	25	20	13	83	20	15	11	2.4	2.2	4.9
24	17	10	23	19	53	48	20	8.1	6.3	2.2	5.1	5.0
25	33	9.9	25	23	24	36	15	7.9	15	2.1	3.4	5.1
26	40	10	86	22	16	31	13	117	13	2.3	2.2	4.9
27	19	12	38	22	148	27	12	27	6.2	2.8	2.1	4.9
28	15	201	29	23	71	25	12	14	5.3	2.2	2.0	5.1
29	13	442	25	20	---	695	14	9.3	4.9	2.4	1.9	5.0
30	13	55	21	15	---	2390	12	35	4.6	3.2	1.6	5.0
31	20	---	21	17	---	237	---	31	---	2.7	1.6	---
TOTAL	4338.7	1232.0	3578	1866	658	6204	1345	450.7	411.5	125.1	128.0	494.8
MEAN	140	41.1	115	60.2	23.5	200	44.8	14.5	13.7	4.04	4.13	16.5
MAX	2550	442	1080	772	148	2390	369	117	64	13	20	130
MIN	5.2	9.0	16	15	13	19	12	5.9	4.6	2.1	1.3	1.2
CFSM	3.66	1.07	3.00	1.57	.61	5.22	1.17	.38	.36	.11	.11	.43
IN.	4.21	1.20	3.48	1.81	.64	6.03	1.31	.44	.40	.12	.12	.48

CAL YR 1976 TOTAL 15828.5 MEAN 43.2 MAX 2550 MIN 1.5 CFSM 1.13 IN 15.37
WTR YR 1977 TOTAL 20831.8 MEAN 57.1 MAX 2550 MIN 1.2 CFSM 1.49 IN 20.23

02146700 McMULLEN CREEK AT SHARON VIEW ROAD NEAR CHARLOTTE, N. C.

LOCATION.--Lat 35°08'26", long 80°49'12", 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.--6.98 mi² (18.08 km²).

PERIOD OF RECORD.--April 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 592.91 ft (180.719 m) above mean sea level (city of Charlotte bench mark). 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. Occasional temporary and slight fluctuation during low flow from city of Charlotte sewage pump station and a small sewage treatment plant diverting water into the basin from Catawba River (city water supply). 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. Suspended-sediment records for the current year are published on page 362 of this report.

AVERAGE DISCHARGE.--15 years, 7.42 ft³/s (0.210 m³/s), 14.44 in/yr (367 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,630 ft³/s (46.16 m³/s) Sept. 23, 1975 (gage height, 9.19 ft or 2.801 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 or 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)
Oct. 9	0415	*1440	40.8	*8.55	2.606	Mar. 13	0230	773	21.9	5.85	1.783
Dec. 7	0230	909	25.7	6.63	2.021	Mar. 20	0500	535	15.2	4.53	1.381
Dec. 15	1115	615	17.4	4.97	1.515	Mar. 29	2145	995	28.2	6.98	2.128
Jan. 10	0300	517	14.6	4.43	1.350	Mar. 30	0715	1030	29.2	7.12	2.170

Minimum discharge, 0.04 ft³/s (0.001 m³/s) Sept. 5, 6, gage height, 0.67 ft (0.204 m). Minimum daily, 0.06 ft³/s (0.002 m³/s) Sept. 2-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	1.2	3.1	2.0	1.8	2.5	6.8	1.3	20	4.0	.18	.08
2	41	1.1	2.5	1.8	1.6	2.1	5.2	1.3	1.7	2.1	.35	.06
3	1.1	1.2	2.1	2.0	1.7	2.0	32	1.3	1.2	.54	4.6	.06
4	.57	1.0	2.0	2.4	1.9	24	8.2	1.2	1.3	.44	.95	.06
5	.40	1.0	1.8	2.2	1.9	5.7	80	4.5	1.3	.36	.28	.06
6	.35	1.0	14	7.2	1.7	30	7.2	1.2	37	.35	.20	.17
7	30	.95	226	19	1.5	42	4.6	1.1	4.6	.42	.19	.60
8	128	.88	41	3.2	1.4	5.6	3.8	.89	1.1	.33	.13	68
9	389	.85	9.8	73	1.4	3.6	3.2	.70	1.3	.31	.10	18
10	3.2	1.0	5.5	131	1.5	3.0	2.7	.70	.85	.27	.10	.98
11	2.0	1.0	36	7.0	1.6	3.5	2.6	.66	.67	3.7	.13	.40
12	1.5	12	155	4.4	1.6	4.0	2.4	.70	22	2.8	.08	.28
13	1.1	1.3	18	3.2	3.1	137	2.2	.69	3.3	.45	.10	.24
14	.97	4.0	5.1	29	1.7	6.9	2.2	.62	1.6	.30	.33	1.4
15	.83	60	132	11	1.6	4.0	2.0	.65	1.7	.30	.46	1.7
16	.80	5.1	18	4.8	1.5	3.2	2.0	.61	1.1	.29	.37	58
17	6.8	2.6	6.6	3.1	1.5	2.6	1.8	.60	.77	.30	8.1	9.1
18	1.3	2.1	3.9	2.7	1.5	2.6	1.8	.60	1.8	.27	4.6	1.2
19	.77	1.8	3.0	2.6	1.7	2.2	2.6	.57	.72	.21	.68	.60
20	123	1.8	17	2.5	1.5	97	4.7	1.5	4.8	.17	4.6	.40
21	6.4	1.7	6.2	2.4	1.5	75	1.6	.60	.77	.22	1.9	.29
22	2.4	1.5	2.8	2.3	1.5	102	3.2	2.3	.89	.30	.24	.27
23	1.7	1.3	2.6	2.2	1.5	7.9	4.0	13	3.8	.22	.17	.27
24	1.4	1.3	2.4	2.2	20	4.5	4.2	1.6	.79	.17	.63	.25
25	8.6	1.3	4.2	3.3	2.6	3.4	1.8	3.0	2.6	.18	.30	.22
26	4.5	1.5	20	3.0	2.0	2.9	1.6	37	1.7	.26	.18	.29
27	1.5	2.4	4.2	2.3	20	2.7	1.4	2.7	.70	.21	.13	.37
28	1.2	107	3.0	2.4	5.1	2.5	1.3	1.5	.51	.13	.13	.59
29	1.0	65	2.6	2.4	---	191	2.4	1.1	.57	.13	.13	.22
30	1.6	5.8	2.2	1.8	---	396	1.3	27	.44	.36	.10	.18
31	4.4	---	2.2	1.8	---	32	---	2.4	---	.21	.10	---
TOTAL	769.79	290.68	754.8	340.2	87.9	1203.4	200.8	113.59	121.58	20.30	30.54	164.34
MEAN	24.8	9.69	24.3	11.0	3.14	38.8	6.69	3.66	4.05	.65	.99	5.48
MAX	389	107	226	131	20	396	80	37	37	4.0	8.1	68
MIN	.35	.85	1.8	1.8	1.4	2.0	1.3	.57	.44	.13	.08	.06
CFSM	3.55	1.39	3.48	1.58	.45	5.56	.96	.52	.58	.09	.14	.79
IN.	4.10	1.55	4.02	1.81	.47	6.41	1.07	.61	.65	.11	.16	.88

CAL YR 1976 TOTAL 3289.24 MEAN 8.99 MAX 389 MIN .08 CFSM 1.29 IN 17.53
WTR YR 1977 TOTAL 4097.92 MEAN 11.2 MAX 396 MIN .06 CFSM 1.60 IN 21.84

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 (prior to March 1977). Datum of gage is 517.29 ft (157.670 m) above mean sea level.

REMARKS.--Records good prior to March 1977 and poor thereafter. The drainage area is the eastern side of the city of Charlotte and has an impervious area of about 10 percent. Suspended-sediment records for the current year are published on page 362 of this report.

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); maximum gage height, 13.53 ft (4.124 m), Oct. 9, 1976 (affected by backwater from Sugar Creek); minimum, 2.2 ft³/s (0.062 m³/s) Sept. 5, 1977; minimum daily, 2.4 ft³/s (0.068 m³/s) Sept. 5, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1964, about 12.9 ft (3.93 m) 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)
Oct. 9	1545	a6000	170	*13.53	4.124	Jan. 10	1330	2900	82.1	7.83	2.387
Oct. 20	2130	2310	65.4	6.83	2.082	Mar. 13	1345	1850	52.4	6.00	1.829
Nov. 29	1130	2290	64.9	6.80	2.073	Mar. 22	1130	2630	74.5	7.38	2.249
Dec. 7	1545	3320	94.0	8.45	2.576	Mar. 30	1700	*6480	184	12.16	3.706
Dec. 12	1600	2410	68.3	7.02	2.140	Apr. 5	1730	1500	42.5	5.37	1.637
Dec. 15	2315	2210	62.6	6.65	2.027						

a About, affected by backwater from Sugar Creek.

Minimum discharge, 2.2 ft³/s (0.062 m³/s) Sept. 5; minimum daily, 2.4 ft³/s (0.068 m³/s) Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	39	99	45	37	90	207	26	85	12	4.0	3.9
2	238	32	72	42	34	68	132	25	31	30	3.8	3.3
3	48	31	58	45	35	45	234	25	21	12	18	2.7
4	23	29	50	57	39	200	185	25	18	10	14	2.6
5	16	27	47	70	40	350	950	33	16	8.5	6.5	2.4
6	14	25	49	105	35	240	297	24	35	7.8	5.3	5.3
7	39	25	2490	157	32	760	121	20	123	7.2	4.8	3.7
8	310	24	805	74	31	210	94	18	25	7.0	4.2	182
9	4640	23	343	144	30	98	73	17	20	7.0	3.7	99
10	1420	23	124	2270	32	75	65	16	19	7.0	3.4	29
11	103	23	160	373	34	70	59	16	16	7.0	3.5	12
12	58	75	1850	95	35	65	51	16	24	17	3.1	6.2
13	42	40	815	83	43	1250	47	16	84	9.4	3.0	5.4
14	33	33	166	155	39	250	43	15	25	8.1	2.7	7.4
15	27	500	940	307	35	130	40	14	21	6.6	3.4	8.7
16	24	235	1040	115	33	80	39	14	21	5.9	34	164
17	40	79	187	70	31	68	37	14	16	5.3	15	182
18	36	58	112	60	31	56	35	13	22	4.6	46	33
19	23	48	84	56	33	54	37	12	16	3.8	20	25
20	1290	43	103	54	33	730	60	15	31	3.4	7.4	14
21	885	41	122	50	30	329	37	14	20	3.2	14	10
22	106	35	100	48	30	1900	33	12	14	3.5	5.9	8.1
23	65	31	79	46	30	350	47	56	27	3.6	5.2	7.4
24	50	30	66	47	124	146	42	25	16	3.0	5.0	6.8
25	58	29	79	50	70	105	35	22	31	2.8	9.0	6.8
26	122	29	180	52	35	78	30	117	27	3.0	4.9	6.6
27	54	34	125	50	110	66	28	116	16	4.5	4.3	6.5
28	42	152	74	51	251	60	26	48	13	3.6	4.2	6.5
29	36	1820	64	48	---	396	30	32	12	3.4	3.7	6.4
30	36	313	56	38	---	5330	28	33	12	4.6	3.4	6.5
31	55	---	50	40	---	1880	---	88	---	4.5	3.2	---
TOTAL	9946	3926	10589	4897	1372	15529	3142	937	857	219.3	268.6	863.2
MEAN	321	131	342	158	49.0	501	105	30.2	28.6	7.07	8.66	28.8
MAX	4640	1820	2490	2270	251	5330	950	117	123	30	46	182
MIN	13	23	47	38	30	45	26	12	12	2.8	2.7	2.4
CFSM	3.47	1.42	3.70	1.71	.53	5.42	1.14	.33	.31	.08	.09	.31
IN.	4.00	1.58	4.26	1.97	.55	6.25	1.26	.38	.35	.09	.11	.35

CAL YR 1976 TOTAL 42539.9 MEAN 116 MAX 4640 MIN 4.0 CFSM 1.26 IN 17.13
WTR YR 1977 TOTAL 52546.1 MEAN 144 MAX 5330 MIN 2.4 CFSM 1.56 IN 21.15

02146800 SUGAR CREEK NEAR FORT MILL, S. C.

LOCATION.--Lat 35°00'21", long 80°54'09", York County, Hydrologic Unit 03050103, on right bank at downstream side of bridge on State Highway 160, 3,500 ft (1,070 m) downstream from Clems Branch, and 2.6 mi (4.2 km) east of Fort Mill, S. C.

DRAINAGE AREA.--262 mi² (679 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 484.98 ft (147.822 m) above mean sea level.

REMARKS.--Water-discharge record fair. City of Charlotte diverted an average of 65.2 ft³/s (1.85 m³/s) for water supply from Catawba River at Mountain Island Lake. The sewage effluent is discharged into the basin above the station causing diurnal fluctuation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,700 ft³/s (643 m³/s) Oct. 9, 1976, gage height, 26.25 ft (8.001 m); minimum, 63 ft³/s (1.78 m³/s) Sept. 13, 1976; minimum daily, 68 ft³/s (1.93 m³/s) Sept. 13, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,750 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)
Oct. 9	1700	*22700	643	*26.25	8.001	Mar. 22	1700	5210	148	15.84	4.828
Jan. 10	1700	5680	161	16.37	4.990	Mar. 30	2100	15600	442	23.07	7.032

Minimum discharge, 69 ft³/s (1.95 m³/s) July 24, 25, Sept. 6; minimum gage height, 1.95 ft (0.594 m) Sept. 6; minimum daily, 76 ft³/s (2.15 m³/s) July 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	329	174	381	228	198	324	979	174	453	113	89	93
2	535	156	289	210	194	250	595	169	210	333	95	94
3	267	153	248	212	196	221	834	172	156	127	231	90
4	138	150	219	233	202	377	774	170	135	95	188	85
5	126	148	205	227	203	767	1800	229	125	93	123	77
6	116	141	192	230	188	517	1120	182	119	97	105	83
7	211	137	4720	587	175	1400	494	163	738	97	93	96
8	1250	133	2800	375	177	668	404	155	182	95	85	1510
9	15400	135	1080	299	182	377	350	142	144	92	95	857
10	7040	136	509	4070	187	308	315	143	139	86	96	309
11	583	137	430	1850	188	283	292	143	123	82	115	172
12	346	307	3190	489	186	272	280	145	116	118	103	138
13	283	191	2480	380	223	2570	268	142	322	109	92	136
14	254	147	650	411	209	1200	256	140	157	97	86	140
15	232	951	1630	949	192	457	246	134	148	165	88	143
16	215	808	3050	492	186	356	237	127	302	99	147	381
17	227	284	700	338	180	302	224	133	148	87	191	1500
18	269	216	464	292	179	277	213	133	222	80	279	334
19	203	185	376	267	183	258	241	131	136	88	204	206
20	1610	169	368	262	183	1360	380	180	187	89	113	174
21	1950	159	521	241	172	950	253	155	154	90	119	154
22	415	142	325	233	177	3840	219	130	122	96	94	145
23	263	139	295	221	178	1530	238	194	191	91	97	139
24	220	134	273	225	359	510	263	211	138	82	101	133
25	205	131	254	240	335	386	230	209	160	76	108	128
26	360	125	566	254	211	326	196	245	209	91	99	122
27	222	137	415	235	305	287	186	575	128	100	95	134
28	184	374	313	238	824	265	182	258	116	93	90	137
29	171	3750	282	225	---	733	191	187	113	90	84	131
30	167	1140	250	198	---	10400	197	157	112	119	91	124
31	220	---	244	206	---	7250	---	411	---	94	91	---
TOTAL	34011	11089	27719	14917	6372	39021	12457	5839	5699	3264	3687	7965
MEAN	1097	370	894	481	228	1259	415	188	190	105	119	266
MAX	15400	3750	4720	4070	824	10400	1800	575	738	333	279	1510
MIN	116	125	192	198	172	221	182	127	112	76	84	77

CAL YR 1976 TOTAL 147160 MEAN 402 MAX 15400 MIN 68
WTR YR 1977 TOTAL 172040 MEAN 471 MAX 15400 MIN 76

02146800 SUGAR CREEK NEAR FORT MILL, S. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1973 to current year.
WATER TEMPERATURES: July 1973 to current 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, 493 micromhos July 20, 1977; minimum daily, 49 micromhos Sept. 23, 1975.
WATER TEMPERATURES: Maximum daily, 30.0°C July 13, 20, 21, Aug. 7, 10, 11, 1977; minimum daily, 2.0°C Jan. 20, 1976, Jan. 12, 17, 18, 20, 21, 30, Feb. 2, 8, 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 493 micromhos July 20; minimum daily, 55 micromhos Oct. 9.
WATER TEMPERATURES: Maximum daily, 30.0°C July 13, 20, 21, Aug. 7, 10, 11; minimum daily, 2.0°C Jan. 12, 17, 18, 20, 21, 30, Feb. 2, 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)
NOV 16...	0945	850	123	6.7	9.5	150	9.3	38	10	9.2	3.6	7.2
JAN 26...	1000	263	320	6.6	4.5	20	9.5	67	9	17	5.9	44
FEB 23...	1000	181	320	7.2	9.5	10	9.2	63	0	16	5.6	28
MAR 30...	1615	14100	66	6.8	16.5	300	7.5	22	0	5.5	2.0	2.8
SEP 09...	1115	654	190	7.2	23.0	400	5.0	37	19	10	2.8	14

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
NOV 16...	27	.5	3.6	34	0	28	11	15	7.3	.2	11	89
JAN 26...	57	2.3	4.4	71	0	58	29	20	59	.4	21	225
FEB 23...	47	1.5	4.8	108	0	89	11	23	21	.4	22	185
MAR 30...	20	.3	2.0	38	0	31	9.6	8.1	3.2	.1	5.4	56
SEP 09...	42	1.0	4.3	21	0	17	2.1	25	12	.2	10	105

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA (NH4) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	DISSOLVED ORGANIC NITROGEN (N) (MG/L)
NOV 16...	74	.12	204	.93	.07	1.0	1.0	.47	.41	.53	.93	.52
JAN 26...	207	.31	160	.54	.05	.59	.60	5.4	5.5	7.1	1.1	.30
FEB 23...	187	.25	90.4	.67	.11	.78	.69	7.2	7.1	9.1	2.0	2.1
MAR 30...	50	.08	2130	.33	.01	.34	.29	.22	.16	.21	1.3	.32
SEP 09...	99	.14	185	1.5	.12	1.6	1.6	1.1	1.0	1.3	.70	.60

02146800 SUGAR CREEK NEAR FORT MILL, S. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	SUS-PENDED KJEL. NITRO-GEN (N) (MG/L)	DIS-SOLVED KJEL. NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (P04) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
NOV											
16...	1.4	.47	.93	2.4	11	.58	.35	.39	.33	1.0	4
JAN											
26...	6.5	.70	5.8	7.1	31	1.4	1.2	1.3	1.2	3.7	1
FEB											
23...	9.2	.00	9.2	10	44	2.2	1.9	2.0	.38	1.2	--
MAR											
30...	1.5	1.0	.48	1.8	8.1	.56	.08	.17	.06	.18	7
SEP											
09...	1.8	.20	1.6	3.4	15	1.0	.47	.57	.44	1.4	3

DATE	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)
NOV										
16...	2	2	20	20	0	10	2	8	6000	140
JAN										
26...	0	1	40	33	7	15	5	10	2000	50
FEB										
23...	--	3	40	38	2	10	3	7	1300	80
MAR										
30...	6	1	40	39	1	31	24	7	38000	140
SEP										
09...	0	3	10	10	0	24	19	5	16000	40

DATE	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	DIS-SOL-VED ORGANIC CARBON (C) (MG/L)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
NOV									
16...	44	42	2	40	10	30	11	9.9	.10
JAN									
26...	30	30	0	40	20	20	9.0	9.0	.20
FEB									
23...	24	18	6	40	10	30	7.7	7.0	.20
MAR									
30...	76	69	7	60	40	20	--	--	.00
SEP									
09...	69	50	19	50	40	10	8.2	5.6	--

02146800 SUGAR CREEK NEAR FORT MILL, S. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	194	240	153	209	240	184	132	314	235	410	437	442
2	153	250	185	209	219	217	176	294	211	203	406	465
3	194	255	207	149	260	265	196	274	294	277	298	491
4	255	281	220	194	265	251	142	294	363	320	312	455
5	275	291	227	200	255	121	127	318	382	312	377	455
6	306	316	228	209	270	176	118	255	363	300	415	434
7	327	316	74	214	255	124	176	333	157	320	436	374
8	117	316	102	163	255	147	220	333	230	332	438	98
9	55	301	100	200	255	184	230	323	318	337	387	165
10	74	286	138	64	286	213	240	304	382	354	358	213
11	125	316	175	78	275	243	227	333	412	358	412	339
12	184	275	73	128	281	244	225	343	402	364	328	343
13	224	240	80	158	270	87	235	363	196	327	412	355
14	265	270	121	173	250	110	250	372	260	354	431	333
15	291	296	112	102	245	161	274	363	304	245	427	373
16	316	112	70	133	265	196	274	333	294	357	333	343
17	326	173	118	153	286	220	284	314	294	381	236	141
18	255	204	159	117	286	245	284	343	294	400	200	328
19	255	235	180	194	291	245	269	372	323	480	248	253
20	107	250	180	204	291	127	216	343	333	493	375	283
21	86	255	144	209	265	124	260	314	274	440	428	323
22	153	265	164	224	255	80	304	353	333	426	364	399
23	209	265	188	230	255	103	314	353	353	430	378	395
24	235	265	207	220	265	169	294	235	279	460	354	404
25	255	291	217	209	204	195	245	294	358	436	386	410
26	214	296	150	321	250	217	265	260	328	407	416	414
27	204	265	131	286	265	233	284	127	309	386	463	374
28	245	255	170	265	122	225	309	180	343	407	463	379
29	275	86	184	214	---	220	314	235	343	447	454	394
30	296	122	217	270	---	68	294	294	392	440	416	423
31	316	---	237	245	---	70	---	157	---	406	411	---
MEAN	219	253	158	192	256	176	239	301	312	374	381	353

WTR YR 1977 MEAN 268 MAX 493 MIN 55

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	13.0	5.0	7.0	4.0	9.0	15.0	17.0	21.0	26.0	28.0	25.0
2	18.0	10.0	5.0	4.0	2.0	7.0	17.0	18.0	22.0	26.0	26.0	27.0
3	18.0	10.0	5.0	4.0	3.0	11.0	17.0	20.0	22.0	25.0	25.0	27.0
4	20.0	10.0	7.0	3.0	4.0	11.0	16.0	20.0	25.0	24.0	25.0	27.0
5	20.0	11.0	5.0	5.0	6.0	11.0	17.0	21.0	23.0	25.0	27.0	26.0
6	18.0	10.0	7.0	7.0	5.0	12.0	13.0	21.0	24.0	26.0	28.0	27.0
7	20.0	10.0	5.0	6.0	3.0	10.0	13.0	25.0	23.0	28.0	30.0	27.0
8	20.0	9.0	8.0	6.0	2.0	10.0	15.0	23.0	20.0	27.0	29.0	23.0
9	20.0	7.0	4.0	4.0	5.0	10.0	16.0	21.0	21.0	28.0	28.0	23.0
10	18.0	8.0	5.0	3.0	6.0	10.0	15.0	17.0	20.0	28.0	30.0	24.0
11	16.0	10.0	9.0	3.0	5.0	14.0	18.0	18.0	23.0	29.0	30.0	25.0
12	14.0	10.0	9.0	2.0	6.0	14.0	20.0	20.0	21.0	29.0	29.0	23.0
13	15.0	9.0	10.0	6.0	9.0	16.0	17.0	18.0	22.0	30.0	29.0	24.0
14	16.0	8.0	9.0	5.0	7.0	14.0	19.0	20.0	26.0	29.0	28.0	25.0
15	16.0	7.0	8.0	5.0	8.0	16.0	19.0	20.0	24.0	29.0	28.0	25.0
16	18.0	7.0	7.0	5.0	7.0	15.0	19.0	21.0	25.0	29.0	26.0	24.0
17	17.0	8.0	8.0	2.0	7.0	13.0	22.0	21.0	25.0	28.0	28.0	23.0
18	14.0	10.0	9.0	2.0	4.0	15.0	20.0	22.0	26.0	29.0	25.0	25.0
19	13.0	11.0	9.0	5.0	5.0	14.0	20.0	23.0	27.0	29.0	25.0	26.0
20	12.0	12.0	10.0	2.0	8.0	13.0	18.0	22.0	27.0	30.0	25.0	26.0
21	12.0	11.0	8.0	2.0	8.0	13.0	20.0	24.0	27.0	30.0	25.0	25.0
22	11.0	11.0	3.0	3.0	4.0	11.0	22.0	22.0	25.0	28.0	26.0	24.0
23	13.0	7.0	5.0	3.0	7.0	10.0	20.0	22.0	24.0	28.0	27.0	24.0
24	13.0	7.0	6.0	4.0	11.0	10.0	21.0	22.0	24.0	27.0	27.0	23.0
25	15.0	7.0	5.0	5.0	11.0	12.0	18.0	23.0	24.0	26.0	27.0	24.0
26	16.0	9.0	6.0	4.0	14.0	13.0	16.0	22.0	25.0	26.0	25.0	25.0
27	14.0	12.0	5.0	5.0	14.0	15.0	15.0	21.0	28.0	26.0	26.0	25.0
28	12.0	13.0	5.0	6.0	11.0	15.0	16.0	22.0	28.0	25.0	27.0	24.0
29	9.0	13.0	7.0	4.0	---	16.0	18.0	23.0	26.0	26.0	27.0	22.0
30	11.0	8.0	4.0	2.0	---	16.0	17.0	23.0	25.0	26.0	27.0	21.0
31	14.0	---	6.0	4.0	---	16.0	---	22.0	---	28.0	28.0	---
MEAN	15.5	9.5	6.5	4.0	6.5	12.5	17.5	21.0	24.0	27.5	27.0	24.5

WTR YR 1977 MEAN 16.5 MAX 30.0 MIN 2.0

02146800 SUGAR CREEK NEAR FORT MILL, S. C.--Continued

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE FOR SELECTED DAYS, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
NOV				
16...	0945	850	118	271
JAN				
26...	1000	263	38	27
FEB				
23...	1000	181	15	7.3
MAR				
30...	1615	14100	1250	47600
30...	1800	15100	295	12000
SEP				
09...	1115	654	252	445

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)
OCT									
14...	1000	261	230	7.4	14.0	6.5	22	4.7	6700
NOV									
29...	1300	4360	70	6.9	13.0	8.2	41	6.5	14000
DEC									
14...	1345	613	95	7.3	7.0	10.6	21	5.7	12000
JAN									
18...	1440	270	130	7.7	3.0	11.5	<10	1.8	460
FEB									
16...	1145	192	210	7.7	8.0	9.6	29	>8.9	740
MAR									
24...	1130	481	135	7.2	11.0	6.7	21	7.4	5100
APR									
19...	1500	213	260	7.2	20.0	---	22	>7.6	1100
MAY									
23...	1445	217	360	8.5	23.0	4.4	32	>8.1	4900
JUN									
28...	1445	118	385	7.2	28.0	3.4	21	6.1	820
JUL									
20...	---	96	480	7.3	29.0	4.6	27	3.8	470
AUG									
18...	1310	304	---	6.6	24.0	5.0	31	9.9	3300

02146900 TWELVE MILE CREEK NEAR WAXHAW, N. C.

LOCATION.--Lat 34°57'06", long 80°45'23", 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.--72.4 mi² (187.5 km²).

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) above mean sea level. Prior to Mar. 13, 1962, water-stage recorder at site 70 ft (21 m) downstream at same datum.

REMARKS.--Records good. Suspended-sediment records for the water year are published on page 362 of this report.

AVERAGE DISCHARGE.--17 years, 68.7 ft³/s (1.946 m³/s), 12.89 in/yr (327 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)
Oct. 9	1700	2530	71.6	14.06	4.285	Mar. 22	1030	2300	65.1	13.60	4.145
Dec. 7	1530	1550	43.9	12.01	3.661	Mar. 30	1700	*4000	113	*16.30	5.029
Jan. 10	1430	2780	78.7	14.55	4.435						

Minimum discharge, 0.93 ft³/s (0.026 m³/s) Aug. 13, 14, 15, gage height, 1.39 ft (0.424 m); minimum daily, 0.93 ft³/s (0.026 m³/s) Aug. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	28	75	40	38	60	209	25	84	14	6.2	4.3
2	165	21	56	37	36	44	132	23	48	104	19	5.2
3	41	20	47	37	36	39	157	23	19	15	12	4.5
4	19	20	40	38	37	277	159	21	14	8.9	11	4.3
5	15	19	37	39	39	283	504	21	12	6.8	6.0	4.3
6	12	18	36	39	36	326	185	20	12	5.7	4.1	8.5
7	11	18	1270	230	33	749	101	19	57	5.0	3.2	8.5
8	185	17	378	88	31	195	81	18	17	4.6	2.5	23
9	2150	16	263	130	31	101	66	17	12	4.1	2.1	48
10	393	16	107	2190	32	76	58	15	11	3.7	1.8	21
11	69	16	190	346	33	67	53	15	9.2	5.4	1.4	7.1
12	38	67	1200	116	33	61	49	15	9.2	22	1.2	3.9
13	29	40	402	87	35	970	44	15	23	40	1.0	2.8
14	24	27	143	163	35	191	42	14	65	8.5	.93	2.0
15	21	468	744	332	32	100	38	13	32	5.4	8.5	1.7
16	20	219	632	138	31	76	36	13	17	4.3	146	44
17	19	70	177	86	30	62	34	12	20	3.5	12	115
18	24	49	104	68	29	56	33	12	31	3.1	6.5	28
19	20	39	80	62	31	52	31	11	15	2.5	6.2	14
20	826	35	75	52	31	268	40	11	23	2.2	3.9	9.2
21	402	33	82	53	30	335	36	12	17	1.9	2.9	5.7
22	76	30	57	46	28	1750	31	11	12	1.8	3.1	4.3
23	48	26	54	43	28	252	31	11	17	1.9	2.2	3.5
24	36	24	49	44	50	124	43	14	13	2.0	2.7	3.2
25	32	24	47	48	57	88	34	13	28	1.9	7.4	2.8
26	53	23	166	52	38	73	29	25	18	1.8	3.5	2.5
27	37	24	91	51	70	63	26	23	13	1.4	2.0	2.8
28	27	82	63	55	148	60	25	19	11	1.6	1.7	2.7
29	23	885	54	50	---	370	25	17	8.5	1.6	1.8	2.4
30	23	150	45	40	---	3100	26	87	7.4	1.7	2.0	2.2
31	27	---	43	39	---	1090	---	140	---	1.8	2.1	---
TOTAL	4876	2524	6807	4839	1118	11358	2358	705	675.3	288.1	286.93	391.4
MEAN	157	84.1	220	156	39.9	366	78.6	22.7	22.5	9.29	9.26	13.0
MAX	2150	885	1270	2190	148	3100	504	140	84	104	146	115
MIN	11	16	36	37	28	39	25	11	7.4	1.4	.93	1.7
CFSM	2.17	1.16	3.04	2.16	.55	5.06	1.09	.31	.31	.13	.13	.18
IN.	2.51	1.30	3.50	2.49	.57	5.84	1.21	.36	.35	.15	.15	.20

CAL YR 1976 TOTAL 29357.90 MEAN 80.2 MAX 2150 MIN 1.1 CFSM 1.11 IN 15.08
WTR YR 1977 TOTAL 36226.73 MEAN 99.3 MAX 3100 MIN .93 CFSM 1.37 IN 18.61

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 mi (2 km) upstream from mouth, and 5 mi (8 km) east of town of Lake Lure.

DRAINAGE AREA.--77.0 mi² (199.4 km²).

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) above mean sea level. Prior to Dec. 20, 1954, nonrecording gage at same site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 362 of this report.

AVERAGE DISCHARGE.--27 years, 131 ft³/s (3.710 m³/s), 23.10 in/yr (587 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)
Oct. 9	0600	*2680	75.9	*10.90	3.322	Apr. 5	0530	1570	44.5	7.60	2.316
Mar. 13	0500	2370	67.1	10.07	3.069	Sept. 8	0200	1770	50.1	8.29	2.527

Minimum discharge, 46 ft³/s (1.30 m³/s) Aug. 8, gage height, 1.99 ft (0.607 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128	127	122	113	110	123	260	142	139	112	56	62
2	103	120	115	114	102	115	220	141	114	106	54	56
3	93	116	109	115	100	110	258	137	107	89	68	54
4	88	113	105	114	101	168	259	197	103	84	65	52
5	85	109	102	116	104	168	1000	155	101	81	58	52
6	83	107	123	115	97	252	404	141	101	79	56	52
7	551	106	737	128	97	233	285	135	108	78	51	104
8	1260	104	262	118	98	180	245	131	96	75	50	724
9	1450	102	186	124	100	154	220	125	96	72	58	159
10	365	103	159	132	95	141	205	122	91	97	68	113
11	225	101	147	109	98	139	193	121	91	111	58	94
12	180	116	178	119	101	292	186	119	105	81	58	82
13	158	103	167	125	113	1200	179	117	92	77	52	80
14	143	101	150	120	105	377	172	115	125	75	71	178
15	133	102	411	126	102	254	167	113	132	73	65	136
16	126	99	321	123	99	211	161	111	106	70	64	477
17	127	98	216	113	96	186	155	109	119	67	99	377
18	119	97	181	126	96	173	151	108	110	66	79	258
19	115	96	162	120	96	159	150	112	99	64	65	152
20	122	96	158	115	96	180	153	110	94	62	60	126
21	114	94	150	115	92	161	146	108	91	61	58	107
22	109	92	137	115	92	225	142	108	88	65	75	97
23	107	91	134	110	93	189	199	133	118	89	67	91
24	109	91	130	107	141	170	296	125	96	66	86	87
25	159	91	127	107	119	158	184	145	116	63	68	83
26	170	91	141	104	108	149	163	133	99	66	88	81
27	130	107	128	106	138	143	154	139	92	61	94	79
28	120	133	125	107	138	140	148	120	89	61	75	76
29	116	187	122	102	---	153	146	114	87	64	71	72
30	118	138	117	104	---	864	144	123	102	67	63	73
31	150	---	120	104	---	423	---	135	---	59	61	---
TOTAL	7056	3231	5542	3566	2927	7590	6745	3944	3107	2341	2061	4234
MEAN	228	108	179	115	105	245	225	127	104	75.5	66.5	141
MAX	1450	187	737	132	141	1200	1000	197	139	112	99	724
MIN	83	91	102	102	92	110	142	108	87	59	50	52
CFSM	2.96	1.40	2.33	1.49	1.36	3.18	2.92	1.65	1.35	.98	.86	1.83
IN.	3.41	1.56	2.68	1.72	1.41	3.67	3.26	1.91	1.50	1.13	1.00	2.05

CAL YR 1976 TOTAL 56072 MEAN 153 MAX 1450 MIN 64 CFSM 1.99 IN 27.09
WTR YR 1977 TOTAL 52344 MEAN 143 MAX 1450 MIN 50 CFSM 1.86 IN 25.29

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) above mean sea level (levels by Soil Conservation Service).

REMARKS.--Records good. Considerable diurnal fluctuation and some low-flow regulation by mills above station. Suspended-sediment records for the current year are published on page 362 of this report.

AVERAGE DISCHARGE.--52 years, 311 ft³/s (8.808 m³/s), 20.02 in/yr (509 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. 9	0500	*10500	297	*12.93	3.941	Mar. 30	0630	4040	114	6.38	1.945

Minimum discharge, 12 ft³/s (0.34 m³/s) Oct. 31, May 1, gage height, 0.62 ft (0.189 m); minimum daily, 52 ft³/s (1.47 m³/s) July 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	411	326	390	267	238	291	868	187	304	253	150	96
2	250	271	335	265	228	273	618	245	250	296	110	152
3	221	276	290	265	233	260	710	266	225	210	149	69
4	202	274	265	271	230	307	680	270	208	190	114	107
5	189	249	243	280	235	472	2340	288	194	220	158	105
6	184	228	262	272	237	414	1930	268	215	180	107	146
7	326	234	1940	331	226	593	819	239	213	167	81	139
8	2870	231	1070	307	228	471	631	226	222	165	152	1070
9	9160	224	577	303	220	392	531	220	228	133	122	395
10	4040	227	443	412	223	352	474	210	147	124	130	221
11	821	225	392	357	224	331	433	207	213	206	147	189
12	552	241	479	307	228	321	405	206	149	161	108	194
13	443	234	535	314	269	806	377	205	227	166	123	161
14	386	226	435	315	269	688	353	195	244	165	65	202
15	346	231	1250	356	257	469	353	192	287	119	185	311
16	314	228	1380	339	242	395	342	198	284	168	130	932
17	301	217	701	299	232	343	322	191	336	90	156	1200
18	294	211	523	290	228	318	311	191	249	158	169	507
19	274	208	430	310	228	303	305	189	232	155	214	347
20	274	210	409	309	226	335	303	193	220	101	143	279
21	283	207	427	272	227	335	354	196	220	154	90	241
22	262	200	354	262	218	416	313	197	141	119	158	213
23	250	200	326	255	217	424	322	256	213	90	137	211
24	247	199	318	267	255	371	557	243	220	136	144	167
25	267	200	299	265	300	329	425	228	249	125	168	164
26	602	202	342	257	255	310	350	236	263	125	143	191
27	426	233	321	257	266	293	322	256	222	126	124	200
28	339	342	301	262	334	290	305	227	221	121	130	162
29	303	996	300	254	---	310	296	224	174	123	191	173
30	349	549	284	224	---	3260	343	228	217	209	135	157
31	273	---	280	257	---	2200	---	235	---	52	129	---
TOTAL	25459	8099	15901	9001	6773	16672	16692	6912	6787	4807	4262	8701
MEAN	821	270	513	290	242	538	556	223	226	155	137	290
MAX	9160	996	1940	412	334	3260	2340	288	336	296	214	1200
MIN	184	199	243	224	217	260	296	187	141	52	65	69
CFSM	3.89	1.28	2.43	1.37	1.15	2.55	2.64	1.06	1.07	.74	.65	1.37
IN.	4.49	1.43	2.80	1.59	1.19	2.94	2.94	1.22	1.20	.85	.75	1.53

CAL YR 1976 TOTAL 136463 MEAN 373 MAX 9160 MIN 98 CFSM 1.77 IN 24.06
WTR YR 1977 TOTAL 130066 MEAN 356 MAX 9160 MIN 52 CFSM 1.69 IN 22.93

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 and bridge on Secondary Road 1186, 3 mi (5 km) downstream from Second Broad River, and 3.5 mi (5.6 km) southwest of Boiling Springs.

DRAINAGE AREA.--864 mi² (2,238 km²).

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) above mean sea level (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.

REMARKS.--Records good. Considerable diurnal fluctuation and some regulation caused by powerplants above station. Suspended-sediment records for the current year are published on page 363 of this report.

AVERAGE DISCHARGE.--52 years, 1,499 ft³/s (42.45 m³/s), 23.56 in/yr (598 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. 9	0630	*36600	1040	*17.39	5.300	Mar. 30	1530	17100	484	11.19	3.411

Minimum discharge, 352 ft³/s (9.97 m³/s) Aug. 2, gage height, 1.61 ft (0.491 m); minimum daily, 482 ft³/s (13.7 m³/s) Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2500	1640	1900	1390	1150	1410	3940	1630	1390	1110	646	516
2	1530	1470	1420	1390	1050	1360	3310	1650	993	1530	574	568
3	1140	1960	1260	1380	1050	1240	3240	1610	961	1070	629	482
4	933	2180	1190	1380	1210	1360	3560	1600	931	899	588	551
5	889	1890	1220	1170	1350	2130	6810	1670	911	880	612	507
6	858	1390	1260	1220	1010	1460	5580	1290	821	706	502	592
7	1180	1240	6550	1370	847	2020	3730	1490	791	765	497	664
8	11100	1200	4230	1300	1050	2050	3200	1320	1440	695	571	6150
9	29400	1220	2680	1380	988	1470	2590	1150	1160	650	581	3700
10	10100	1210	2290	1890	1000	1260	2560	1370	854	725	582	2270
11	3880	1080	2150	1900	1050	1370	2450	1470	912	670	645	1320
12	2590	1110	1970	1430	909	1590	2030	1190	866	706	564	1110
13	1980	1280	1980	1430	1120	3960	1960	1050	992	770	540	1210
14	1860	1260	1890	1300	1120	3890	1820	1080	1170	851	489	1020
15	1520	1100	4170	1460	1240	2480	1890	1020	1220	697	667	1510
16	1610	1060	4650	1420	1210	2300	1920	1070	1210	790	733	3310
17	1670	1040	2950	1540	1040	1880	1900	1050	1380	619	825	5240
18	1380	916	2470	1520	1080	1720	1830	1020	1320	686	917	3650
19	1300	1100	2100	1340	1020	1680	1790	974	1240	640	856	2290
20	1110	1110	2010	1580	1010	1850	1760	1020	1120	565	620	1600
21	1350	1190	1720	1210	981	1810	1810	1000	962	632	549	1470
22	1210	892	1730	1160	977	2170	1780	1040	844	634	610	1340
23	1110	1050	1460	1160	974	2180	1750	1120	1050	603	577	1020
24	1100	869	1430	1280	1090	1870	2400	1220	1120	630	575	921
25	1190	952	1470	1560	1350	1760	2170	1170	1120	621	708	899
26	2470	892	1820	1110	1250	1710	1970	1520	1280	616	645	825
27	1560	1160	1580	1060	1350	1680	1900	1260	1090	616	835	925
28	1390	1410	1520	1160	1350	1670	1710	1250	1020	582	768	830
29	1450	3050	1380	1150	---	1750	1710	1140	886	602	664	788
30	1430	2420	1380	1020	---	13300	1790	945	1020	746	601	746
31	1450	---	1480	1080	---	7370	---	1090	---	490	565	---
TOTAL	94240	40341	67310	41740	30826	75750	76860	38479	32074	22796	19735	48024
MEAN	3040	1345	2171	1346	1101	2444	2562	1241	1069	735	637	1601
MAX	29400	3050	6550	1900	1350	13300	6810	1670	1440	1530	917	6150
MIN	858	869	1190	1020	847	1240	1710	945	791	490	489	482
CFSM	3.52	1.56	2.51	1.56	1.27	2.83	2.97	1.44	1.24	.85	.74	1.85
IN.	4.06	1.74	2.90	1.80	1.33	3.26	3.31	1.66	1.38	.98	.85	2.07

CAL YR 1976 TOTAL 683877 MEAN 1869 MAX 29400 MIN 605 CFSM 2.16 IN 29.44
WTR YR 1977 TOTAL 588175 MEAN 1611 MAX 29400 MIN 482 CFSM 1.87 IN 25.32

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 m^2 (154.1 km^2).

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 or 271 m (from topographic map).

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 363 of this report.

AVERAGE DISCHARGE.--18 years, 95.2 ft^3/s (2.696 m^3/s), 21.73 in/yr (552 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,760 ft^3/s (220 m^3/s) Oct. 17, 1975, gage height, 16.70 ft (5.090 m); minimum, 17 ft^3/s (0.48 m^3/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 ft^3/s (0.41 m^3/s) was measured on Sept. 21, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft^3/s (34 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 8	2230	*4540	129	*12.49	3.807	Apr. 5	0600	2370	67.1	8.68	2.646

Minimum daily discharge, 32 ft^3/s (0.91 m^3/s) Aug. 8, 14, Sept. 4, 5; minimum gage height, 0.68 ft (0.207 m) Aug. 8, 14, Sept. 4, 5, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	104	120	83	81	109	184	85	81	55	34	39
2	56	90	100	83	79	97	149	85	70	55	34	34
3	50	82	88	82	69	89	179	82	66	52	38	33
4	46	77	81	82	70	151	176	90	64	49	41	32
5	44	72	76	84	72	158	1250	84	63	48	37	32
6	43	69	86	82	68	167	329	79	64	47	35	34
7	442	68	625	94	69	180	200	77	73	45	33	36
8	1920	65	226	86	71	140	163	75	61	44	32	192
9	1990	65	142	90	72	117	141	74	59	48	39	70
10	297	64	117	105	67	105	129	72	56	48	35	50
11	158	63	106	90	68	100	121	72	56	44	37	43
12	118	70	141	95	71	101	115	71	62	44	35	39
13	100	63	143	96	96	186	110	70	58	44	33	38
14	88	62	121	92	85	146	107	69	97	41	32	85
15	79	65	402	104	82	120	103	68	69	40	48	56
16	74	62	309	101	77	107	100	67	61	39	131	333
17	74	60	181	91	74	97	97	67	65	39	78	187
18	69	60	140	101	73	94	96	66	61	41	51	104
19	66	59	120	94	73	89	94	68	58	38	41	70
20	72	59	125	97	72	105	92	68	61	37	38	57
21	69	58	120	95	70	93	93	71	55	37	37	50
22	63	57	105	90	69	132	90	66	53	37	37	47
23	61	56	101	85	69	119	116	81	63	38	35	44
24	62	56	96	80	95	106	123	76	56	36	36	44
25	133	56	92	78	85	98	99	74	74	35	38	43
26	202	56	113	74	79	92	92	76	59	36	35	42
27	110	68	99	75	111	88	89	86	55	35	37	41
28	89	243	97	76	131	86	86	74	75	35	43	41
29	80	408	93	76	---	95	85	81	88	38	42	38
30	79	171	86	80	---	701	85	73	59	42	36	39
31	127	---	88	80	---	315	---	70	---	37	34	---
TOTAL	6942	2608	4539	2721	2198	4383	4893	2317	1942	1304	1292	1993
MEAN	224	86.9	146	87.8	78.5	141	163	74.7	64.7	42.1	41.7	66.4
MAX	1990	408	625	105	131	701	1250	90	97	55	131	333
MIN	43	56	76	74	67	86	85	66	53	35	32	32
CFSM	3.77	1.46	2.45	1.48	1.32	2.37	2.74	1.26	1.09	.71	.70	1.12
IN.	4.34	1.63	2.84	1.70	1.37	2.74	3.06	1.45	1.21	.82	.81	1.25

CAL YR 1976 TOTAL 36314 MEAN 99.2 MAX 1990 MIN 30 CFSM 1.67 IN 22.70
WTR YR 1977 TOTAL 37132 MEAN 102 MAX 1990 MIN 32 CFSM 1.71 IN 23.21

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) above mean sea level. 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. Suspended-sediment records for the current year are published on page 363 of this report.

AVERAGE DISCHARGE.--9 years, 2.32 ft³/s (0.0657 m³/s), 21.14 in/yr (537 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)
Oct. 9	0215	390	11.0	4.56	1.390	Mar. 30	0345	*409	11.6	*4.68	1.426
Dec. 7	0115	242	6.85	3.55	1.082						

Minimum discharge, 0.13 ft³/s (0.004 m³/s) Aug. 13, 14, gage height, 0.91 ft (0.277 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	1.1	2.3	1.7	1.5	1.8	3.7	1.4	1.1	.69	.54	.27
2	1.2	1.1	2.1	1.7	1.5	1.7	3.0	1.3	.80	.60	.54	.25
3	.98	1.1	2.0	1.7	1.5	1.7	5.0	1.3	.75	.53	.48	.23
4	.88	1.1	1.9	1.7	1.6	2.6	3.5	1.3	.71	.50	.39	.22
5	.85	1.1	1.8	1.7	1.5	2.2	22	1.2	.69	.47	.33	.22
6	.82	1.0	6.5	2.0	1.4	2.6	3.8	1.2	.68	.45	.29	.21
7	11	1.0	25	3.1	1.4	3.9	3.0	1.1	.67	.43	.25	.39
8	54	1.0	3.6	2.0	1.4	2.6	2.7	1.1	.64	.39	.25	12
9	48	1.0	2.5	5.5	1.4	2.4	2.5	1.0	.63	.38	.29	.70
10	5.3	1.0	2.2	14	1.4	2.2	2.4	1.0	.59	.37	.22	.53
11	3.9	1.0	2.2	3.4	1.4	2.2	2.2	1.0	.58	.36	.23	.45
12	3.2	1.1	10	2.7	1.5	2.2	2.1	1.0	.62	.36	.20	.41
13	2.0	.98	3.6	2.4	1.9	2.6	2.0	.97	.59	.36	.18	.42
14	1.7	1.0	2.5	4.1	1.5	2.2	2.0	.94	4.5	.33	.18	.51
15	1.4	1.1	30	3.2	1.4	2.0	1.9	.91	.74	.32	.20	1.4
16	1.3	1.0	4.8	2.7	1.4	1.8	1.8	.90	.69	.31	.23	9.0
17	1.4	1.0	3.1	2.3	1.3	1.7	1.7	.87	.69	.30	.46	2.0
18	1.3	.98	2.7	2.3	1.3	1.8	1.7	.84	.68	.29	.39	.95
19	1.2	.98	2.4	2.2	1.3	1.6	1.6	.84	.62	.26	.30	.73
20	1.4	.98	3.4	2.0	1.3	2.6	1.9	.82	.59	.25	.28	.63
21	1.2	1.0	2.5	1.9	1.3	3.1	1.7	.83	.55	.25	.25	.57
22	1.1	.98	2.3	1.8	1.3	5.3	1.6	.83	.54	.41	.24	.53
23	1.1	.98	2.2	1.8	1.3	2.7	1.7	.86	.60	.36	.23	.52
24	1.1	.94	2.0	1.9	2.3	2.4	2.6	.94	.85	.29	1.1	.50
25	1.6	.94	2.1	1.9	1.6	2.1	1.7	.91	.79	.27	.34	.49
26	1.3	.98	2.8	1.8	1.5	2.0	1.5	.97	1.6	.29	.33	.48
27	1.1	1.3	2.1	1.8	2.5	1.9	1.4	.91	.92	.40	1.5	.50
28	1.1	7.5	2.0	1.8	2.0	1.9	1.4	.84	.60	.67	.50	.46
29	1.1	7.5	2.0	1.7	---	5.3	1.4	.80	.58	.74	.37	.43
30	1.3	2.7	1.9	1.5	---	69	1.4	.92	.57	.75	.31	.46
31	1.4	---	1.9	1.6	---	6.0	---	.91	---	.62	.29	---
TOTAL	157.03	45.44	138.4	81.9	42.7	146.1	86.9	30.71	25.16	13.00	11.69	36.46
MEAN	5.07	1.51	4.46	2.64	1.53	4.71	2.90	.99	.84	.42	.38	1.22
MAX	54	7.5	30	14	2.5	69	22	1.4	4.5	.75	1.5	12
MIN	.82	.94	1.8	1.5	1.3	1.6	1.4	.80	.54	.25	.18	.21
CFSM	3.40	1.01	2.99	1.77	1.03	3.16	1.95	.66	.56	.28	.26	.82
IN.	3.92	1.13	3.45	2.04	1.07	3.65	2.17	.77	.63	.32	.29	.91

CAL YR 1976 TOTAL 730.20 MEAN 2.00 MAX 54 MIN .36 CFSM 1.34 IN 18.23
WTR YR 1977 TOTAL 815.49 MEAN 2.23 MAX 69 MIN .18 CFSM 1.50 IN 20.35

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 mi^2 or 52.3 km^2), 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 mi^2 or 85.2 km^2), 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 month-end contents only published in WSP 1723), October 1960 to current year.

Total capacity of Talbott Reservoir, 350,000,000 ft^3 (9,900,000 m^3) and Townes Reservoir, 60,000,000 ft^3 (1,700,000 m^3). 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 mi^2 (499 km^2). 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) above mean sea level, unadjusted (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 ft^3 (93,120,000 m^3). 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 mi^2 (21,598 km^2). PERIOD OF RECORD, October 1962 to current year. GAGE, water-stage recorder and staff gage. Datum of gage is at mean sea level.

Lake, used mainly for hydroelectric power development, was first filled Oct. 13-15, 1962, and has a total capacity of 22,434,000,000 ft^3 (635,330,000 m^3). Usable capacity is 20,127,000,000 ft^3 (570,000,000 m^3) 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 ft^3 (78,960,000 m^3) 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 ft^3 (302,260,000 m^3) 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 mi^2 (21,743 km^2). PERIOD OF RECORD, June 1955 to September 1960 (month-end contents only published in WSP 1723), October 1960 to current year. GAGE, water-stage recorder and staff gage. Datum of gage is at mean sea level.
Lake, used for hydroelectric power development, was put in operation June 25, 1955, and has a total capacity of 3,360,220,000 ft^3 (95,161,400 m^3) at normal highwater elevation of 132.0 ft (40.23 m) and 3,515,290,000 ft^3 (99,553,000 m^3) at elevation 132.75 ft or 40.462 m (top of gates). Records furnished by Virginia Electric and Power Co. (See sta 02080500)

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 mi^2 (440 km^2) approximately. PERIOD OF RECORD, October 1962 to current year. GAGE, water-stage recorder and wire-weight gage at dam. Datum of gage is 0.47 ft (0.143 m) below mean sea level.

Lake, used for municipal water supply, began filling in May 1926 and reached spillway elevation Dec. 26, 1926. Total capacity is 618,000,000 ft^3 (17,500,000 m^3) between elevations (gage datum) 300.0 ft (91.44 m) and 341 ft or 103.9 m (crest of spillway). (See sta 02087000)

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 mi^2 (910 km^2), approximately. PERIOD OF RECORD, August 1962 to current year. Gage, water-stage recorder and staff gage at dam. Datum of gage is at mean sea level.

Lake, used for flood control, low-flow augmentation and recreation. Some stroage 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 ft^3 (188,744,000 m^3) of which 6,316,200,000 ft^3 (178,870,000 m^3) 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 mi^2 (10,400 km^2), approximately. PERIOD OF RECORD, November 1927 to September 1960 (month-end 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) below mean sea level.

Lake, used for hydroelectric power development, was first put in operation Nov. 7, 1927. Total capacity is 11,090,000,000 ft^3 (314,100,000 m^3) and usable capacity is 10,230,000,000 ft^3 (289,700,000 m^3) 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 mi^2 (10,670 km^2), 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) below mean sea level.

Lake, used for hydroelectric power development, was first filled Apr. 6, 1962. Total capacity is 1,852,400,000 ft^3 (52,460,000 m^3) and usable capacity is 293,800,000 ft^3 (8,320,000 m^3) between elevations 593 ft (181 m) and 596 ft (182 m) gage datum. 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

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 (month-end 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) below mean sea level.

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)

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 month-end 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) above mean sea level (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 (month-end 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) above mean sea level (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)

02138510 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 (month-end 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 3.53 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) above mean sea level (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 (month-end 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) above mean sea level (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 (month-end 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) above mean sea level (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 (month-end 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) above mean sea level (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.

Lakes and Reservoirs in South Atlantic Slope basin--Continued

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) above mean sea level (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.

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 (month-end contents only, published in WSP 1723), October 1960 to current year. GAGE, float gage, indicator and staff gage at dam. Datum of gage is 547.5 ft (166.88 m) above mean sea level (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 was 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:

02077303 ROXBORO STREAM-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 m² (508 km²). Total capacity is approximately 522,720,000 ft³ (144,803,000 m³) with a surface area of about 650 acres (260 ha) at a normal elevation of 385 ft (117 m), above mean sea level. 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.

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. (See 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)

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)

Lakes and Reservoirs in South Atlantic Slope basin--Continued

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 km²). 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 1976 TO SEPTEMBER 1977

Date	Elevation (feet)	Combined 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 Talbott & Townes Reservoirs		02067820	020877280 Hyco Lake			02079964 Lake Gaston			02080100 Roanoke Rapids Lake		
Sept. 30		351.4	-	8.46	3040	-	199.53	19192	-	131.0	3162	-
Oct. 31		373.9	+22.5	9.00	3130	+90	199.68	19324	+132	127.8	2597	-565
Nov. 30		363.7	-10.2	8.97	3125	-5	199.00	18731	-593	129.7	2916	+319
Dec. 31		365.5	+1.8	10.48	3367	+242	200.06	19654	+923	130.6	3082	+166
CAL YR 1976		-	+6.3	-	-	-38	-	-	-462	-	-	-40
Jan. 31		338.6	-26.9	10.50	3370	+3	199.10	18818	-836	128.0	2629	-453
Feb. 28		340.2	+1.6	10.53	3375	+5	199.54	19201	+383	127.1	2479	-150
Mar. 31		369.1	+28.9	9.75	3252	-123	199.65	19298	+97	129.4	2861	+382
Apr. 30		363.6	-5.5	9.28	3176	-76	199.48	19149	-149	128.7	2744	-117
May 31		340.2	-23.4	9.16	3156	-20	199.51	19175	+26	128.7	2744	0
June 30		333.0	-7.2	8.72	3083	-73	199.39	19070	-105	130.3	3026	+282
July 31		309.6	-23.4	8.50	3047	-36	199.48	19149	+79	126.7	2411	-615
Aug. 31		296.1	-13.5	8.89	3111	+64	199.77	19402	+253	132.0	3360	+949
Sept. 30		345.5	+49.4	8.30	3014	-97	199.94	19549	+147	128.4	2697	-663
WTR YR 1977		-	-5.9	-	-	-26	-	-	+357	-	-	-465

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			021228440 Badin Lake		
Sept. 30	1024.60	1460	-	650.06	8148	-	595.34	1784	-	540.35	10334	-
Oct. 31	1030.0	1786	+326	651.07	8700	+552	595.45	1795	+11	540.66	10404	+70
Nov. 30	1029.7	1766	-20	650.20	8201	-499	595.37	1787	-8	540.78	10427	+23
Dec. 31	1030.0	1786	+20	647.94	7012	-1189	594.90	1738	-49	540.36	10334	-93
CAL YR 1976	-	-	-152	-	-	+292	-	-	-61	-	-	-70
Jan. 31	1029.7	1766	-20	645.25	5758	-1254	595.22	1772	+34	540.45	10334	0
Feb. 28	1030.10	1795	+29	646.13	6156	+398	595.28	1778	+6	539.46	10124	-210
Mar. 31	1030.0	1786	-9	649.37	7774	+1618	595.14	1763	-15	541.10	10498	+374
Apr. 30	1030.0	1786	0	650.34	8256	+482	595.35	1785	+22	539.64	10147	-351
May 31	1030.15	1799	+13	652.15	9336	+1080	595.19	1768	-17	539.47	10124	-23
June 30	1030.0	1786	-13	652.54	9517	+181	595.25	1775	+7	539.61	10147	+23
July 31	1026.35	1565	-221	649.01	7565	-1952	595.18	1767	-8	539.91	10217	+70
Aug. 31	1022.60	1346	-219	646.37	6296	-1269	595.34	1784	+17	540.38	10334	+117
Sept. 30	1029.05	1724	+258	649.28	7722	-1426	595.31	1781	-3	539.45	10101	-233
WTR YR 1977	-	-	+378	-	-	-426	-	-	-3	-	-	-233

Lakes and Reservoirs in South Atlantic Slope basin--Continued

MONTHEND ELEVATIONS AND CONTENTS AT 2400, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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	238.4	5686	-	137.1	1650	-	95.5	11355	-	97.1	1298	-
Oct. 31	238.0	5600	-86	137.4	1682	+32	93.7	10890	+465	96.8	1257	-41
Nov. 30	239.2	5859	+259	140.5	2000	+318	90.1	10005	-885	95.9	1137	-120
Dec. 31	239.1	5837	-22	138.6	1808	-192	89.6	9886	-119	97.3	1325	+188
CAL YR 1976	-	-	+151	-	-	-262	-	-	-310	-	-	+41
Jan. 31	239.1	5837	0	137.2	1661	-147	83.4	8491	-1395	97.1	1298	-27
Feb. 28	239.4	5903	+66	138.3	1776	+115	87.1	9307	+816	96.2	1176	-122
Mar. 31	237.5	5492	-411	141.8	2130	+354	93.9	10941	+1634	96.4	1203	+27
Apr. 30	239.0	5815	+323	137.9	1734	-396	96.3	11567	+626	97.9	1409	+206
May 31	239.2	5859	+44	136.2	1560	-174	97.3	11835	+268	97.4	1339	-70
June 30	238.0	5600	-259	136.2	1560	0	96.6	11647	-188	96.7	1243	-96
July 31	238.3	5664	+64	138.4	1787	+227	93.4	10814	-833	96.7	1243	0
Aug. 31	239.0	5815	+151	136.9	1630	-157	93.2	10764	-50	96.0	1150	-93
Sept. 30	239.3	5881	+66	137.0	1640	-10	95.1	11251	+487	96.6	1230	+80
WTR YR 1977	-	-	+195	-	-	-10	-	-	-104	-	-	-68

	02141961 Lake Hickory			02142441 Lookout Shoals Lake			02142647 Lake Norman			02142676 Mountain Island Lake		
Sept. 30	97.0	1758	-	98.4	138	-	95.9	42030	-	95.7	296	-
Oct. 31	96.4	1658	-100	97.1	84	-54	97.3	43880	+1850	95.6	284	-12
Nov. 30	97.4	1825	+167	98.2	130	+46	93.0	38400	-5480	97.3	488	+204
Dec. 31	96.6	1691	-134	97.6	105	-25	93.6	39140	+740	95.7	296	-192
CAL YR 1976	-	-	-202	-	-	-77	-	-	-2120	-	-	-70
Jan. 31	96.5	1674	-17	97.1	84	-21	88.1	32790	-6350	95.5	272	-24
Feb. 28	96.9	1741	+67	98.8	156	+72	91.1	36150	+3360	95.8	307	+35
Mar. 31	97.2	1791	+50	98.2	130	-26	96.5	42820	+6670	100.0	845	+538
Apr. 30	97.0	1758	-33	97.8	113	-17	98.2	45090	+2270	95.7	296	-549
May 31	97.9	1910	+152	98.1	126	+13	98.0	44820	-270	95.7	296	0
June 30	97.4	1825	-85	97.5	100	-26	97.0	43470	-1350	95.7	296	0
July 31	95.9	1576	-249	98.1	126	+26	94.2	39880	-3590	95.8	307	+11
Aug. 31	96.5	1674	+98	97.7	109	-17	92.9	38280	-1600	95.7	296	-11
Sept. 30	95.9	1576	-98	98.1	126	+17	96.3	42550	+4270	95.8	307	+11
WTR YR 1977	-	-	-182	-	-	-12	-	-	+520	-	-	+11

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) above mean sea level, unadjusted. 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 except those for period Jan. 3 to Feb. 23, which are fair to poor. Suspended-sediment records for the current year are published on page 363 of this report.

AVERAGE DISCHARGE.--53 years, 424 ft³/s (12.01 m³/s), 27.82 in/yr (707 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)
Oct. 9	0300	*5280	150	*7.26	2.213	Apr. 5	1430	4460	126	6.75	2.057
Mar. 13	2030	5130	145	7.17	2.185	Sept. 8	1700	3060	86.7	5.72	1.743

Minimum discharge, 126 ft³/s (3.57 m³/s) Jan. 2, gage height, 1.69 ft (0.515 m), result of freezeup; minimum daily, 217 ft³/s (6.15 m³/s) Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	457	494	337	280	350	504	605	518	595	424	233	270
2	312	426	359	283	350	432	556	545	492	440	231	282
3	271	404	346	285	345	391	637	540	396	368	237	234
4	248	391	331	285	355	454	772	776	366	337	239	242
5	236	377	322	285	370	678	3340	815	346	325	255	230
6	230	361	334	290	350	754	1660	651	364	312	294	217
7	627	350	1580	290	330	836	1090	585	570	303	280	386
8	4130	341	947	290	320	620	887	574	387	294	228	1870
9	4840	332	621	330	310	527	773	535	358	285	244	1360
10	1980	333	517	300	305	472	708	497	357	279	323	686
11	1010	325	469	290	290	452	660	479	328	320	453	506
12	744	367	509	295	295	573	621	460	322	578	341	411
13	613	358	546	300	430	4500	594	445	356	501	278	366
14	531	324	470	430	550	2020	574	407	393	363	361	348
15	476	325	498	420	450	1130	551	395	469	310	438	337
16	439	328	658	410	400	871	536	392	523	289	405	438
17	598	318	544	400	360	742	513	385	936	278	298	475
18	578	312	482	395	350	676	501	370	1290	270	374	364
19	451	299	445	390	370	630	499	360	595	296	385	330
20	447	294	434	390	350	665	541	351	466	273	286	458
21	474	294	495	390	330	645	483	344	423	254	267	384
22	417	290	434	390	340	698	468	343	398	255	271	325
23	388	281	439	385	360	693	540	385	589	262	249	304
24	384	277	452	380	936	599	1090	411	531	248	266	290
25	462	298	410	375	980	558	750	432	535	240	282	284
26	786	286	425	370	575	527	607	526	468	281	252	278
27	575	330	402	365	561	502	560	579	435	289	245	279
28	486	362	401	360	637	488	521	417	451	246	240	268
29	443	609	372	355	---	481	581	373	395	245	232	256
30	427	466	351	355	---	640	576	400	369	248	251	252
31	528	---	405	350	---	802	---	467	---	243	264	---
TOTAL	24588	10552	15335	10713	11949	24560	22794	14757	14503	9656	9002	12730
MEAN	793	352	495	346	427	792	760	476	483	311	290	424
MAX	4840	609	1580	430	980	4500	3340	815	1290	578	453	1870
MIN	230	277	322	280	290	391	468	343	322	240	228	217
CFSM	3.83	1.70	2.39	1.67	2.06	3.83	3.67	2.30	2.33	1.50	1.40	2.05
IN.	4.42	1.90	2.76	1.93	2.15	4.41	4.10	2.65	2.61	1.74	1.62	2.29

CAL YR 1976 TOTAL 177743 MEAN 486 MAX 4840 MIN 198 CFSM 2.35 IN 31.94
WTR YR 1977 TOTAL 181139 MEAN 496 MAX 4840 MIN 217 CFSM 2.40 IN 32.55

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) above mean sea level. 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 except those for period Jan. 12 to Feb. 9, which are fair. Suspended-sediment records for the current year are published on page 364 of this report.

AVERAGE DISCHARGE.--43 years (1907-8, 1935-77), 240 ft³/s (6.797 m³/s), 48.00 in/yr (1,219 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)
Mar. 13	0015	*7410	210	*12.20	3.719	Sept. 7	2315	6500	184	11.68	3.560
Mar. 30	0315	2800	79.3	7.96	2.426	Sept. 16	1215	5920	168	11.32	3.450
Apr. 4	2330	2140	60.6	6.80	2.073						

Minimum discharge, 69 ft³/s (1.95 m³/s) Sept. 4, gage height, 1.68 ft (0.512 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	215	149	180	155	205	512	272	269	150	82	83
2	101	190	142	180	150	189	451	279	240	136	80	78
3	95	176	135	179	150	179	701	259	224	129	89	75
4	92	164	130	176	149	433	684	355	211	125	88	71
5	90	155	126	177	147	316	1140	282	201	123	82	74
6	91	148	204	178	140	381	701	261	206	120	107	74
7	622	144	532	187	140	331	576	249	212	118	99	961
8	688	137	275	169	140	285	507	242	189	114	135	965
9	816	134	224	183	140	258	462	230	183	112	127	272
10	331	131	205	210	135	238	429	223	174	125	93	200
11	239	129	194	179	138	241	404	218	169	117	92	166
12	200	156	230	175	152	1950	383	212	166	110	85	143
13	178	131	210	170	222	2390	364	207	171	115	95	183
14	161	130	191	238	172	824	351	202	192	107	185	217
15	148	138	375	232	166	610	337	197	188	107	124	451
16	141	130	301	190	154	498	322	190	305	101	110	2520
17	143	125	255	180	145	435	310	187	258	106	110	964
18	131	120	229	175	145	399	299	198	199	107	139	571
19	127	118	214	170	146	362	294	195	197	96	114	473
20	160	118	239	165	144	382	283	218	176	93	97	409
21	138	116	223	165	137	357	276	196	165	92	91	332
22	127	112	202	160	136	417	268	537	162	91	89	293
23	123	110	194	160	139	349	560	308	180	92	87	269
24	124	110	188	160	277	326	656	269	158	88	92	248
25	248	110	193	160	204	309	403	266	168	86	92	230
26	231	114	237	159	188	296	347	308	159	90	90	222
27	177	151	196	155	276	287	317	332	146	86	96	206
28	159	188	191	151	239	293	299	354	139	86	94	193
29	149	236	184	150	---	412	293	317	142	92	87	183
30	207	170	176	160	---	1410	283	292	141	94	82	181
31	312	---	211	160	---	678	---	289	---	86	79	---
TOTAL	6662	4306	6755	5433	4626	16040	13212	8144	5690	3294	3112	11307
MEAN	215	144	218	175	165	517	440	263	190	106	100	377
MAX	816	236	532	238	277	2390	1140	537	305	150	185	2520
MIN	90	110	126	150	135	179	268	187	139	86	79	71
CFSM	3.17	2.12	3.21	2.58	2.43	7.61	6.48	3.87	2.80	1.56	1.47	5.55
IN.	3.65	2.36	3.70	2.98	2.53	8.79	7.24	4.46	3.12	1.80	1.70	6.19

CAL YR 1976 TOTAL 94913 MEAN 259 MAX 2250 MIN 81 CFSM 3.81 IN 52.00
WTR YR 1977 TOTAL 88581 MEAN 243 MAX 2520 MIN 71 CFSM 3.58 IN 48.53

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) above mean sea level (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 except those for period Jan. 12 to Feb. 10, which are fair. Suspended-sediment records for the current year are published on page 364 of this report.

AVERAGE DISCHARGE.--57 years, 130 ft³/s (3.682 m³/s), 43.70 in/yr (1,110 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.--Studies by Tennessee Valley Authority indicate the flood of June 1876 is the highest known, since at least 1869.

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)
Mar. 12	2400	3290	93.2	6.66	2.030	Sept. 7	2245	*4530	128	*8.21	2.502
Mar. 30	0315	1280	36.2	3.87	1.180	Sept. 16	1245	3410	96.6	6.81	2.076
Apr. 4	2230	2070	58.6	5.07	1.545						

Minimum discharge, 36 ft³/s (1.02 m³/s) Aug. 6, 7, 8, Sept. 3, 4, 5, 6, 7, gage height, 0.51 ft (0.155 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	123	90	108	70	113	297	167	174	75	49	43
2	49	109	85	105	70	103	260	161	153	70	42	40
3	45	101	79	100	70	97	368	155	139	65	46	39
4	44	94	77	97	70	248	465	204	128	63	41	38
5	43	88	74	96	72	187	767	165	121	61	39	38
6	43	85	117	97	70	257	436	153	119	60	46	38
7	384	82	327	104	70	209	357	146	128	57	40	593
8	444	78	165	93	70	169	314	140	107	56	99	690
9	519	75	130	99	70	148	282	133	104	59	89	226
10	218	74	117	118	70	134	259	127	98	68	75	156
11	150	73	110	97	67	138	240	124	94	62	89	125
12	121	95	138	90	78	883	226	121	92	55	51	104
13	105	76	118	90	126	1090	214	118	120	58	48	121
14	94	75	106	100	89	433	204	114	260	53	100	134
15	86	80	225	120	87	323	195	111	132	51	99	181
16	80	75	185	103	77	267	185	107	124	49	77	1300
17	86	72	152	95	76	231	177	105	125	54	66	551
18	75	70	135	90	74	211	175	118	111	55	78	342
19	72	69	124	90	74	189	167	109	111	47	62	274
20	91	68	142	85	73	206	163	126	98	45	53	227
21	78	66	128	85	68	188	159	130	93	45	59	189
22	72	64	120	85	68	239	152	201	88	46	61	166
23	69	63	118	80	70	192	300	150	108	45	57	151
24	71	62	103	80	161	176	448	132	85	42	51	138
25	162	62	108	80	107	164	261	160	86	41	50	128
26	150	63	149	75	99	155	221	234	88	43	54	122
27	109	90	114	75	168	147	200	253	79	40	63	114
28	96	99	109	75	136	148	187	262	72	41	66	106
29	89	154	104	70	---	196	182	236	69	44	53	100
30	119	103	100	70	---	719	174	213	72	45	48	99
31	176	---	128	70	---	387	---	196	---	40	44	---
TOTAL	3995	2488	3977	2822	2400	8347	8035	4871	3362	1635	1895	6573
MEAN	129	82.9	128	91.0	85.7	269	268	157	112	52.7	61.1	219
MAX	519	154	327	120	168	1090	767	262	260	75	100	1300
MIN	43	62	74	70	67	97	152	105	69	40	39	38
CFSM	3.19	2.05	3.17	2.25	2.12	6.66	6.63	3.89	2.77	1.30	1.51	5.42
IN.	3.68	2.29	3.66	2.60	2.21	7.69	7.40	4.49	3.10	1.51	1.74	6.05

CAL YR 1976 TOTAL 52368 MEAN 143 MAX 1500 MIN 38 CFSM 3.54 IN 48.22
WTR YR 1977 TOTAL 50400 MEAN 138 MAX 1300 MIN 38 CFSM 3.42 IN 46.41

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) above mean sea level (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 1.06 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.--15 years, 110 ft³/s (3.115 m³/s), 55.74 in/yr (1,416 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)
Oct. 9	0600	908	25.7	3.35	1.021	Mar. 30	1130	737	20.9	3.11	0.948
Mar. 13	0830	*1840	52.1	*4.48	1.366	Sept. 8	0615	1550	43.9	4.18	1.274

Minimum discharge, 16 ft³/s (0.45 m³/s) Aug. 7, Sept. 4, gage height, 1.22 ft (0.372 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127	127	78	89	50	120	258	124	67	29	29	20
2	102	94	72	85	50	111	224	121	57	29	31	19
3	82	89	67	85	52	107	318	106	55	27	27	18
4	67	81	62	83	60	170	288	96	50	27	25	18
5	58	78	60	83	60	160	560	91	46	26	20	21
6	55	69	91	85	52	169	356	87	42	26	19	18
7	359	69	403	93	49	159	275	81	39	25	17	151
8	685	63	196	83	49	141	236	79	33	24	20	931
9	737	61	145	91	50	131	220	78	33	22	49	180
10	375	65	126	110	51	126	197	74	31	44	52	150
11	213	65	113	75	52	126	181	75	29	29	42	158
12	172	82	131	70	56	305	162	74	29	24	27	92
13	143	67	115	80	86	1200	155	71	33	24	22	80
14	131	63	105	112	66	426	158	70	43	22	25	121
15	126	67	268	119	62	285	152	69	40	23	27	222
16	107	67	226	90	58	235	147	69	35	21	33	534
17	97	69	168	70	56	204	141	66	39	51	26	408
18	81	61	142	70	55	184	144	66	36	53	41	238
19	75	55	126	68	56	172	132	54	43	31	33	172
20	84	55	131	68	56	178	127	42	41	27	24	142
21	92	53	120	68	55	167	126	86	38	25	21	119
22	75	50	105	65	55	199	120	65	36	25	20	103
23	67	49	101	65	55	174	158	55	40	25	23	95
24	68	48	96	63	116	160	233	66	35	22	21	86
25	140	48	96	60	89	150	173	81	37	21	21	80
26	146	50	128	60	85	143	156	82	37	21	36	75
27	120	71	105	58	128	136	145	107	38	20	47	68
28	101	94	98	58	127	134	136	91	32	19	35	64
29	83	138	93	55	---	183	131	109	30	22	29	59
30	94	95	89	55	---	597	129	83	28	22	24	58
31	168	---	103	55	---	354	---	75	---	19	22	---
TOTAL	5030	2143	3959	2371	1836	7106	5938	2493	1172	825	888	4500
MEAN	162	71.4	128	76.5	65.6	229	198	80.4	39.1	26.6	28.6	150
MAX	737	138	403	119	128	1200	560	124	67	53	52	931
MIN	55	48	60	55	49	107	120	42	28	19	17	18
CFSM	6.05	2.66	4.78	2.85	2.45	8.55	7.39	3.00	1.46	.99	1.07	5.60
IN.	6.98	2.97	5.50	3.29	2.55	9.86	8.24	3.46	1.63	1.15	1.23	6.25

CAL YR 1976 TOTAL 41889 MEAN 114 MAX 1630 MIN 23 CFSM 4.25 IN 58.14
WTR YR 1977 TOTAL 38261 MEAN 105 MAX 1200 MIN 17 CFSM 3.92 IN 53.11

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) above mean sea level (levels by Tennessee Valley Authority). Prior to July 5, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good. Considerable diurnal fluctuation at low flow caused by powerplant about 8 mi (13 km) above station. Suspended-sediment records for the current year are published on page 364 of this report.

AVERAGE DISCHARGE.--57 years, 987 ft³/s (27.95 m³/s), 45.28 in/yr (1,150 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. 9	1900	5170	146	17.36	5.291	Apr. 5	2330	5120	145	17.30	5.273
Mar. 13	2315	*10400	295	*20.46	6.236	Sept. 8	2145	5100	144	17.28	5.267
Mar. 31	0945	5790	164	17.99	5.483	Sept. 18	0215	6410	182	19.01	5.794

Minimum discharge, 246 ft³/s (6.97 m³/s) Sept. 4, 5, gage height, 4.00 ft (1.219 m); minimum daily, 254 ft³/s (7.19 m³/s) Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1180	1230	901	928	572	988	3830	1240	1140	623	287	308
2	760	1050	837	847	545	898	2370	1210	968	562	299	307
3	647	958	794	877	570	837	3170	1180	853	532	333	290
4	598	899	759	865	618	1140	3260	1340	799	512	369	254
5	572	851	709	858	700	1650	4680	1260	761	499	339	275
6	564	816	737	830	652	1570	4990	1140	731	485	316	281
7	1700	793	2960	860	618	1630	3600	1090	785	449	305	633
8	3950	726	1870	832	603	1310	2720	1050	692	436	336	4670
9	4930	687	1330	862	584	1160	2290	1020	657	432	623	4430
10	4160	741	1150	1040	565	1060	2070	980	630	457	446	1590
11	1930	696	1060	854	560	1020	1910	933	596	489	521	1270
12	1370	824	1160	823	579	1910	1780	869	593	428	410	852
13	1170	766	1160	838	870	7150	1680	845	661	423	340	802
14	1040	723	1020	920	742	7160	1610	853	1220	421	425	1560
15	950	720	1720	1180	670	4160	1540	882	819	389	545	1940
16	880	667	2020	1000	633	2410	1470	858	854	350	460	4220
17	864	609	1470	830	589	1940	1400	821	1160	348	404	5760
18	815	589	1260	825	579	1730	1370	771	864	412	493	5650
19	772	585	1150	820	590	1580	1370	799	788	418	493	3030
20	811	647	1130	820	613	1640	1300	768	806	395	398	1720
21	859	635	1190	801	586	1510	1260	935	687	387	367	1330
22	772	565	1020	750	588	1930	1210	957	643	375	381	1130
23	752	549	980	730	658	1640	1540	1280	727	347	423	1030
24	740	543	944	700	932	1450	2920	1010	685	304	363	945
25	907	541	917	684	1030	1350	2080	1070	696	301	369	886
26	1450	542	1190	652	869	1280	1630	1140	685	361	352	843
27	1050	691	1040	655	1010	1230	1480	1250	661	321	426	811
28	931	806	965	662	1210	1190	1370	1160	596	319	431	773
29	865	1420	930	621	---	1500	1320	1300	572	337	380	703
30	866	1100	890	550	---	4790	1280	1160	594	323	344	643
31	1500	---	978	600	---	5610	---	1190	---	292	322	---
TOTAL	40355	22969	36241	25114	19335	66423	64500	32361	22923	12727	12300	48936
MEAN	1302	766	1169	810	691	2143	2150	1044	764	411	397	1631
MAX	4930	1420	2960	1180	1210	7160	4990	1340	1220	623	623	5760
MIN	564	541	709	550	545	837	1210	768	572	292	287	254
CFSM	4.40	2.59	3.95	2.74	2.33	7.24	7.26	3.53	2.58	1.39	1.34	5.51
IN.	5.07	2.89	4.55	3.16	2.43	8.35	8.11	4.07	2.88	1.60	1.55	6.15

CAL YR 1976 TOTAL 448826 MEAN 1226 MAX 9110 MIN 303 CFSM 4.14 IN 56.41
WTR YR 1977 TOTAL 404184 MEAN 1107 MAX 7160 MIN 254 CFSM 3.74 IN 50.80

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) above mean sea level (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 except those for period Jan. 12 to Feb. 5, which are fair. City of Hendersonville diverted an average of 5.12 ft³/s (0.15 m³/s) from North Fork and Bradley Creek for municipal water supply. Suspended-sediment records for the current year are published on page 365 of this report.

AVERAGE DISCHARGE.--46 years, 168 ft³/s (4.758 m³/s), 34.20 in/yr (869 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)
Mar. 13	0230	*4160	118	*9.64	2.938	Sept. 8	0215	3240	91.8	8.01	2.441
Mar. 30	0530	1030	29.2	3.93	1.198	Sept. 16	1500	2740	77.6	7.02	2.140
Apr. 5	0215	2200	62.3	5.95	1.814						

Minimum discharge, 44 ft³/s (1.25 m³/s) July 31, Aug. 1, gage height, 1.65 ft (0.503 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	149	105	113	78	135	390	239	181	85	53	71
2	65	135	104	110	75	123	339	230	160	80	56	66
3	60	127	97	110	75	115	406	224	148	75	52	62
4	58	120	93	110	80	254	531	267	139	71	52	60
5	55	112	92	112	80	238	1360	227	133	69	112	59
6	55	108	115	112	83	301	690	212	131	66	94	58
7	308	106	369	119	85	269	532	203	139	62	77	390
8	425	99	212	103	85	218	455	195	123	62	119	1410
9	631	96	168	116	85	189	403	186	120	61	127	414
10	290	96	151	130	85	171	367	180	113	86	101	269
11	197	94	141	99	82	169	340	174	109	86	272	207
12	160	111	157	95	87	741	317	171	110	66	110	170
13	139	96	146	110	114	2030	300	165	120	66	85	165
14	126	93	132	130	99	679	287	160	183	61	114	185
15	116	95	258	152	97	478	277	157	178	57	132	229
16	108	94	246	115	87	382	264	151	125	55	149	1550
17	115	92	203	94	78	326	250	147	122	53	154	984
18	104	89	180	95	89	293	244	148	118	52	123	670
19	98	86	165	93	86	264	240	145	114	49	98	512
20	113	85	161	93	85	287	231	139	110	49	83	428
21	107	84	155	92	77	254	222	143	104	73	75	355
22	96	82	135	92	77	303	214	144	96	72	72	312
23	92	79	130	90	83	257	317	153	104	58	86	279
24	92	77	129	90	177	237	611	150	96	52	151	259
25	139	77	129	90	130	222	378	184	103	50	128	265
26	196	78	158	90	115	210	316	222	104	52	116	255
27	138	116	130	83	166	201	287	233	93	49	126	233
28	124	105	126	85	162	196	268	206	85	49	120	213
29	116	154	122	83	---	227	266	212	82	50	99	199
30	124	120	114	80	---	796	250	202	81	52	86	195
31	193	---	145	80	---	514	---	207	---	47	77	---
TOTAL	4717	3055	4768	3166	2702	11079	11352	5776	3624	1915	3299	10524
MEAN	152	102	154	102	96.5	357	378	186	121	61.8	106	351
MAX	631	154	369	152	177	2030	1360	267	183	86	272	1550
MIN	55	77	92	80	75	115	214	139	81	47	52	58
CFSM	2.28	1.53	2.31	1.53	1.45	5.35	5.67	2.79	1.81	.93	1.59	5.26
IN.	2.63	1.70	2.66	1.77	1.51	6.18	6.33	3.22	2.02	1.07	1.84	5.87

CAL YR 1976 TOTAL 66604 MEAN 182 MAX 1900 MIN 50 CFSM 2.73 IN 37.15
WTR YR 1977 TOTAL 65977 MEAN 181 MAX 2030 MIN 47 CFSM 2.71 IN 36.80

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).

WATER-DISCHARGE RECORDS

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) above mean sea level (levels by Tennessee Valley Authority).

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 365 of this report. Some dirunal fluctuation at low flow caused by powerplant about 34 mi (55 km) above station.

AVERAGE DISCHARGE.--44 years, 1,688 ft³/s (47.80 m³/s), 33.91 in/yr (861 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. 9	1015	7280	206	6.85	2.088	Apr. 5	1045	9800	278	8.09	2.466
Mar. 14	2230	*10200	289	*8.25	2.515	Sept. 19	2015	7040	199	6.70	2.042
Mar. 31	0515	7410	210	6.92	2.109						

Minimum discharge, 427 ft³/s (12.1 m³/s) Sept. 5, gage height, 2.37 ft (0.722 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2130	1690	1370	1390	1070	1480	6840	1980	1940	1160	460	537
2	1400	1480	1250	1350	1070	1340	5020	1910	1620	1080	460	515
3	050	1370	1190	1310	938	1250	4090	1870	1540	956	471	493
4	960	1280	1140	1300	1050	1490	4770	2140	1450	901	548	460
5	909	1220	1090	1280	1100	2290	8800	2100	1400	865	570	438
6	870	1170	1090	1280	1030	2590	7410	1840	1350	844	647	460
7	1710	1150	4510	1340	1010	2670	6420	1740	1320	806	537	680
8	4960	1110	3950	1300	1000	2060	5140	1670	1260	757	548	5590
9	6740	1030	2180	1310	1000	1730	3780	1640	1180	731	992	5420
10	6380	1020	1700	1450	915	1560	3300	1620	1130	807	865	4210
11	4810	1050	1530	1400	938	1500	3050	1610	1080	954	1140	1960
12	2210	1140	1650	1320	938	2290	2840	1550	1060	814	863	1540
13	1670	1150	1740	1270	1150	7810	2670	1490	1070	734	664	1320
14	1520	1070	1520	1310	1230	8680	2550	1460	1620	719	628	2170
15	1440	1070	2880	1560	1080	8510	2460	1480	1780	692	1040	2580
16	1340	1040	3570	1490	1020	5360	2350	1460	1360	640	822	5570
17	1310	984	2400	1480	938	3010	2230	1420	1600	591	1030	6530
18	1230	938	1930	1440	938	2500	2160	1370	1630	663	1090	6590
19	1160	904	1690	1370	938	2250	2150	1380	1330	659	919	6610
20	1190	926	1570	1500	949	2350	2120	1340	1320	630	765	4550
21	1250	961	1660	1470	926	2210	2010	1400	1200	597	658	2330
22	1160	915	1490	1420	893	2790	1930	1440	1110	666	654	1880
23	1100	871	1480	1380	938	2550	2130	1740	1330	651	691	1700
24	1090	860	1450	1300	1300	2170	4230	1610	1190	559	952	1630
25	1210	849	1400	1280	1520	1960	3670	1700	1270	493	876	1560
26	1830	849	1540	1210	1340	1850	2700	1720	1240	526	716	1530
27	1560	995	1520	1030	1390	1750	2400	1920	1140	537	872	1440
28	1390	1110	1470	1120	1670	1690	2220	1790	1050	504	813	1370
29	1260	1830	1410	1100	---	1870	2140	1890	991	526	740	1290
30	1220	1660	1340	1090	---	6420	2070	1740	1080	559	640	1200
31	1630	---	1400	1080	---	7330	---	1890	---	493	581	---
TOTAL	59689	33692	56110	40930	30279	95310	105650	51910	39641	22114	23252	74153
MEAN	1925	1123	1810	1320	1081	3075	3522	1675	1321	713	750	2472
MAX	6740	1830	4510	1560	1670	8680	8800	2140	1940	1160	1140	6610
MIN	870	849	1090	1030	893	1250	1930	1340	991	493	460	438
CFSM	2.85	1.66	2.68	1.95	1.60	4.55	5.21	2.48	1.95	1.06	1.11	3.66
IN.	3.28	1.85	3.09	2.25	1.67	5.24	5.81	2.86	2.18	1.22	1.28	4.08

CAL YR 1976 TOTAL 688597 MEAN 1881 MAX 14500 MIN 572 CFSM 2.78 IN 37.89
WTR YR 1977 TOTAL 632730 MEAN 1734 MAX 8800 MIN 438 CFSM 2.57 IN 34.82

03448000 FRENCH BROAD RIVER AT BENT CREEK, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958-67, 1969 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1968 to current year.

INSTRUMENTATION.--Temperature recorder since October 1968.

REMARKS.--Miscellaneous chemical data published for water years 1955-57. Samples for the 1972 water year were collected by USGS personnel 3.0 mi (4.8 km) upstream at Long Shoals bridge (03447861 French Broad River near Arden). Chemical data published for Long Shoals bridge for 1954 water year.

COOPERATION.--Analyses for the 1972 water year were made and furnished by the Tennessee Valley Authority. Temperature data furnished by the Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 25.5°C July 17, 1970, July 8, 15, 16, 18-21, Aug. 1, 1977; minimum, 0.0°C on several days during most winters.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 25.5°C July 8, 15, 16, 18-21, Aug. 1; minimum, 0.5°C Jan. 1, 2, 11, 12, 18-24, 27-31, Feb. 7, 8, 9.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MI
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.0	15.0	10.5	9.0	5.0	4.0	2.0	0.5	---	---	6.5	5.
2	16.0	14.5	10.0	8.5	4.5	3.5	1.5	0.5	---	---	6.5	4.
3	17.0	14.5	9.0	8.0	4.5	3.5	1.5	1.0	1.5	1.0	6.5	5.
4	18.0	15.0	9.0	7.0	4.5	3.5	3.5	1.5	4.0	1.5	9.0	6.
5	18.5	16.0	8.0	6.5	5.0	3.5	4.5	3.5	4.0	2.0	9.0	8.
6	16.5	16.0	7.0	5.5	4.5	4.0	5.0	4.5	3.5	1.0	8.0	7
7	16.0	16.0	8.0	5.5	5.0	4.0	5.0	4.0	3.0	0.5	8.5	6
8	16.5	16.0	6.5	5.0	6.0	5.0	4.0	3.0	3.0	0.5	8.5	6
9	16.5	15.5	6.5	5.0	5.5	4.5	3.5	1.0	4.0	0.5	8.5	6
10	15.5	14.5	8.5	5.5	4.5	4.0	3.0	1.0	4.5	1.5	9.0	8
11	14.5	13.5	9.0	7.0	6.0	4.5	1.5	0.5	4.5	3.0	9.5	8
12	14.0	13.5	8.5	6.5	8.0	6.0	1.0	0.5	4.5	3.5	10.5	9
13	14.5	13.0	7.0	6.0	8.0	7.0	2.0	1.0	6.0	4.5	12.0	10
14	14.5	13.0	6.0	5.5	7.0	6.0	3.0	1.5	6.0	4.0	13.0	11
15	14.0	12.0	6.5	5.5	6.5	6.0	3.0	2.0	5.5	4.0	13.0	11
16	14.0	13.0	7.0	6.0	7.0	6.5	2.0	1.0	5.0	3.0	12.0	11
17	13.5	12.0	8.0	6.5	7.0	6.5	1.0	1.0	4.5	1.5	11.5	10
18	13.5	11.0	8.5	6.0	6.5	6.0	1.0	0.5	5.0	2.0	11.0	10
19	11.0	10.0	8.5	7.0	7.0	6.0	0.5	0.5	5.5	3.5	10.5	10
20	11.0	10.0	8.5	8.0	8.0	6.5	1.0	0.5	5.5	4.0	11.0	10
21	11.0	9.5	9.0	6.5	6.5	4.0	1.0	0.5	5.5	3.5	10.5	9
22	11.0	9.0	7.0	5.0	4.0	3.0	0.5	0.5	6.0	3.0	9.5	8
23	10.5	8.5	5.5	4.0	3.5	2.0	0.5	0.5	7.0	4.5	9.0	8
24	10.5	9.5	5.0	4.0	3.5	1.5	1.5	0.5	8.5	6.5	9.5	8
25	11.0	10.5	5.5	4.0	3.0	2.0	3.0	1.5	8.5	6.5	10.0	8
26	11.5	10.5	6.5	5.0	4.0	3.0	3.5	2.0	9.5	7.0	11.0	9
27	11.5	10.0	8.5	6.5	3.5	2.0	3.5	0.5	9.0	8.0	11.0	10
28	10.5	9.0	10.0	8.5	4.5	3.5	1.5	0.5	8.0	6.5	12.0	10
29	9.5	8.0	10.0	7.0	5.0	3.5	1.0	0.5	---	---	13.5	11
30	9.0	8.5	7.0	5.0	4.0	2.0	1.5	0.5	---	---	13.0	11
31	9.5	9.0	---	---	4.0	2.0	1.5	0.5	---	---	14.0	12
MONTH	18.5	8.0	10.5	4.0	8.0	1.5	5.0	0.5	9.5	0.5	14.0	4

03448000 FRENCH BROAD RIVER AT BENT CREEK, N. C.--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.0	12.0	---	---	19.5	18.0	23.0	20.5	25.5	20.5	24.0	21.0
2	13.0	12.0	---	---	19.5	18.0	23.0	20.5	24.0	21.0	25.0	21.0
3	13.0	12.0	---	---	19.5	16.5	23.0	20.5	21.5	20.5	25.0	21.0
4	14.0	13.0	16.0	15.0	20.0	16.5	23.5	20.0	23.0	20.0	24.5	21.0
5	14.0	13.0	17.0	15.5	20.5	17.0	23.5	20.5	24.0	21.0	23.5	21.0
6	12.0	10.5	18.0	15.5	21.5	18.5	24.5	21.0	24.5	20.5	23.0	21.0
7	12.0	10.0	18.0	16.5	19.5	17.0	25.0	21.5	25.0	22.0	22.0	20.0
8	12.0	11.0	18.5	16.0	19.0	16.0	25.5	22.0	24.5	22.0	20.0	18.5
9	12.0	11.5	18.0	15.5	18.5	16.0	25.0	23.0	23.0	21.0	19.5	19.0
10	12.0	11.0	16.0	14.0	18.0	15.5	25.0	23.0	23.0	20.5	20.0	19.5
11	13.5	12.0	15.5	13.5	18.5	16.0	24.5	20.5	21.5	20.5	20.0	19.0
12	14.5	13.0	16.0	13.5	19.5	16.5	24.5	21.5	23.5	21.0	19.5	18.0
13	14.5	13.5	16.5	13.5	20.0	18.5	24.5	22.0	24.5	21.5	18.5	17.0
14	14.5	14.0	16.5	14.5	19.0	18.5	25.0	22.0	24.5	21.0	19.0	17.0
15	15.0	14.0	17.0	15.0	20.0	18.0	25.5	22.0	23.5	21.5	18.5	18.5
16	15.5	13.5	18.5	15.5	20.5	18.5	25.5	23.0	23.0	21.5	18.5	18.0
17	16.0	14.0	19.0	16.0	19.5	19.0	24.5	23.0	22.0	21.5	18.5	18.0
18	15.5	14.5	19.0	16.5	19.5	18.5	25.5	22.0	23.5	21.0	19.5	18.5
19	15.5	14.5	19.5	17.0	21.0	18.5	25.5	22.0	22.0	20.5	19.5	19.0
20	16.0	14.5	19.5	17.0	21.5	19.5	25.5	22.0	22.0	19.5	19.0	18.5
21	16.5	15.0	19.0	17.0	22.0	19.5	25.5	23.0	21.5	20.0	19.0	18.0
22	16.0	15.5	18.5	16.5	21.5	19.5	24.0	21.5	22.0	19.5	19.0	18.0
23	16.0	15.5	18.5	17.0	21.5	19.5	24.0	21.0	22.0	20.0	19.5	18.0
24	15.5	14.5	18.0	16.5	22.0	20.0	24.5	21.0	21.0	19.5	19.0	18.0
25	15.0	13.5	18.0	16.5	21.0	20.0	22.0	21.0	21.0	19.0	19.0	18.0
26	13.5	11.5	17.0	16.5	22.0	20.0	24.0	20.5	20.5	19.5	19.0	18.0
27	13.0	11.5	18.0	16.0	23.0	20.0	23.5	21.0	20.5	19.0	18.5	18.0
28	13.5	11.5	18.5	16.5	23.5	20.5	21.5	19.5	22.0	19.5	19.0	16.5
29	---	---	19.0	16.5	23.0	21.0	19.5	19.0	23.0	20.0	17.0	16.0
30	---	---	19.0	17.0	23.0	21.0	23.0	18.5	23.5	20.5	16.5	16.0
31	---	---	19.0	17.0	---	---	23.0	19.5	23.5	20.5	---	---
MONTH	16.5	10.0	19.5	13.5	23.5	15.5	25.5	18.5	25.5	19.0	25.0	16.0
YEAR	25.5	0.5										

03448500 HOMINY CREEK AT CANDLER, N. C.

LOCATION.--Lat 35°32'28", long 82°40'35", Buncombe County, Hydrologic Unit 06010105, on left bank 0.1 mi (0.2 km) downstream from Pole Creek, 0.4 mi (0.6 km) downstream from bridge on State Highway 112, 1.0 mi (1.6 km) east of Candler, and at mile 10.3 (16.6 km).

DRAINAGE AREA.--79.8 mi² (206.7 km²).

PERIOD OF RECORD.--October 1942 to September 1977 (destroyed by flood of November 1977).

REVISED RECORDS.--WSP 1113: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,065.83 ft (629.665 m) above mean sea level (levels by Tennessee Valley Authority).

REMARKS.--Records good except those for period Dec. 22 to Feb. 9, which are fair. Numerous small diversions for irrigation above station. Suspended-sediment records for the current year are published on page 365 of this report.

AVERAGE DISCHARGE.--35 years, 96.1 ft³/s (2.722 m³/s), 16.35 in/yr (415 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,800 ft³/s (193 m³/s) June 16, 1949, gage height, 13.25 ft (4.039 m); minimum, 13 ft³/s (0.37 m³/s) Sept. 2, 1953, gage height, 0.80 ft (0.244 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1840, 24.17 ft (7.367 m) Nov. 6, 1977, from floodmarks, discharge, 24,000 ft³/s (680 m³/s) by slope-area method. Flood of Aug. 30, 1940, reached a stage of 18.0 ft (5.49 m) from floodmarks, discharge, 13,100 ft³/s (371 m³/s) by conveyance method.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 900 ft³/s (25 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. 13	0230	2380	67.4	6.01	1.832	Sept. 8	0130	2430	68.8	6.11	1.862
Apr. 4	2215	*5430	154	*11.15	3.399	Sept. 16	1200	1480	41.9	4.46	1.359

Minimum daily discharge, 36 ft³/s (1.02 m³/s) Sept. 5, 6; minimum gage height, 1.10 ft (0.335 m) Sept. 4, 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	62	61	75	60	68	223	117	117	80	43	40
2	55	60	57	70	57	63	191	121	101	88	46	39
3	53	59	55	70	55	62	349	132	91	65	51	38
4	51	58	53	68	55	141	1020	147	87	61	47	37
5	49	56	52	67	55	114	1350	125	83	60	45	36
6	48	55	75	70	56	267	468	115	87	59	54	36
7	140	55	184	83	55	188	333	112	91	57	48	288
8	159	53	100	68	55	138	274	107	77	55	57	754
9	327	53	82	72	55	115	236	101	77	59	50	164
10	122	53	75	79	53	102	211	99	72	62	58	106
11	91	52	73	75	52	98	192	98	70	62	112	83
12	78	61	94	70	58	649	177	96	69	66	64	70
13	71	54	83	70	75	1110	159	94	75	65	53	70
14	66	53	75	71	56	381	154	93	91	54	61	72
15	62	54	238	70	55	261	150	92	108	52	60	98
16	61	53	158	63	50	208	140	89	85	50	52	677
17	68	52	120	63	53	179	138	87	85	50	52	290
18	60	51	101	62	50	160	133	102	78	49	57	179
19	58	50	92	62	50	146	142	89	80	46	47	140
20	62	50	96	64	50	165	135	100	76	45	45	120
21	58	50	87	64	47	140	129	97	74	69	43	100
22	56	49	80	63	48	154	122	97	80	59	43	89
23	55	48	75	62	50	132	159	101	99	53	47	83
24	59	48	72	60	140	125	191	96	78	48	69	78
25	77	48	72	59	78	120	149	146	101	53	53	74
26	80	50	81	58	69	113	135	158	99	56	50	76
27	66	60	69	64	86	110	126	145	79	48	53	73
28	62	66	69	62	79	108	120	124	69	47	49	69
29	60	98	67	60	---	113	142	111	65	48	44	65
30	60	65	65	59	---	5[illegible]	121	155	67	50	42	67
31	68	---	89	58	---	[illegible]	---	167	---	45	40	---
TOTAL	2439	1676	2750	2061	1702	6538	7569	3513	2511	1761	1635	4111
MEAN	78.7	55.9	88.7	66.5	60.8	211	252	113	83.7	56.8	52.7	137
MAX	327	98	238	83	140	1110	1350	167	117	88	112	754
MIN	48	48	52	58	47	62	120	87	65	45	40	36
CFSM	.99	.70	1.11	.83	.76	2.64	3.16	1.42	1.05	.71	.66	1.72
IN.	1.14	.78	1.28	.96	.79	3.05	3.53	1.64	1.17	.82	.76	1.92

CAL YR 1976 TOTAL 39865 MEAN 109 MAX 1990 MIN 43 CFSM 1.37 IN 18.58
WTR YR 1977 TOTAL 38266 MEAN 105 MAX 1350 MIN 36 CFSM 1.32 IN 17.84

03448960 NORTH FORK SWANNANOA RIVER BELOW BURNETT RESERVOIR NEAR BLACK MOUNTAIN, N. C.

LOCATION.--Lat 35°39'28", long 82°20'51", Buncombe County, Hydrologic Unit 06010105, on right bank 0.3 mi (0.5 km) upstream from Walker Branch, 0.3 mi (0.5 km) downstream from Burnett Dam, 3.3 mi (5.3 km) northwest of Black Mountain, and 4.5 mi (7.2 km) upstream from mouth.

DRAINAGE AREA.--22.1 mi² (57.2 km²).

PERIOD OF RECORD.--May 1976 to September 1977 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 2,440.89 ft (743.983 m) above mean sea level.

REMARKS.--Records good. Flow controlled by Burnett Lake (see p. 309). City of Asheville diverted an average of 35.2 ft³/s (1.00 m³/s) for water supply from Burnett Lake. Suspended-sediment records for the current year are published on page 365 of this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,600 ft³/s (73.6 m³/s) May 29, 1976, gage height, 8.63 ft (2.630 m); minimum daily, 0.08 ft³/s (0.002 m³/s) Sept. 2, 11, 12, 24, 25, 1977; minimum gage height, 0.60 ft (0.183 m) Sept. 1, 2, 3, 11, 12, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 786 ft³/s (22.3 m³/s) Apr. 5, gage height, 5.34 ft (1.628 m); minimum daily, 0.08 ft³/s (0.002 m³/s) Sept. 2, 11, 12, 24, 25; minimum gage height, 0.60 ft (0.183 m) Sept. 1, 2, 3, 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.29	.62	.97	.28	.12	.34	91	30	54	1.6	.25	.09
2	.29	.58	.89	.26	.12	.34	68	26	42	.66	.27	.08
3	.29	.53	.88	.42	.14	.34	80	27	31	.59	.34	.09
4	.28	.48	.87	.26	.18	5.8	109	113	24	.54	.32	.79
5	.29	.47	.88	.23	.17	47	628	128	19	.45	.31	.64
6	.29	.46	1.1	.25	.15	112	304	95	14	.43	.30	.14
7	.47	.47	.75	.24	.14	129	173	74	12	.41	.32	.24
8	.39	.65	.56	.20	.14	91	121	59	3.1	.37	.35	.36
9	.52	.55	.64	.17	.12	64	98	46	1.9	.52	.40	.14
10	.34	.54	.61	.18	.14	47	82	32	1.2	.50	.31	.10
11	.31	.34	.60	.18	.14	39	69	25	.53	.43	.26	.08
12	.30	.26	.58	.17	.18	91	57	21	1.3	.51	.23	.08
13	.31	.20	.54	.16	.22	544	46	16	.59	.46	.23	.09
14	.42	.17	.49	.16	.22	246	38	13	.65	.43	.24	.10
15	.46	.16	.56	.18	.24	130	33	9.3	.58	.41	.26	.18
16	.48	.17	.30	.18	.24	91	29	6.3	.65	.38	.26	.33
17	.53	.16	.33	.16	.22	62	26	3.3	.54	.36	.32	.25
18	.51	.42	.38	.16	.24	47	25	1.3	.51	.37	.34	.14
19	.52	.84	.39	.16	.24	39	20	.67	.53	.34	.23	.12
20	.59	.96	.30	.16	.26	40	15	2.9	.54	.20	.20	.10
21	.81	1.1	.33	.16	.26	34	11	15	.51	.14	.25	.09
22	.91	1.3	.33	.16	.27	46	7.3	11	.67	.37	.26	.09
23	1.0	1.5	.32	.14	.30	46	18	8.4	.69	.36	.25	.09
24	1.3	1.7	.37	.14	.40	37	86	4.7	.97	.32	.28	.08
25	1.3	1.7	.37	.14	.32	30	76	12	11	.33	.26	.08
26	.80	1.8	.57	.14	.32	26	53	55	26	.38	.28	.09
27	.77	1.6	.39	.14	.44	23	43	88	26	.37	.27	.24
28	.68	1.5	.25	.12	.35	20	35	77	19	.37	.18	.48
29	.65	1.2	.30	.12	---	18	37	86	13	.36	.10	.50
30	.69	1.0	.26	.12	---	114	34	75	5.4	.30	.12	.54
31	.73	---	.30	.12	---	134	---	57	---	.26	.14	---
TOTAL	17.52	23.43	16.41	5.66	6.28	2353.82	2512.3	1217.87	311.86	13.52	8.13	6.42
MEAN	.57	.78	.53	.18	.22	75.9	83.7	39.3	10.4	.44	.26	.21
MAX	1.3	1.8	1.1	.42	.44	544	628	128	54	1.6	.40	.79
MIN	.28	.16	.25	.12	.12	.34	7.3	.67	.51	.14	.10	.08

WTR YR 1977 TOTAL 6493.22 MEAN 17.8 MAX 628 MIN .08

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) above mean sea level (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 35.2 ft³/s (1.00 m³/s) for water supply from Burnett Lake on North Fork Swannanoa River 20 mi (32 km) above station (see p. 309); an average of 26.3 ft³/s (0.74 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 366 of this report.

AVERAGE DISCHARGE.--50 years (1920-26, 1933-77), 161 ft³/s (4.560 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 8,400 ft³/s (238 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, 4,680 ft³/s (133 m³/s) Apr. 4, gage height, 10.61 ft (3.234m); minimum, 19 ft³/s (0.54 m³/s) Sept. 5, gage height, 1.25 ft (0.381 m); minimum daily, 28 ft³/s (0.79 m³/s) Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	89	89	90	73	136	416	172	275	127	36	35
2	63	82	85	104	70	116	336	161	193	144	34	28
3	59	80	77	103	69	108	469	194	159	84	39	33
4	52	77	78	105	77	172	944	501	139	76	54	31
5	51	72	75	99	79	186	2890	398	126	73	58	29
6	50	76	131	100	78	486	1080	307	126	70	45	32
7	204	74	451	114	74	442	682	257	119	66	40	112
8	260	69	208	101	69	320	527	226	96	62	51	286
9	594	67	149	103	67	256	425	193	102	58	55	83
10	201	67	127	111	68	214	353	170	93	88	45	63
11	125	69	118	79	70	199	309	154	85	81	41	51
12	103	80	176	78	74	347	274	140	101	64	34	41
13	90	67	142	78	97	1530	249	131	85	61	39	44
14	77	69	123	87	82	721	227	128	186	58	57	61
15	73	68	498	85	80	474	213	121	108	55	57	115
16	74	65	312	85	77	359	195	109	92	59	44	280
17	85	63	219	85	71	293	185	105	104	58	52	161
18	70	64	176	85	72	253	173	101	104	52	88	102
19	66	60	157	82	73	215	167	101	100	47	48	81
20	72	59	151	82	76	249	155	94	82	45	46	76
21	68	63	147	80	70	210	148	123	76	44	45	61
22	61	60	120	80	68	296	141	109	111	46	43	54
23	65	56	120	80	71	246	188	107	162	60	44	47
24	69	56	108	80	160	218	409	108	125	50	53	51
25	110	59	108	78	127	197	273	179	151	44	45	48
26	138	59	155	75	112	183	226	239	132	47	38	48
27	96	83	116	90	157	171	200	279	112	44	47	45
28	87	100	107	82	167	155	181	252	103	41	43	46
29	81	175	107	78	---	188	202	264	89	45	36	42
30	87	106	99	75	---	923	182	344	86	51	33	44
31	112	---	117	75	---	597	---	284	---	44	32	---
TOTAL	3409	2234	4846	2729	2428	10460	12419	6051	3622	1944	1422	2230
MEAN	110	74.5	156	88.0	86.7	337	414	195	121	62.7	45.9	74.3
MAX	594	175	498	114	167	1530	2890	501	275	144	88	286
MIN	50	56	75	75	67	108	141	94	76	41	32	28

CAL YR 1976 TOTAL 66498 MEAN 182 MAX 4960 MIN 38
WTR YR 1977 TOTAL 53794 MEAN 147 MAX 2890 MIN 28

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) above mean sea level. 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 except those for period Jan. 1 to Feb. 7, which are fair. 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 43 ft³/s (1.22 m³/s), see sta 03451000, of which 26.3 ft³/s (0.74 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. Suspended-sediment records for the current year are published on page 366 of this report.

AVERAGE DISCHARGE.--82 years, 2,089 ft³/s (59.16 m³/s), 30.02 in/yr (762 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. 9	1015	9420	267	5.78	1.762	Apr. 5	0515	*19100	541	*9.04	2.755
Mar. 13	0345	13100	371	7.19	2.192	Sept. 16	1600	9350	265	5.75	1.753
Mar. 30	1630	9590	272	5.85	1.783						

Minimum discharge, 600 ft³/s (17.0 m³/s) Sept. 5, gage height, 1.13 ft (0.344 m); minimum daily, 611 ft³/s (17.3 m³/s) Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2630	2110	1620	1680	1220	1850	8040	2350	2500	1500	657	718
2	1550	1750	1480	1640	1210	1640	6140	2290	2020	1430	634	680
3	1240	1590	1400	1600	1170	1530	5160	2300	1760	1190	657	668
4	1120	1490	1350	1570	1120	1800	6480	2830	1630	1110	772	634
5	1050	1410	1310	1540	1190	2750	15300	2730	1560	1070	785	611
6	1010	1370	1330	1530	1090	3460	10100	2390	1530	1040	864	634
7	1780	1340	4980	1610	1080	3550	8410	2240	1570	1010	735	900
8	5550	1300	4760	1570	1150	2770	6410	2140	1460	957	792	6760
9	8240	1230	2750	1540	1140	2350	4550	2030	1380	922	1100	6020
10	7280	1210	2160	1700	1150	2110	3880	1940	1330	985	1080	4920
11	5670	1240	1950	1630	1160	2000	3530	1880	1270	1180	1300	2400
12	2860	1310	2100	1610	1180	2840	3270	1800	1270	1030	1120	1790
13	2120	1370	2200	1570	1380	11400	3080	1730	1230	948	890	1480
14	1850	1270	1930	1530	1520	10100	2940	1690	1760	903	828	2180
15	1670	1260	3560	1830	1330	10100	2840	1690	2190	882	1190	2650
16	1550	1250	4520	1820	1240	6660	2730	1670	1570	850	1010	6810
17	1540	1190	3110	1740	1150	3840	2610	1630	1770	799	1110	7700
18	1460	1130	2490	1710	1150	3100	2530	1590	1950	842	1400	7250
19	1360	1090	2200	1700	1150	2800	2530	1570	1570	853	1110	7250
20	1350	1080	2060	1680	1160	2920	2480	1530	1500	853	954	5640
21	1420	1130	2130	1670	1140	2780	2360	1590	1420	801	838	2780
22	1350	1110	1900	1650	1110	3280	2290	1660	1360	894	818	2250
23	1300	1050	1800	1620	1150	3140	2420	1920	1710	893	882	2010
24	1290	1030	1720	1590	1700	2700	4780	1880	1470	780	1070	1860
25	1400	1020	1660	1560	1940	2500	4260	2110	1620	718	*1140	1740
26	2200	1010	1890	1430	1660	2350	3130	2210	1570	734	891	1700
27	1960	1140	1950	1350	1670	2240	2780	2440	1440	756	1030	1610
28	1630	1290	1730	1290	2110	2170	2590	2260	1320	704	987	1520
29	1490	2160	1670	1250	---	2270	2560	2330	1220	726	922	1430
30	1460	2100	1570	1240	---	7880	2440	2290	1200	761	816	1360
31	1870	---	1680	1230	---	8760	---	2410	---	712	760	---
TOTAL	70250	40030	68960	48680	36420	119640	132620	63120	47150	28833	29142	85955
MEAN	2266	1334	2225	1570	1301	3859	4421	2036	1572	930	940	2865
MAX	8240	2160	4980	1830	2110	11400	15300	2830	2500	1500	1400	7700
MIN	1010	1010	1310	1230	1080	1530	2290	1530	1200	704	634	611
CFSM	2.40	1.41	2.35	1.66	1.38	4.08	4.68	2.15	1.66	.98	1.00	3.03
IN.	2.77	1.58	2.71	1.92	1.43	4.71	5.22	2.48	1.86	1.14	1.15	3.38

CAL YR 1976 TOTAL 849864 MEAN 2322 MAX 17800 MIN 684 CFSM 2.46 IN 33.45
WTR YR 1977 TOTAL 770800 MEAN 2112 MAX 15300 MIN 611 CFSM 2.24 IN 30.34

03452001 SANDYMUSH CREEK 1.1 MI ABOVE MOUTH NEAR ALEXANDER, N. C.

LOCATION.--Lat 35°43'55", long 82°40'22", Buncombe County, Hydrologic Unit 06010105, on right bank 0.9 mi (1.4 km) downstream from Turkey Creek, 3.8 mi (6.1 km) northwest of Alexander, and 1.1 mi (1.8 km) upstream from mouth.

DRAINAGE AREA.--79.5 mi² (205.9 km²).

PERIOD OF RECORD.--July 1975 to September 1977 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,727.09 ft (526.42 m) above mean sea level.

REMARKS.--Records good except those for period Jan. 11 to Feb. 20, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,980 ft³/s (169 m³/s) Apr. 4, 1977, gage height, 10.23 ft (3.118 m); minimum, 17 ft³/s (0.48 m³/s) Aug. 26, 1976, gage height, 1.30 ft (0.396 m).

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)
Mar. 13	0345	2180	61.7	6.22	1.896	May 31	1930	1080	30.6	4.52	1.378
Mar. 30	1300	1510	42.8	5.27	1.606	Sept. 8	0345	2720	77.0	6.90	2.103
Apr. 4	2345	*5980	169	*10.23	3.118	Sept. 17	2300	1100	31.2	4.56	1.390

Minimum discharge, 18 ft³/s (0.51 m³/s) Sept. 4, 5, 6, gage height, 1.31 ft (0.399 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	34	62	57	46	61	179	68	82	36	21	26
2	32	33	55	55	44	54	133	78	52	36	40	21
3	29	32	44	60	42	50	347	66	45	31	49	19
4	27	32	41	46	41	71	970	67	40	30	28	19
5	26	31	39	45	41	70	1610	62	38	29	24	19
6	25	30	38	48	43	381	368	57	39	29	22	19
7	68	30	110	61	41	205	222	57	54	27	21	130
8	80	29	66	51	41	122	169	54	37	26	20	802
9	282	29	52	51	41	93	153	49	39	25	43	110
10	78	30	58	55	40	78	128	47	36	26	33	66
11	52	29	44	52	40	69	110	47	33	40	37	50
12	43	37	55	50	44	196	98	45	33	77	29	41
13	39	31	62	50	56	871	89	44	32	58	22	39
14	36	30	52	52	42	232	85	43	57	33	26	51
15	33	32	279	50	41	147	82	43	73	29	27	41
16	32	31	147	48	38	108	79	41	40	27	53	179
17	38	30	89	46	40	87	71	40	42	27	72	186
18	33	30	69	44	38	77	68	43	44	26	73	223
19	31	29	59	44	38	67	68	45	41	23	34	101
20	33	29	57	45	38	87	69	39	36	24	29	75
21	34	29	56	48	37	71	65	43	35	24	26	59
22	30	27	52	47	36	86	62	40	37	26	25	50
23	30	27	51	47	39	76	75	47	49	29	28	45
24	32	29	48	45	104	70	88	40	38	23	35	42
25	44	28	48	45	71	65	71	54	50	30	30	40
26	58	28	65	45	61	60	65	65	73	37	25	45
27	41	36	54	49	77	57	63	53	51	25	27	45
28	37	38	52	47	72	55	60	48	41	23	24	39
29	35	76	46	45	---	57	88	46	36	24	22	35
30	35	50	45	45	---	634	73	59	35	26	21	36
31	39	---	75	44	---	335	---	131	---	22	20	---
TOTAL	1471	986	2070	1517	1332	4692	5808	1661	1338	948	986	2653
MEAN	47.5	32.9	66.8	48.9	47.6	151	194	53.6	44.6	30.6	31.8	88.4
MAX	282	76	279	61	104	871	1610	131	82	77	73	802
MIN	25	27	38	44	36	50	60	39	32	22	20	19
CFSM	.60	.41	.84	.62	.60	1.90	2.44	.67	.56	.39	.40	1.11
IN.	.69	.46	.97	.71	.62	2.20	2.72	.78	.63	.44	.46	1.24

CAL YR 1976 TOTAL 24490 MEAN 66.9 MAX 1560 MIN 18 CFSM .84 IN 11.46
WTR YR 1977 TOTAL 25462 MEAN 69.8 MAX 1610 MIN 19 CFSM .88 IN 11.91

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) above mean sea level (levels by Tennessee Valley Authority).

REMARKS.--Records good except those for period Jan. 11 to Feb. 9, which are fair. 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.--35 years, 2,468 ft³/s (69.89 m³/s), 25.16 in/yr (639 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,400 ft³/s (1,144 m³/s) Mar. 26, 1965, gage height, 11.54 ft (3.517 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)
Oct. 9	0900	11500	326	5.73	1.747	Apr. 5	0115	*37600	1060	*11.08	3.377
Mar. 13	0445	18200	515	7.38	2.249	Sept. 8	0915	10600	300	5.48	1.670
Mar. 30	1345	13800	391	6.34	1.932						

Minimum discharge, 756 ft³/s (21.4 m³/s) Sept. 5, 6, gage height, 1.07 ft (0.326 m); minimum daily, 775 ft³/s (21.9 m³/s) Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2970	2440	2000	2040	1580	2370	8520	2650	2950	1660	826	937
2	1920	2090	1810	2030	1550	2080	6730	2600	2280	1760	795	862
3	1490	1890	1710	1970	1500	1930	6460	2560	1990	1440	858	829
4	1340	1790	1630	1940	1450	2160	8950	3190	1820	1320	879	832
5	1260	1700	1570	1910	1550	3210	23300	3200	1720	1260	959	775
6	1200	1630	1550	1880	1450	5070	11200	2770	1680	1240	1050	788
7	1810	1590	5200	2050	1400	4920	8600	2580	1830	1220	893	921
8	5640	1550	5450	1950	1450	3710	6860	2450	1660	1190	909	7560
9	9360	1490	3420	1930	1450	3040	5180	2300	1570	1150	1210	6290
10	7470	1450	2620	2100	1420	2680	4470	2180	1510	1210	1330	5420
11	6030	1450	2350	2050	1450	2480	4220	2110	1430	1400	1490	3110
12	3600	1520	2480	1890	1470	2930	3850	2030	1480	1360	1400	2160
13	2500	1610	2720	1880	1730	13500	3550	1940	1470	1200	1090	1720
14	2180	1550	2400	1870	1900	10400	3420	1890	1970	1080	969	2400
15	1970	1490	4640	2270	1720	10500	3300	1870	2620	1040	1230	2900
16	1840	1500	5650	2260	1570	7240	3160	1860	1830	1050	1320	7400
17	1830	1460	4020	2180	1430	4670	2990	1800	1900	999	1420	8600
18	1750	1410	3130	2100	1410	3710	2890	1790	2170	990	1820	7600
19	1630	1350	2710	2060	1420	3320	2870	1750	2190	990	1340	7400
20	1600	1320	2540	2040	1430	3430	2840	1720	1810	983	1170	6360
21	1680	1310	2600	2010	1390	3310	2700	1750	1720	982	1080	3400
22	1620	1320	2320	1990	1350	3710	2590	1830	1570	1010	1130	2590
23	1530	1270	2220	1970	1380	3820	2740	1970	2310	1110	1010	2280
24	1530	1250	2100	1920	2170	3280	4870	2150	1870	949	1310	2100
25	1660	1240	2010	1900	2540	2990	4760	2250	2160	924	1390	1960
26	2490	1240	2240	1810	2180	2790	3610	2560	2230	1050	1110	1930
27	2430	1380	2330	1710	2240	2640	3150	2680	1920	958	1160	1860
28	1990	1580	2100	1700	2660	2520	2920	2510	1700	883	1160	1740
29	1820	2500	2030	1680	---	2520	2980	2540	1530	883	1110	1630
30	1740	2570	1910	1670	---	9290	2780	2450	1440	913	1000	1560
31	1980	---	2110	1620	---	9880	---	2760	---	896	930	---
TOTAL	79860	47940	83570	60380	46240	140100	156460	70690	56330	35100	35348	95914
MEAN	2576	1598	2696	1948	1651	4519	5215	2280	1878	1132	1140	3197
MAX	9360	2570	5650	2270	2660	13500	23300	3200	2950	1760	1820	8600
MIN	1200	1240	1550	1620	1350	1930	2590	1720	1430	883	795	775
CFSM	1.93	1.20	2.02	1.46	1.24	3.39	3.92	1.71	1.41	.85	.86	2.40
IN.	2.23	1.34	2.33	1.69	1.29	3.91	4.37	1.97	1.57	.98	.99	2.68

CAL YR 1976 TOTAL 994069 MEAN 2716 MAX 18800 MIN 890 CFSM 2.04 IN 27.76
WTR YR 1977 TOTAL 907932 MEAN 2487 MAX 23300 MIN 775 CFSM 1.87 IN 25.36

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

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 current year.
WATER TEMPERATURES: October 1957 to September 1967, August 1973 to current year.

REMARKS.--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, 205 micromhos Nov. 21, 1973; 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, 161 micromhos Aug. 4; minimum daily, 35 micromhos Mar. 15.
WATER TEMPERATURES: Maximum daily, 25.0°C July 9, 10, 16, 19-22, Aug. 27; minimum daily, 0.0°C on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)
DEC 16...	1130	5690	72	5.8	5.5	45	13.2	18	8	5.0	1.4	5.5
FEB 23...	1200	1370	115	6.3	3.0	0	15.4	22	2	6.4	1.5	13
MAR 28...	1145	2530	72	7.5	12.0	10	11.9	19	5	5.1	1.4	7.2
APR 26...	1110	3580	60	7.7	13.0	20	10.2	12	0	3.4	.8	5.2
MAY 23...	1400	1950	70	6.8	21.0	0	9.8	14	0	4.1	.8	8.7
JUL 19...	1100	995	135	7.8	26.0	40	9.8	26	2	8.2	1.4	15

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
DEC 16...	36	.6	2.2	13	0	11	33	12	3.6	.1	6.7	55
FEB 23...	54	1.2	1.5	25	0	21	20	20	4.6	.1	9.3	70
MAR 28...	44	.7	1.2	16	0	13	.8	11	3.4	.0	9.6	59
APR 26...	46	.7	1.0	16	0	13	.5	7.6	2.3	.0	8.6	40
MAY 23...	55	1.0	1.4	20	0	16	5.1	14	3.5	.0	8.7	53
JUL 19...	53	1.3	1.9	30	0	25	.8	27	5.8	.1	8.5	87

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE IN BOT. MAT. (MG/KG)	TOTAL AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA (NH4) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)
DEC 16...	46	.07	845	.61	.02	.63	.62	--	.12	.06	.08	.67
FEB 23...	69	.10	259	.31	.01	.32	.32	--	.12	.07	.09	.36
MAR 28...	49	.08	403	.39	.01	.40	.40	--	.09	.10	.13	.26
APR 26...	38	.05	387	.28	.00	.28	.30	--	.08	.07	.09	.54
MAY 23...	53	.07	279	.42	.06	.48	.38	--	.08	.09	.12	.39
JUL 19...	86	.12	234	.50	.03	.53	.54	1.3	.06	.04	.05	.58

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	SUS-PENDED KJEL. NITRO-GEN (N) (MG/L)	DIS-SOLVED KJEL. NITRO-GEN (N) (MG/L)	TOTAL KJEL. NITRO-GEN IN BOTTOM MAT. (MG/KG)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (P04) (MG/L)
DEC 16...	.25	.79	.48	.31	--	1.4	6.3	.24	.05	.06	.02	.06
FEB 23...	.25	.48	.16	.32	--	.80	3.5	.13	.10	.07	.06	.18
MAR 28...	.12	.35	.13	.22	--	.75	3.3	.10	.06	.04	.05	.15
APR 26...	.14	.62	.41	.21	--	.90	4.0	.16	.05	.01	.03	.09
MAY 23...	.45	.47	.00	.54	--	.95	4.2	.13	.06	.05	.04	.12
JUL 19...	.17	.64	.43	.21	560	1.2	5.2	.14	.11	.07	.07	.21

DATE	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL CHRO-MIUM IN BOTTOM MA-TERIAL (UG/G)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL COPPER IN BOTTOM MA-TERIAL (UG/G)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL IRON IN BOTTOM MA-TERIAL (UG/G)
DEC 16...	10	3	7	--	23	18	5	--	7600	80	--
FEB 23...	10	4	6	--	24	20	4	--	410	130	--
MAR 28...	--	--	--	--	--	--	--	--	--	--	--
APR 26...	<10	<10	0	--	6	4	2	--	2400	70	--
MAY 23...	10	0	14	--	10	9	1	--	1200	100	--
JUL 19...	10	7	3	<10	4	1	3	<10	800	150	560

DATE	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL LEAD IN BOTTOM MA-TERIAL (UG/G)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ZINC IN BOTTOM MA-TERIAL (UG/G)	TOTAL ORGANIC CARBON (C) (MG/L)	DIS-SOL-VED ORGANIC CARBON (C) (MG/L)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
DEC 16...	55	55	0	--	40	30	10	--	--	20	.00
FEB 23...	37	37	0	--	20	20	0	--	3.0	3.0	.10
MAR 28...	--	--	--	--	--	--	--	--	7.2	4.1	.00
APR 26...	10	8	2	--	20	20	0	--	8.4	7.2	.00
MAY 23...	10	6	4	--	30	30	0	--	5.7	2.5	.00
JUL 19...	24	16	8	<10	20	20	0	20	6.1	3.2	.00

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C..--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Dec. 16	1130	CHRYSOPHYTA			Depth Integrating Sampler
		Bacillariophyceae			
		Achnanthes	50	7	
		Asterionella	62	9	
		Cyclotella	37	5	
		Cymbella	25	4	
		Fragilaria	75	11	
		Frustulia	12	2	
		Gomphonema	50	7	
		Navicula	250	36	
		Nitzschia	50	7	
		Synedra	75	11	
		TOTAL	690		
Mar. 28	1145	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae			
		Scenedesmus	21	3	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Achnanthes	48	6	
		Amphora	5	1	
		Asterionella	16	2	
		Caloneis	37	4	
		Cocconeis	5	1	
		Cymbella	53	6	
		Diatoma	5	1	
		Fragilaria	11	1	
		Gomphonema	16	2	
		Melosira	32	4	
		Meridion	11	1	
		Navicula	280	34	
		Nitzschia	210	25	
		Surirella	21	3	
		Synedra	16	2	
		CYANOPHYTA			
		Myxophyceae			
		Raphidiopsis	42	5	
		TOTAL	830		
May 23	1400	CHRYSOPHYTA			Depth Integrating Sampler
		Bacillariophyceae			
		Amphora	78	9	
		Diatoma	16	2	
		Epithemia	39	5	
		Gomphonema	39	5	
		Gyrosigma	8	1	
		Melosira	140	16	
		Navicula	170	20	
		Nitzschia	54	6	
		Pinnularia	8	1	
		Surirella	23	3	
		Synedra	220	25	
		EUGLENOPHYTA			
		Euglenophyceae			
		Trachelomonas	70	8	
		TOTAL	860		

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PERIPHYTON

Date	Length of exposure (days)	Biomass (g/m²)		Chlorophyll a (mg/m²)	Chlorophyll b (mg/m²)	Biomass chlorophyll ratio	Sampling method
		Dry weight	Ash weight				
Mar. 28	33	386	346				Polyethylene strip
May 23	26	1.26	.866				

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	72	70	60	102	73	47	55	73	118	148	137
2	61	61	73	61	102	71	49	53	73	102	144	145
3	78	69	82	67	102	78	65	63	83	108	138	146
4	87	74	85	75	102	80	60	73	88	107	161	147
5	88	79	85	90	98	75	56	69	92	108	160	148
6	94	82	82	85	102	67	49	67	93	111	132	142
7	100	79	84	86	94	64	46	69	94	113	148	146
8	86	78	55	82	96	59	47	73	103	117	122	93
9	53	80	54	84	98	64	52	71	103	116	136	53
10	44	84	61	75	100	65	52	74	98	118	134	55
11	44	94	66	82	102	67	57	82	103	121	133	64
12	51	65	71	86	100	69	53	78	113	122	133	78
13	60	90	69	82	96	61	57	80	101	116	116	87
14	65	93	70	84	92	41	62	86	103	125	123	96
15	70	80	71	102	89	35	65	86	99	133	125	91
16	72	83	62	84	87	44	65	82	100	139	131	80
17	80	91	52	77	94	52	65	84	105	128	131	52
18	78	92	58	85	99	57	63	92	95	139	115	55
19	80	96	60	102	102	61	71	90	82	136	124	47
20	80	102	61	94	98	64	71	96	87	142	123	58
21	88	100	65	88	94	60	71	92	96	142	129	70
22	88	92	73	86	96	66	73	92	94	145	115	73
23	86	89	69	91	98	67	74	84	108	140	124	77
24	86	95	68	78	112	63	73	94	108	133	134	81
25	75	100	67	82	88	66	48	81	98	132	136	85
26	77	99	65	86	86	69	53	84	98	128	124	81
27	75	90	53	90	77	69	61	80	98	141	134	83
28	64	91	51	98	73	81	63	78	98	157	137	91
29	75	88	55	102	---	73	63	75	108	157	125	97
30	78	82	59	102	---	76	57	74	108	157	142	99
31	77	---	59	100	---	55	---	73	---	154	129	---
MEAN	76	86	66	85	96	64	60	78	97	129	132	92

WTR YR 1977 MEAN 88 MAX 161 MIN 35

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.0	7.0	2.0	0.0	0.0	5.0	11.0	15.0	19.0	22.0	24.0	23.0
2	15.0	7.0	2.0	0.0	0.0	4.0	14.0	14.0	18.0	22.0	22.0	23.0
3	16.0	7.0	2.0	0.0	0.0	5.0	14.0	15.0	18.0	20.0	22.0	23.0
4	16.0	7.0	2.0	1.0	0.0	8.0	13.0	16.0	21.0	21.0	21.0	23.0
5	16.0	5.0	3.0	3.0	0.0	8.0	11.0	16.0	20.0	24.0	23.0	23.0
6	17.0	4.0	3.0	3.0	0.0	8.0	8.0	16.0	18.0	23.0	23.0	23.0
7	18.0	5.0	4.0	3.0	0.0	6.0	9.0	18.0	20.0	24.0	24.0	24.0
8	16.0	4.0	5.0	2.0	0.0	5.0	10.0	17.0	18.0	24.0	23.0	20.0
9	15.0	8.0	2.0	2.0	0.0	6.0	11.0	16.0	17.0	25.0	23.0	19.0
10	13.0	6.0	3.0	2.0	0.0	7.0	11.0	13.0	17.0	25.0	23.0	20.0
11	12.0	6.0	5.0	0.0	1.0	9.0	12.0	12.0	17.0	24.0	23.0	20.0
12	12.0	6.0	6.0	0.0	3.0	10.0	12.0	13.0	19.0	23.0	23.0	17.0
13	12.0	4.0	6.0	0.0	4.0	10.0	13.0	13.0	20.0	24.0	23.0	18.0
14	14.0	5.0	4.0	0.0	2.0	10.0	14.0	18.0	20.0	24.0	24.0	19.0
15	12.0	5.0	5.0	1.0	4.0	10.0	14.0	15.0	20.0	24.0	24.0	20.0
16	13.0	6.0	6.0	0.0	3.0	12.0	14.0	17.0	20.0	25.0	24.0	19.0
17	13.0	6.0	5.0	0.0	1.0	9.0	16.0	17.0	20.0	24.0	24.0	20.0
18	10.0	6.0	5.0	0.0	1.0	10.0	15.0	18.0	21.0	24.0	22.0	19.0
19	9.0	6.0	5.0	0.0	4.0	10.0	15.0	18.0	21.0	25.0	20.0	19.0
20	11.0	7.0	6.0	0.0	4.0	10.0	14.0	19.0	20.0	25.0	21.0	19.0
21	9.0	7.0	3.0	0.0	2.0	9.0	16.0	18.0	20.0	25.0	22.0	19.0
22	9.0	5.0	0.0	0.0	2.0	8.0	16.0	20.0	21.0	25.0	22.0	17.0
23	8.0	3.0	1.0	0.0	5.0	6.0	17.0	19.0	20.0	23.0	22.0	18.0
24	10.0	3.0	0.0	0.0	7.0	7.0	15.0	18.0	20.0	24.0	22.0	18.0
25	11.0	3.0	1.0	0.0	7.0	8.0	13.0	18.0	22.0	24.0	21.0	14.0
26	11.0	4.0	2.0	0.0	7.0	13.0	12.0	18.0	20.0	23.0	23.0	19.0
27	9.0	7.0	1.0	0.0	9.0	10.0	10.0	18.0	22.0	23.0	25.0	18.0
28	7.0	8.0	2.0	0.0	5.0	11.0	11.0	19.0	22.0	22.0	24.0	18.0
29	6.0	7.0	3.0	0.0	---	12.0	13.0	19.0	23.0	21.0	23.0	15.0
30	8.0	3.0	0.0	0.0	---	13.0	14.0	20.0	23.0	21.0	23.0	17.0
31	8.0	---	3.0	0.0	---	12.0	---	19.0	---	22.0	23.0	---
MEAN	12.0	5.5	3.0	0.5	2.5	8.5	13.0	17.0	20.0	23.5	23.0	19.5

WTR YR 1977 MEAN 12.5 MAX 25.0 MIN 0.0

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE FOR SELECTED DAYS, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
DEC				
16...	1130	5690	690	10600
FEB				
23...	1200	1370	15	55
MAR				
28...	1145	2530	31	212
APR				
26...	1110	3580	82	793
MAY				
23...	1400	1950	45	237
JUL				
19...	1100	995	16	43
AUG				
22...	1030	1020	3	8.3
SEP				
26...	1300	1970	32	170

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)
OCT									
07...	1100	1310	--	7.5	17.0	8.8	13	1.8	1100
NOV									
12...	1230	1530	--	7.5	8.0	11.2	13	1.6	220
DEC									
13...	1030	2750	--	7.3	6.0	10.4	12	2.0	1800
JAN									
05...	1000	1910	--	7.2	3.0	10.6	13	1.9	720
MAR									
09...	1200	3050	--	7.1	11.0	11.3	11	1.8	430
APR									
13...	1430	3540	60	7.1	20.0	9.3	15	1.1	170
MAY									
11...	1400	2100	90	7.3	17.0	9.7	10	1.9	3700
JUN									
08...	1530	1640	100	6.2	20.0	9.1	12	2.0	2500
JUL									
13...	1130	1180	--	7.1	25.0	7.6	14	2.1	12000
AUG									
10...	1300	1310	--	--	24.0	7.6	--	--	--

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) above mean sea level (Tennessee Valley Authority bench mark).

REMARKS.--Records good except those for period Jan. 1 to Feb. 8, which are fair. Suspended-sediment records for the current year are published on page 366 of this report.

AVERAGE DISCHARGE.--23 years, 103 ft³/s (2.917 m³/s), 50.68 in/yr (1,287 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)
Mar. 12	1930	*6830	193	*8.03	2.448	Sept. 7	2100	5690	161	7.35	2.240
Mar. 30	0145	2000	56.6	4.71	1.436	Sept. 16	0845	3150	89.2	5.66	1.725
Apr. 4	2130	6440	182	7.80	2.377						

Minimum daily discharge, 19 ft³/s (0.54 m³/s) Sept. 3, 4, 5; minimum gage height, 0.82 ft (0.250 m) Oct. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	81	88	85	44	97	228	105	97	44	22	21
2	33	72	60	75	44	84	202	100	87	50	21	20
3	29	67	58	70	42	79	391	97	81	40	23	19
4	27	63	54	67	42	375	774	183	75	38	23	19
5	26	58	52	64	42	151	911	111	69	37	28	19
6	26	56	145	70	42	348	427	97	78	36	32	20
7	575	56	289	70	42	195	337	93	74	34	22	692
8	297	50	102	66	42	147	279	89	63	32	53	287
9	508	50	86	67	42	130	241	83	61	32	55	92
10	135	50	77	67	40	118	215	77	57	33	79	64
11	98	50	77	70	39	138	194	75	54	31	79	53
12	81	69	137	70	56	2100	177	73	56	50	39	46
13	69	49	98	72	102	879	164	70	77	46	28	69
14	63	49	79	117	55	395	153	66	86	33	51	94
15	57	58	267	96	53	295	142	64	62	30	38	112
16	54	50	152	72	46	245	132	62	67	29	35	1030
17	63	47	115	68	58	210	123	66	65	30	31	206
18	52	44	102	68	56	190	118	88	54	32	53	129
19	48	44	94	66	45	166	111	67	66	28	34	143
20	72	43	172	65	43	196	110	61	58	33	28	119
21	54	42	115	62	44	169	106	60	53	37	28	90
22	49	38	145	62	49	245	100	307	48	31	31	78
23	47	43	90	60	47	161	319	106	64	28	26	70
24	53	45	90	55	221	146	261	87	50	25	31	64
25	247	38	88	52	89	135	147	190	66	25	28	60
26	142	41	104	50	117	125	128	235	76	26	25	62
27	88	79	83	48	351	117	118	206	54	24	28	56
28	76	112	79	48	137	117	112	235	48	24	26	52
29	69	190	76	45	---	216	117	147	49	26	24	48
30	96	77	75	45	---	827	106	125	45	27	22	47
31	142	---	94	44	---	298	---	112	---	24	21	---
TOTAL	3409	1811	3343	2036	2030	9094	6943	3537	1940	1015	1064	3881
MEAN	110	60.4	108	65.7	72.5	293	231	114	64.7	32.7	34.3	129
MAX	575	190	289	117	351	2100	911	307	97	50	79	1030
MIN	26	38	52	44	39	79	100	60	45	24	21	19
CFSM	3.99	2.19	3.91	2.38	2.63	10.6	8.37	4.13	2.34	1.19	1.24	4.67
IN.	4.59	2.44	4.51	2.74	2.74	12.26	9.36	4.77	2.61	1.37	1.43	5.23

CAL YR 1976 TOTAL 42631 MEAN 116 MAX 2210 MIN 16 CFSM 4.20 IN 57.46
WTR YR 1977 TOTAL 40103 MEAN 110 MAX 2100 MIN 19 CFSM 3.99 IN 54.05

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) above mean sea level (Tennessee Valley Authority bench mark).

REMARKS.--Records good. Considerable regulation at times caused by Lake Logan (see p. 309). Suspended-sediment records for the current year are published on page 366 of this report.

AVERAGE DISCHARGE.--23 years, 163 ft^3/s (4.616 m^3/s), 40.03 in/yr (1,017 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, 8,000 ft^3/s (227 m^3/s) Mar. 12, gage height, 9.19 ft (2.801 m); minimum, 39 ft^3/s (1.10 m^3/s) Aug. 8, Sept. 1, 2, gage height, 0.50 ft (0.152 m); minimum daily, 40 ft^3/s (1.13 m^3/s) Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	137	121	136	87	189	420	172	175	82	45	40
2	53	124	113	137	87	163	372	168	156	91	44	46
3	50	116	104	137	85	153	590	160	145	77	44	52
4	46	109	99	131	87	482	1010	252	135	73	43	50
5	45	100	95	127	85	280	1660	177	127	71	42	50
6	49	95	128	133	85	536	760	159	137	68	42	50
7	586	94	438	146	84	383	595	151	143	65	41	565
8	384	87	192	123	84	292	502	145	116	61	42	492
9	655	85	153	151	86	255	439	135	112	63	92	165
10	220	87	146	162	87	233	394	129	104	67	61	115
11	158	82	139	123	85	238	356	126	99	61	166	94
12	133	116	214	128	91	2330	323	123	98	67	71	80
13	116	85	176	124	140	1550	298	119	146	93	50	102
14	104	84	146	198	103	657	276	115	173	61	75	120
15	95	94	381	194	100	503	256	112	122	56	61	160
16	89	87	274	147	90	427	238	108	111	53	64	1200
17	103	81	218	114	82	374	223	104	129	52	50	321
18	85	77	194	115	87	340	213	133	103	58	84	213
19	79	76	176	115	87	299	201	115	124	50	63	206
20	106	75	258	115	86	336	197	103	109	58	48	196
21	92	73	218	116	79	284	191	103	103	68	46	148
22	79	68	182	109	80	382	176	363	94	63	52	130
23	77	63	172	105	88	280	396	171	118	54	46	118
24	82	70	156	108	315	257	376	144	95	50	68	108
25	272	65	158	103	160	241	241	239	115	49	54	100
26	244	69	200	98	180	228	214	373	142	49	46	101
27	151	117	153	100	475	216	198	333	103	48	45	96
28	128	144	149	98	258	212	188	370	91	47	45	87
29	117	295	140	98	---	270	195	258	89	47	43	80
30	128	146	133	90	---	1150	177	222	83	47	42	77
31	226	---	192	88	---	537	---	200	---	46	41	---
TOTAL	4807	3001	5618	3869	3443	14077	11675	5582	3597	1895	1756	5362
MEAN	155	100	181	125	123	454	389	180	120	61.1	56.6	179
MAX	655	295	438	198	475	2330	1660	373	175	93	166	1200
MIN	45	63	95	88	79	153	176	103	83	46	41	40
(†)	+7	0	0	-4	+4	+8	-7	-1	-7	-16	-6	+23
MEAN‡	155	100	181	125	123	454	389	180	120	60.6	56.5	180
CFSM‡	2.80	1.81	3.27	2.26	2.22	8.21	7.03	3.25	2.17	1.10	1.02	3.25
IN.‡	3.24	2.02	3.78	2.60	2.32	9.47	7.85	3.75	2.41	1.26	1.18	3.62

CAL YR 1976 TOTAL 68468 MEAN 187 MAX 2840 MIN 44 MEAN‡ 187 CFSM‡ 3.38 IN.‡ 46.04
WTR YR 1977 TOTAL 64682 MEAN 177 MAX 2330 MIN 40 MEAN‡ 177 CFSM‡ 3.20 IN.‡ 43.50

† 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) above mean sea level (Tennessee Valley Authority bench mark).

REMARKS.--Records good except those for period Jan. 2 to Feb. 4, which are fair. Suspended-sediment records for the current year are published on page 367 of this report.

AVERAGE DISCHARGE.--23 years, 144 ft³/s (4.078 m³/s), 37.97 in/yr (964 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 4,600 ft³/s (130 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)
Mar. 12	2100	*6940	197	*8.28	2.524	Sept. 7	unknown	6200	176	7.89	2.405
Apr. 4	2315	5700	161	7.55	2.301	Sept. 16	1045	4420	125	6.73	2.051

Minimum daily discharge, 25 ft³/s (0.71 m³/s) Sept. 4, 5, 6; minimum gage height, 1.05 ft (0.320 m) Feb. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	137	92	99	80	136	364	156	194	61	33	30
2	43	128	90	100	80	119	318	151	173	65	31	29
3	40	120	84	100	75	111	445	145	157	59	56	26
4	38	112	82	102	75	369	863	168	143	56	36	25
5	37	104	78	97	70	245	1520	145	133	55	44	25
6	35	99	94	102	72	404	683	135	136	53	49	25
7	490	97	366	95	72	313	511	128	135	51	35	518
8	422	92	187	94	70	244	419	120	114	48	32	832
9	560	88	154	95	60	211	358	113	107	57	61	252
10	259	88	139	90	60	190	315	108	100	69	57	178
11	193	84	131	84	61	186	282	105	94	56	110	139
12	157	104	154	85	73	2000	256	101	106	52	58	112
13	137	84	139	90	124	2130	236	97	112	63	42	117
14	120	82	125	134	75	767	220	94	127	50	54	117
15	109	86	270	131	72	552	208	91	113	46	50	154
16	102	80	229	102	63	442	194	88	97	43	42	1380
17	107	78	196	99	56	375	181	85	93	42	42	531
18	92	74	175	95	65	331	173	91	89	57	50	319
19	88	72	160	95	63	291	167	89	96	41	43	248
20	104	72	178	92	63	306	170	87	87	39	36	210
21	92	70	163	90	57	266	167	97	83	42	35	173
22	86	68	151	90	59	314	152	215	77	47	36	149
23	82	65	137	85	62	259	256	135	85	43	36	131
24	82	67	125	85	234	242	283	118	74	38	81	118
25	172	65	125	85	119	228	212	197	85	39	46	107
26	181	65	142	88	114	216	192	396	96	43	38	103
27	128	94	120	84	259	205	178	338	76	38	46	95
28	114	86	117	84	175	200	168	410	69	36	48	87
29	107	163	112	85	---	219	175	316	65	37	40	81
30	117	104	107	85	---	719	162	255	62	38	35	78
31	193	---	134	85	---	453	---	220	---	34	32	---
TOTAL	4530	2728	4556	2927	2508	13043	9828	4994	3178	1498	1434	6389
MEAN	146	90.9	147	94.4	89.6	421	328	161	106	48.3	46.3	213
MAX	560	163	366	134	259	2130	1520	410	194	69	110	1380
MIN	35	65	78	84	56	111	152	85	62	34	31	25
CFSM	2.84	1.77	2.85	1.83	1.74	8.18	6.37	3.13	2.06	.94	.90	4.14
IN.	3.27	1.97	3.29	2.11	1.81	9.42	7.10	3.61	2.30	1.08	1.04	4.61

CAL YR 1976 TOTAL 60952 MEAN 167 MAX 3370 MIN 30 CFSM 3.24 IN 44.03
WTR YR 1977 TOTAL 57613 MEAN 158 MAX 2130 MIN 25 CFSM 3.07 IN 41.61

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) above mean sea level (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. 309). Town of Canton diverted above station an average of 1.10 ft³/s (0.031 m³/s) for municipal water supply. Suspended-sediment records for the current year are published on page 367 of this report.

AVERAGE DISCHARGE.--50 years (1907-8, 1928-77), 322 ft³/s (9.119 m³/s), 32.88 in/yr (835 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)
Mar. 12	2300	*13300	377	*12.77	3.892	Sept. 8	0115	8780	249	10.36	3.158
Apr. 5	0130	11000	312	11.62	3.542	Sept. 16	1230	6340	180	8.67	2.643

Minimum daily discharge, 84 ft³/s (2.38 m³/s) Oct. 5, Aug. 1; minimum gage height, 0.82 ft (0.250 m) Sept. 1,2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	270	211	241	175	324	823	316	378	153	84	85
2	95	244	201	273	165	280	699	315	334	167	86	85
3	92	229	182	250	165	262	1150	297	306	143	108	94
4	87	218	174	234	140	860	1440	410	283	135	90	90
5	84	202	165	226	140	591	4390	317	266	130	94	90
6	85	189	177	228	140	1080	1690	289	269	127	109	90
7	991	183	862	272	150	795	1260	279	300	122	87	393
8	897	170	389	220	170	589	1040	269	240	115	87	2130
9	1360	162	302	241	153	495	873	253	228	117	141	431
10	538	164	281	287	137	433	762	244	216	147	139	272
11	360	156	265	240	136	419	677	238	206	126	289	210
12	291	210	350	303	149	3740	610	230	212	114	141	173
13	251	162	321	294	266	4710	557	222	244	165	107	171
14	224	154	267	313	179	1670	514	216	321	115	125	242
15	204	168	709	347	166	1210	471	211	257	105	127	298
16	189	160	571	254	146	970	432	204	216	101	114	2530
17	207	148	429	220	125	812	398	196	232	99	105	1020
18	177	142	369	230	146	716	376	229	204	116	134	595
19	161	138	334	220	142	627	358	215	226	98	123	445
20	190	134	415	230	141	689	353	209	211	93	97	452
21	188	132	413	220	124	576	360	212	199	109	93	322
22	157	125	317	215	130	744	318	590	181	119	98	278
23	150	116	305	200	138	572	629	332	218	102	102	247
24	154	122	276	210	561	520	734	272	182	93	162	229
25	357	121	271	205	291	481	465	374	211	94	127	211
26	510	120	343	200	268	447	398	840	263	99	99	208
27	279	197	268	200	740	416	366	735	200	92	102	198
28	241	188	260	170	477	399	343	822	172	90	106	178
29	222	482	248	160	---	471	366	641	163	91	99	161
30	221	257	230	185	---	2170	328	509	156	93	92	159
31	414	---	334	180	---	1120	---	441	---	86	88	---
TOTAL	9478	5463	10239	7268	5860	29188	23180	10927	7094	3556	3555	12087
MEAN	306	182	330	234	209	942	773	352	236	115	115	403
MAX	1360	482	862	347	740	4710	4390	840	378	167	289	2530
MIN	84	116	165	160	124	262	318	196	156	86	84	85
(†)	+36.7	+27.6	+30.7	+29.5	+40.1	+39.5	+22.3	+29.1	+24.7	+26.2	+37.2	+58.6
MEAN‡	307	183	231	235	211	943	773	353	237	116	116	405
CFSM‡	2.31	1.38	2.49	1.77	1.59	7.09	5.81	2.65	1.78	0.87	0.87	3.05
IN.‡	2.66	1.54	2.87	2.04	1.65	8.17	6.49	3.06	1.99	1.00	1.00	3.40

CAL YR 1976 TOTAL 140634 MEAN 384 MAX 6570 MIN 84 MEAN‡ 385 CFSM‡ 2.89 IN.‡ 39.43
WTR YR 1977 TOTAL 127895 MEAN 350 MAX 4710 MIN 84 MEAN‡ 351 CFSM‡ 2.64 IN.‡ 35.87

† 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).

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) above mean sea level (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 of low flow, combined capacity of reservoirs, about 2,000 ft³/s-day (4.894 hm³). (See p. 309).

AVERAGE DISCHARGE.--50 years, 677 ft³/s (19.17 m³/s), 26.27 in/yr (667 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)
Mar. 13	0315	16100	456	11.18	3.408	Sept. 8	0445	9960	282	8.94	2.725
Apr. 5	0500	*19900	564	*12.34	3.761	Sept. 16	1615	6830	193	7.46	2.274

Minimum discharge, 181 ft³/s (5.13 m³/s) Sept. 2, 3, gage height, 1.30 ft (0.396 m); minimum daily, 185 ft³/s (5.24 m³/s) Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	361	611	516	635	391	797	1900	714	774	351	246	214
2	320	505	443	570	394	687	1540	741	681	393	259	192
3	304	511	465	620	411	630	2760	717	623	361	328	191
4	271	502	453	587	422	1180	3280	853	601	351	260	195
5	233	488	439	572	423	1220	10600	733	558	343	232	188
6	235	479	480	567	359	2170	3640	666	616	334	258	185
7	1210	448	1370	713	364	1750	2700	668	657	321	236	611
8	1660	424	805	579	358	1250	2200	640	520	310	253	5450
9	2330	408	623	641	372	1040	1860	585	497	330	409	863
10	1120	391	621	849	380	923	1650	561	475	371	378	596
11	876	340	594	580	387	866	1470	550	439	355	495	460
12	784	472	768	580	435	2680	1310	542	432	325	403	383
13	565	417	742	580	673	8000	1190	527	496	405	287	363
14	525	386	610	714	507	2800	1110	512	662	343	263	499
15	461	404	1430	899	459	1990	1050	495	610	310	322	443
16	418	404	1290	640	427	1610	982	478	488	300	281	2620
17	455	371	937	515	385	1370	919	445	490	360	375	1610
18	422	343	810	525	405	1240	870	522	398	326	373	956
19	388	383	739	510	416	1100	837	506	398	287	328	755
20	415	359	827	535	410	1240	807	583	418	279	264	725
21	439	352	962	530	387	1050	821	549	395	294	243	589
22	382	331	706	505	383	1310	753	824	391	314	252	504
23	354	308	711	477	400	1080	1090	748	467	298	243	459
24	392	321	646	502	994	986	1410	581	393	265	358	425
25	667	328	633	489	742	919	950	726	502	270	378	395
26	1160	332	807	468	619	862	839	1150	606	327	257	409
27	698	458	661	484	1180	816	789	1080	451	271	258	404
28	545	511	625	479	1140	795	747	1300	376	252	289	389
29	521	1110	597	421	---	886	846	1180	342	254	246	356
30	539	783	550	401	---	3950	745	956	325	272	219	345
31	785	---	902	437	---	2610	---	874	---	261	204	---
TOTAL	19835	13480	22762	17604	14223	49807	51665	22006	15081	9833	9197	21774
MEAN	640	449	734	568	508	1607	1722	710	503	317	297	726
MAX	2330	1110	1430	899	1180	8000	10600	1300	774	405	495	5450
MIN	233	308	439	401	358	630	745	445	325	252	204	185

CAL YR 1976 TOTAL 283516 MEAN 775 MAX 10400 MIN 230
WTR YR 1977 TOTAL 267267 MEAN 732 MAX 10600 MIN 185

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) above mean sea level (levels by Tennessee Valley Authority).

REMARKS.--Water-discharge record good except those for period Jan. 2 to Feb. 18, which are fair to poor. 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.--34 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.--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)
Apr. 5	0130	*3890	110	*7.27	2.216	Sept. 7	2330	1310	37.1	5.02	1.530

Minimum discharge, 35 ft³/s (0.99 m³/s) Oct. 5, 6, 7, gage height, 2.13 ft (0.649 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	74	103	99	50	167	308	108	93	102	40	53
2	45	69	86	110	48	137	249	110	81	97	51	49
3	40	67	77	105	48	122	523	110	74	84	53	46
4	37	62	71	80	55	196	666	124	70	77	42	65
5	36	59	67	80	60	178	1900	108	67	72	39	48
6	35	56	71	80	55	415	744	102	93	69	39	48
7	108	55	130	82	55	335	484	106	82	65	39	211
8	95	52	99	77	55	251	367	98	67	62	45	502
9	278	51	92	87	55	207	299	95	70	59	70	189
10	116	51	86	109	55	180	252	91	62	74	48	133
11	85	49	84	86	60	163	219	89	59	70	47	108
12	72	62	107	80	70	261	194	88	62	62	42	92
13	64	48	102	75	80	578	175	82	74	64	38	88
14	58	47	95	80	75	343	162	81	89	55	39	89
15	54	51	189	75	75	271	155	79	88	51	43	80
16	52	47	185	70	70	232	140	75	72	49	40	97
17	60	45	156	68	65	198	129	72	69	70	157	94
18	50	47	135	65	65	179	129	74	69	51	98	84
19	47	44	119	64	61	158	120	72	70	48	63	82
20	48	43	149	62	60	169	112	74	69	52	54	77
21	47	42	128	60	58	147	108	74	72	52	49	71
22	44	41	120	60	58	180	104	93	79	56	46	68
23	43	42	110	60	61	154	147	81	122	51	45	65
24	54	42	102	58	161	145	157	72	108	45	91	62
25	164	40	100	55	121	136	122	95	240	52	59	59
26	160	41	109	55	130	126	114	100	240	55	50	74
27	102	63	92	60	286	119	110	95	183	45	66	65
28	84	85	90	55	225	118	106	89	140	43	73	61
29	75	204	85	52	---	133	138	93	118	43	77	55
30	81	118	97	50	---	643	112	98	102	45	56	56
31	88	---	136	50	---	449	---	104	---	42	55	---
TOTAL	2377	1797	3372	2249	2317	7090	8545	2832	2884	1862	1754	2871
MEAN	76.7	59.9	109	72.5	82.8	229	285	91.4	96.1	60.1	56.6	95.7
MAX	278	204	189	110	286	643	1900	124	240	102	157	502
MIN	35	40	67	50	48	118	104	72	59	42	38	46
CFSM	1.56	1.22	2.22	1.47	1.68	4.65	5.79	1.86	1.95	1.22	1.15	1.95
IN.	1.80	1.36	2.55	1.70	1.75	5.36	6.46	2.14	2.18	1.41	1.33	2.17

CAL YR 1976 TOTAL 37067 MEAN 101 MAX 635 MIN 28 CFSM 2.05 IN 28.03
WTR YR 1977 TOTAL 39950 MEAN 109 MAX 1900 MIN 35 CFSM 2.22 IN 30.21

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.
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, 24 micromhos Oct. 6, 7, May 31, June 1, 18, Aug. 2, 3, 4; minimum, 12 micromhos Feb. 17, 21, 22, Mar. 1, Apr. 7, 9, 10.
WATER TEMPERATURES: Maximum, 23.5°C Aug. 5; minimum, 0.0°C on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM .7UM-MF (COL./100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	HARDNESS (CA,MG) (MG/L)
OCT											
19...	1030	47	15	7.3	5.0	5	12.4	49	B1	25	4
DEC											
14...	1130	95	14	5.5	1.5	0	14.5	B1	<1	B1	6
MAR											
15...	1115	273	14	7.1	6.5	5	14.4	B10	B2	100	5
MAY											
24...	1100	70	14	7.5	14.0	0	11.2	50	B6	600	3
JUN											
29...	1030	122	13	7.8	17.0	10	10.9	90	B15	250	2
AUG											
17...	0900	47	16	7.2	18.5	25	10.3	--	--	--	5

DATE	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)
OCT											
19...	0	1.0	.4	1.2	35	.3	.5	8	0	7	.6
DEC											
14...	1	1.8	.3	.9	24	.2	.5	6	0	5	--
MAR											
15...	1	.7	.8	.9	25	.2	.6	4	0	4	.6
MAY											
24...	0	.3	.6	1.3	41	.3	.7	7	0	6	.4
JUN											
29...	0	.2	.3	1.1	48	.4	.7	6	0	5	.2
AUG											
17...	0	1.3	.4	1.5	37	.3	.6	8	0	7	.8

B Results based on colony count outside the acceptable range (non-ideal colony count).

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	TOTAL FILT-RABLE RESIDUE (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)
OCT										
19...	1.8	.7	.0	8.0	18	19	18	.02	2.28	<1
DEC										
14...	1.9	.4	.0	6.7	18	--	16	.02	4.62	--
MAR										
15...	1.5	1.6	.0	6.4	26	--	16	.04	19.2	--
MAY										
24...	1.1	.6	.0	7.9	17	--	16	.02	3.21	--
JUN										
29...	1.3	.8	.0	7.5	22	--	15	.03	7.25	--
AUG										
17...	2.0	.6	.0	8.9	44	--	20	.06	5.58	--

DATE	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA (NH4) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	DIS-SOLVED ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)
OCT										
19...	.06	.00	.06	.02	.00	.00	.00	.05	.00	.05
DEC										
14...	.43	.00	.43	.17	.01	.01	.01	.00	.00	.00
MAR										
15...	.19	.00	.19	.20	.00	.01	.01	.34	.16	.34
MAY										
24...	.06	.00	.06	.08	.00	.01	.01	.00	--	.00
JUN										
29...	.17	.00	.17	.14	.03	.00	.00	.12	.00	.15
AUG										
17...	.13	.00	.13	.12	.01	.00	.00	.18	.21	.19

DATE	SUS-PENDED KJEL. NITRO-GEN (N) (MG/L)	DIS-SOLVED KJEL. NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
OCT										
19...	.05	.00	.11	.49	.00	.01	.01	.00	.00	0
DEC										
14...	.00	.00	.43	1.9	.01	.01	.00	.01	.03	--
MAR										
15...	.17	.17	.53	2.3	.01	.02	.00	.01	.03	0
MAY										
24...	--	--	.06	.27	.00	.00	.00	.01	.03	--
JUN										
29...	.15	.00	.32	1.4	.02	.01	.01	.00	.00	--
AUG										
17...	.00	.21	.32	1.4	.02	.01	.01	.01	.03	--

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL BARIUM (BA) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	SUSPENDED CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUSPENDED COPPER (CU) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)
OCT 19...	200	0	<10	<10	0	0	0	0	40	10
DEC 14...	--	--	10	0	13	11	11	0	80	20
MAR 15...	100	0	10	8	2	2	2	0	60	10
MAY 24...	--	--	<10	--	--	7	7	0	40	10
JUN 29...	--	--	10	10	0	11	11	0	100	10
AUG 17...	--	--	--	--	0	2	2	0	100	30

DATE	TOTAL LEAD (PB) (UG/L)	SUSPENDED LEAD (PB) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUSPENDED ZINC (ZN) (UG/L)
OCT 19...	3	3	0	10	.0	0	0	20	20
DEC 14...	37	35	2	--	--	--	--	20	10
MAR 15...	0	0	0	0	.0	0	0	0	0
MAY 24...	8	5	3	--	--	--	--	10	0
JUN 29...	4	2	2	--	--	--	--	20	20
AUG 17...	3	3	0	--	--	--	--	0	0

DATE	DISSOLVED ZINC (ZN) (UG/L)	DISSOLVED GROSS ALPHA AS U-NAT. (UG/L)	SUSPENDED GROSS ALPHA AS U-NAT. (UG/L)	DISSOLVED GROSS BETA AS CS-137 (PC/L)	SUSPENDED GROSS BETA AS CS-137 (PC/L)	DISSOLVED GROSS BETA AS SR90 /Y90 (PC/L)	SUSPENDED GROSS BETA AS SR90 /Y90 (PC/L)	DISSOLVED RA-226 (RADON METHOD) (PC/L)	DISSOLVED URANIUM (U) (UG/L)
OCT 19...	0	<.4	<.4	.9	<.4	.7	<.4	.04	.08
DEC 14...	10	--	--	--	--	--	--	--	--
MAR 15...	0	--	--	--	--	--	--	--	--
MAY 24...	10	--	--	--	--	--	--	--	--
JUN 29...	0	--	--	--	--	--	--	--	--
AUG 17...	0	--	--	--	--	--	--	--	--

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ORGANIC CARBON (C) (MG/L)	DISSOLVED ORGANIC CARBON (C) (MG/L)	CYANIDE (CN) (MG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)	TOTAL PCB (UG/L)	PCB IN BOTTOM MATERIAL (UG/KG)	TOTAL ALDRIN (UG/L)	ALDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL CHLORDANE (UG/L)	CHLORDANE IN BOTTOM MATERIAL (UG/KG)
OCT 19...	4.0	2.5	--	.00	.0	0	.00	.0	.0	0
DEC 14...	3.4	3.2	--	.00	--	--	--	--	--	--
MAR 15...	8.1	3.2	.00	.00	--	--	--	--	--	--
MAY 24...	7.2	4.1	--	.00	--	--	--	--	--	--
JUN 29...	6.1	3.1	--	.00	--	--	--	--	--	--
AUG 17...	5.4	2.9	--	.00	--	--	--	--	--	--

DATE	TOTAL DDD (UG/L)	DDD IN BOTTOM MATERIAL (UG/KG)	TOTAL DDE (UG/L)	DDE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDT (UG/L)	DDT IN BOTTOM MATERIAL (UG/KG)	TOTAL DIAZINON (UG/L)	TOTAL DIELDRIN (UG/L)	DIELDRIN IN BOTTOM MATERIAL (UG/KG)
OCT 19...	.00	.0	.00	.0	.00	.0	.00	.00	.0
DEC 14...	--	--	--	--	--	--	--	--	--
MAR 15...	--	--	--	--	--	--	--	--	--
MAY 24...	--	--	--	--	--	--	--	--	--
JUN 29...	--	--	--	--	--	--	--	--	--
AUG 17...	--	--	--	--	--	--	--	--	--

DATE	TOTAL ENDRIN (UG/L)	ENDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ETHION (UG/L)	TOTAL HEPTACHLOR (UG/L)	HEPTACHLOR IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR EPOXIDE (UG/L)	HEPTACHLOR EPOXIDE IN BOTTOM MATERIAL (UG/KG)	TOTAL LINDANE (UG/L)	LINDANE IN BOTTOM MATERIAL (UG/KG)
OCT 19...	.00	.0	.00	.00	.0	.00	.0	.00	.0
DEC 14...	--	--	--	--	--	--	--	--	--
MAR 15...	--	--	--	--	--	--	--	--	--
MAY 24...	--	--	--	--	--	--	--	--	--
JUN 29...	--	--	--	--	--	--	--	--	--
AUG 17...	--	--	--	--	--	--	--	--	--

DATE	TOTAL MALATHION (UG/L)	METHOXYCHLOR IN BOTTOM MATERIAL (UG/KG)	TOTAL METHYL PARATHION (UG/L)	TOTAL METHYL TRITHION (UG/L)	TOTAL PARATHION (UG/L)	TOTAL TOXAPHENE (UG/L)	TOXAPHENE IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TOTAL 2,4-D (UG/L)	TOTAL 2,4,5-T (UG/L)	TOTAL SILVEX (UG/L)
OCT 19...	.00	.0	.00	.00	.00	0	0	.00	.00	.00	.00

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Sampling method
Dec. 14	1130	CHRYSOPHYTA			Depth Integrating Sampler
		Bacillariophyceae			
		Achnanthes	8	11	
		Cocconeis	3	4	
		Fragilaria	11	15	
		Nitzschia	3	4	
		Synedra	29	41	
		TOTAL	72		
Mar. 15	1115	CHRYSOPHYTA			Depth Integrating Sampler
		Bacillariophyceae			
		Achnanthes	83	32	
		Cymbella	10	4	
		Diatoma	41	16	
		Gomphonema	10	4	
		Meridion	7	3	
		Navicula	41	16	
		Nitzschia	3	1	
		Synedra	3	1	
		CYANOPHYTA			
		Myxophyceae			
		Oscillatoria	62	24	
		TOTAL	260		
June 29	1030	CHRYSOPHYTA			Depth Integrating Sampler
		Bacillariophyceae			
		Achnasthes	46	58	
		Cymbella	3	4	
		Eunotia	3	4	
		Fragilaria	9	12	
		Gomphonema	3	4	
		Navicula	6	8	
		Nitzschia	9	12	
		TOTAL	79		
Aug. 17	0900	CHLOROPHYTA			Depth Integrating Sampler
		Chlorophyceae	150	10	
		CHRYSOPHYTA			
		Bacillariophyceae			
		Achnanthes	500	32	
		Cocconeis	230	15	
		Cyclotella	310	20	
		Gomphonema	38	2	
		Navicula	270	17	
		Synedra	77	5	
		TOTAL	1,600		

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PERIPHYTON

Date	Length of exposure (days)	Biomass (g/m²) Dry weight	Biomass (g/m²) Ash weight	Chlorophyll a (mg/m²)	Chlorophyll b (mg/m²)	Biomass chlorophyll ratio	Sampling method
Mar. 15	45	102	70.9				Polyethylene strip
June 29	35	.945	.709				
Aug. 17	34	6.46	4.96				

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22	21	19	18	14	13	14	13	13	13	13	12
2	22	20	18	17	14	13	14	13	14	13	13	13
3	22	20	18	17	14	13	15	14	14	13	14	13
4	23	21	18	17	14	13	15	14	14	14	16	14
5	22	20	18	17	14	13	15	14	14	13	16	14
6	24	22	17	16	15	14	15	14	13	13	16	14
7	24	20	18	17	16	14	15	14	13	13	14	13
8	21	20	18	17	15	14	15	14	13	13	14	13
9	20	19	17	16	14	13	15	14	14	13	14	13
10	20	19	19	17	15	14	15	14	14	13	14	13
11	20	19	19	17	16	14	15	14	14	13	14	14
12	19	19	19	18	16	15	15	14	16	14	16	14
13	19	19	19	17	15	14	15	14	16	14	17	14
14	20	19	18	17	15	14	15	14	14	13	14	14
15	20	18	19	17	16	14	15	14	14	13	14	13
16	19	18	19	17	16	14	15	13	13	13	14	13
17	20	19	19	17	15	14	15	13	13	12	14	13
18	19	18	18	15	14	14	13	13	14	13	14	14
19	19	17	16	15	14	14	14	13	14	13	14	13
20	19	18	16	15	15	14	14	13	14	13	14	14
21	19	18	16	14	14	13	14	14	13	12	15	14
22	19	17	16	14	14	13	14	14	14	12	15	14
23	20	17	15	14	14	13	14	14	15	14	15	14
24	20	19	15	14	14	13	14	14	16	15	14	14
25	20	19	15	14	14	14	14	13	15	14	14	13
26	20	19	16	14	15	14	14	13	14	14	15	14
27	19	18	16	16	15	14	14	13	16	14	15	14
28	19	17	16	16	15	14	14	13	14	13	16	14
29	19	17	17	15	15	14	13	13	---	---	17	16
30	19	17	15	14	15	13	14	13	---	---	20	16
31	19	17	---	---	15	13	13	13	---	---	16	14
MONTH	24	17	19	14	16	13	15	13	16	12	20	12

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14	14	17	16	24	22	20	20	22	22	20	18
2	15	14	18	16	22	21	20	19	24	22	20	17
3	15	14	19	17	22	20	20	19	24	23	20	18
4	17	14	19	18	22	19	20	19	24	19	20	17
5	17	13	19	17	22	20	20	19	20	19	20	17
6	13	13	19	17	22	20	20	18	20	19	20	19
7	13	12	19	18	22	20	20	19	21	20	20	18
8	13	13	19	17	20	19	21	20	21	20	19	17
9	13	12	19	17	20	19	20	19	22	19	17	16
10	13	12	17	16	20	19	21	19	21	20	17	16
11	13	13	17	16	20	19	21	20	22	20	17	15
12	13	13	16	16	21	19	21	20	21	20	17	16
13	14	13	16	15	22	20	20	19	20	19	17	16
14	14	13	16	15	22	21	20	19	20	20	17	16
15	15	14	17	16	22	21	20	18	20	20	17	16
16	14	14	17	16	22	21	20	18	21	20	17	16
17	14	14	17	16	23	22	22	19	20	20	16	16
18	16	14	18	17	24	22	22	20	20	17	16	15
19	16	15	19	17	22	21	22	20	19	17	16	16
20	16	15	19	17	22	22	22	19	18	16	16	16
21	16	15	19	18	22	21	22	20	19	17	17	16
22	16	16	20	19	22	21	22	21	19	17	17	16
23	17	16	19	19	22	21	22	21	19	17	18	16
24	17	17	20	19	22	20	22	20	20	18	17	16
25	17	16	20	19	21	20	22	22	20	18	18	17
26	16	16	20	20	20	20	23	22	19	18	19	17
27	16	16	22	20	20	19	23	21	19	18	20	18
28	17	16	22	19	20	19	22	22	19	16	19	17
29	18	17	22	19	20	19	22	22	18	17	19	18
30	18	16	23	20	20	20	22	21	19	17	19	18
31	---	---	24	21	---	---	22	22	19	17	---	---
MONTH	18	12	24	15	24	19	23	18	24	16	20	15
YEAR	24	12										

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.5	10.5	6.5	4.0	1.0	0.0	0.0	0.0	0.5	0.0	3.0	0.5
2	12.5	11.0	4.5	2.0	2.0	0.0	0.0	0.0	0.5	0.0	4.0	1.0
3	13.0	10.5	6.5	2.5	1.5	0.0	1.5	0.0	0.5	0.0	5.0	2.0
4	12.0	9.5	4.0	2.5	2.0	0.0	2.5	1.5	0.5	0.0	7.0	5.0
5	13.5	11.0	4.0	1.5	2.0	0.5	3.0	2.0	1.0	0.0	6.0	3.5
6	14.0	11.5	3.0	1.0	3.0	1.5	3.0	2.0	0.5	0.0	5.5	4.0
7	14.0	11.0	5.5	1.5	5.0	3.0	2.5	0.5	0.5	0.0	5.5	3.5
8	14.0	12.0	3.5	1.0	4.5	0.5	1.0	0.0	1.0	0.0	6.0	2.0
9	13.0	9.0	3.5	0.0	0.5	0.0	1.5	0.0	1.0	0.5	6.5	2.5
10	10.0	7.5	6.0	2.5	3.5	0.5	1.5	0.0	1.0	0.5	7.0	4.0
11	9.5	6.5	5.0	2.5	5.5	3.5	0.0	0.0	1.0	0.5	8.0	6.0
12	9.5	6.0	4.5	2.5	6.5	5.5	0.0	0.0	1.0	1.0	9.0	7.0
13	10.5	6.0	2.0	1.5	6.5	3.0	0.0	0.0	1.0	1.0	8.5	5.0
14	11.5	8.5	2.5	1.5	2.5	1.5	0.5	0.0	1.5	0.0	9.0	6.0
15	9.5	6.5	5.0	2.5	6.0	2.5	2.0	0.0	1.5	0.5	9.5	5.5
16	10.0	7.5	6.5	4.5	6.0	4.0	1.0	0.0	1.5	0.0	10.0	6.5
17	9.5	7.5	5.5	3.5	5.0	2.5	0.0	0.0	0.5	0.0	8.0	4.5
18	9.0	6.5	5.5	3.0	5.5	3.5	0.0	0.0	1.5	0.5	10.0	7.0
19	8.5	5.5	6.0	3.5	5.5	4.0	0.0	0.0	3.0	0.5	8.5	6.0
20	9.5	7.0	6.0	4.0	6.5	4.0	0.0	0.0	2.0	0.0	9.0	6.5
21	7.5	5.5	5.5	2.0	3.5	0.0	0.0	0.0	1.5	0.5	7.0	5.5
22	8.0	4.5	2.5	1.0	0.0	0.0	0.0	0.0	3.0	1.0	6.5	4.0
23	8.5	5.0	0.5	0.0	1.0	0.0	0.0	0.0	4.0	1.5	6.0	2.5
24	8.5	7.0	1.5	0.0	0.5	0.0	0.5	0.0	4.0	0.5	6.5	3.0
25	9.5	7.0	2.5	0.0	1.5	0.0	0.5	0.0	5.5	2.0	8.5	3.5
26	9.5	6.0	4.5	1.5	2.0	1.5	0.5	0.0	6.5	2.5	9.0	4.5
27	6.5	5.5	7.5	4.5	1.5	0.5	0.5	0.0	5.5	3.5	9.0	6.0
28	6.0	4.0	8.0	5.5	3.5	1.5	0.5	0.0	4.0	2.0	10.5	7.5
29	6.0	2.5	7.5	2.0	2.5	0.0	0.5	0.0	---	---	11.0	9.5
30	8.0	3.5	1.5	0.0	1.5	0.0	0.5	0.0	---	---	10.5	8.5
31	8.5	6.0	---	---	2.0	0.0	0.5	0.0	---	---	10.5	8.0
MONTH	14.0	2.5	8.0	0.0	6.5	0.0	3.0	0.0	6.5	0.0	11.0	0.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.0	6.5	14.0	10.5	15.5	13.0	17.0	14.5	19.5	16.0	20.0	17.0
2	11.0	7.5	12.5	10.5	13.5	10.0	17.0	15.0	19.5	16.5	20.0	16.5
3	11.0	9.0	12.0	10.5	14.5	10.5	17.0	13.0	20.0	16.0	19.5	17.0
4	11.0	8.5	13.5	11.0	16.0	11.5	18.5	13.5	17.5	14.0	19.5	17.0
5	9.5	5.0	14.5	11.5	17.5	12.0	17.5	14.0	23.5	15.0	22.0	16.5
6	9.5	5.0	15.0	10.5	16.5	12.5	18.0	14.5	21.5	17.0	20.0	17.0
7	9.0	4.0	14.0	11.5	16.5	12.5	19.0	15.5	20.5	17.0	20.0	17.5
8	10.0	6.0	15.5	12.0	13.0	11.0	19.0	15.5	20.0	17.0	18.0	16.0
9	9.5	5.0	14.0	9.5	16.0	11.0	19.5	16.5	19.5	16.0	17.5	15.5
10	10.5	5.5	10.5	6.0	13.0	9.0	18.5	15.5	21.5	16.0	17.0	14.5
11	11.0	7.0	10.5	6.0	13.5	9.5	18.5	15.0	20.0	17.0	17.5	14.0
12	11.5	7.0	11.0	6.5	15.5	12.0	18.0	15.5	20.0	16.0	17.0	12.5
13	10.5	7.0	11.0	6.5	14.0	12.5	19.5	15.5	22.0	17.5	16.0	14.0
14	10.5	8.5	11.5	8.5	14.5	13.0	19.0	14.5	21.0	18.0	17.0	15.5
15	10.5	8.0	12.5	8.5	15.5	13.0	19.5	16.0	19.0	17.0	17.0	16.0
16	12.5	8.5	12.5	10.0	15.0	13.0	20.5	15.5	19.5	17.0	17.0	15.0
17	14.0	8.5	13.5	10.5	16.0	13.0	18.0	16.0	19.5	18.0	17.0	15.0
18	11.5	9.5	13.5	11.0	15.5	13.5	20.5	16.5	19.0	15.5	17.5	16.0
19	13.5	9.5	16.0	11.0	17.0	13.5	19.5	16.5	19.5	15.0	17.0	15.5
20	12.0	9.5	14.0	12.0	16.0	14.0	20.0	16.5	18.0	16.5	18.5	15.5
21	12.5	9.5	15.0	11.5	16.0	14.0	19.5	16.5	17.5	14.5	18.0	15.0
22	13.0	10.5	14.5	11.5	16.5	12.0	19.0	16.5	17.5	14.0	17.0	14.5
23	13.0	11.0	14.0	11.0	17.0	14.0	20.5	16.5	17.0	15.5	17.0	14.5
24	12.0	9.5	13.0	12.0	16.0	12.5	21.5	17.5	17.0	14.5	17.0	14.5
25	13.0	7.5	13.0	11.5	16.5	13.0	20.0	17.5	19.5	15.5	18.5	14.5
26	9.5	6.5	13.0	12.0	16.0	12.0	21.0	17.0	19.5	17.0	18.0	15.5
27	10.5	5.5	13.5	12.0	16.0	13.0	19.5	16.5	19.5	15.5	16.0	14.0
28	11.5	6.5	15.5	12.0	16.5	12.0	19.5	16.5	21.0	17.0	15.5	13.5
29	13.0	9.5	15.0	12.0	17.0	15.0	19.0	16.5	20.0	16.5	14.0	12.0
30	13.5	11.0	15.0	12.0	17.5	15.0	19.5	16.0	19.5	17.0	16.5	12.5
31	---	---	14.5	12.0	---	---	19.0	16.0	20.5	17.0	---	---
MONTH	14.0	4.0	16.0	6.0	17.5	9.0	21.5	13.0	23.5	14.0	22.0	12.0
YEAR	23.5	0.0										

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE FOR SELECTED DAYS, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT				
15...	1330	54	2	.29
19...	1030	47	2	.25
NOV				
18...	1300	44	17	2.0
DEC				
14...	1130	95	2	.51
28...	1420	89	3	.72
FEB				
04...	1500	55	3	.45
MAR				
15...	1115	273	4	2.9
APR				
04...	1300	500	8	11
MAY				
11...	1415	90	4	.97
24...	1100	70	1	.19
JUN				
29...	1030	122	4	1.3
JUL				
13...	1450	58	1	.16
AUG				
04...	1215	43	1	.12
17...	0900	47	3	.38
24...	1145	199	31	17

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)
OCT									
15...	1100	54	--	--	9.0	10.7	<10	<.1	<10
NOV									
30...	1100	118	--	6.5	1.0	10.4	<10	.1	<10
FEB									
09...	1320	55	10	6.8	3.0	13.0	<10	.2	<10
MAR									
10...	1035	181	10	6.2	12.0	12.4	<10	<.1	<10
APR									
14...	1030	162	10	6.7	12.0	11.2	<10	.2	10
MAY									
20...	0930	69	15	6.9	13.0	10.6	<10	.4	10
JUN									
20...	1240	67	25	6.8	17.0	9.4	<10	.7	20
JUL									
18...	0945	52	--	6.3	17.0	8.8	<10	.7	11
AUG									
01...	1046	42	17	6.8	18.0	8.7	<10	.6	21
SEP									
19...	1030	81	15	6.8	15.0	9.2	<10	.7	<10

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) above mean sea level.

REMARKS.--Records good except those for period Jan. 14 to Feb. 8, which are fair. Suspended-sediment records for the current year are published on page 367 of this report.

AVERAGE DISCHARGE.--20 years, 145 ft³/s (4.106 m³/s), 45.37 in/yr (1,152 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,900 ft³/s (394 m³/s) June 20, 1972, gage height, 9.87 ft (3.008 m), 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)
Mar. 13	0045	*6620	187	*6.85	2.088	Sept. 8	0015	3950	112	5.12	1.561
Apr. 4	2315	4170	118	5.30	1.615						

Minimum discharge, 24 ft³/s (0.68 m³/s) Sept. 6, 7, gage height, 0.58 ft (0.177 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	138	87	102	72	141	221	136	184	70	31	35
2	94	122	79	105	72	118	198	138	144	69	31	31
3	73	112	70	102	70	107	290	181	126	62	33	28
4	63	104	72	90	70	282	642	527	115	59	34	27
5	58	95	66	84	70	199	1120	274	105	56	32	26
6	54	89	144	82	68	418	440	215	122	52	32	25
7	461	86	551	84	65	266	341	189	124	50	28	374
8	666	80	208	85	65	198	286	169	98	47	27	1600
9	853	77	154	79	64	170	248	150	93	57	47	458
10	310	77	136	84	62	154	223	138	85	68	67	206
11	211	72	127	82	60	169	203	131	79	56	54	133
12	166	84	152	85	57	1630	186	122	102	51	38	101
13	139	70	155	80	90	1840	174	115	86	51	45	91
14	120	68	121	100	63	552	164	109	118	46	81	101
15	107	69	303	100	63	398	154	104	96	44	43	89
16	98	67	235	97	57	326	144	98	83	40	45	225
17	103	64	179	95	55	267	136	94	80	39	43	239
18	89	62	155	90	55	238	136	90	79	41	58	153
19	82	60	141	85	52	209	166	87	82	36	42	112
20	88	59	172	80	52	223	154	87	81	35	36	96
21	81	58	153	80	49	200	133	87	73	38	34	83
22	74	56	137	80	50	278	125	83	72	36	53	77
23	71	53	113	78	53	209	236	92	101	36	36	75
24	75	53	113	78	235	186	337	101	89	40	45	72
25	249	53	110	75	130	170	202	220	122	47	46	67
26	242	54	129	75	144	157	170	440	115	55	40	66
27	144	79	108	75	416	147	154	368	117	41	55	65
28	121	95	103	75	206	140	142	239	96	37	45	62
29	109	177	100	75	---	152	158	213	84	36	54	59
30	116	95	112	75	---	602	140	183	75	36	40	59
31	202	---	106	72	---	285	---	165	---	33	38	---
TOTAL	5432	2428	4591	2629	2565	10431	7423	5345	3026	1464	1333	4835
MEAN	175	80.9	148	84.8	91.6	336	247	172	101	47.2	43.0	161
MAX	853	177	551	105	416	1840	1120	527	184	70	81	1600
MIN	54	53	66	72	49	107	125	83	72	33	27	25
CFSM	4.03	1.86	3.41	1.95	2.11	7.74	5.69	3.96	2.33	1.09	.99	3.71
IN.	4.66	2.08	3.94	2.25	2.20	8.94	6.36	4.58	2.59	1.25	1.14	4.14

CAL YR 1976 TOTAL 53734 MEAN 147 MAX 2850 MIN 30 CFSM 3.39 IN 46.06
WTR YR 1977 TOTAL 51502 MEAN 141 MAX 1840 MIN 25 CFSM 3.25 IN 44.14

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) above mean sea level.

REMARKS.--Records good except those for period Jan. 1 to Feb. 23, which are fair. Slight diurnal fluctuation at low flow caused by small mills above station. Suspended-sediment records for the current year are published on page 367 of this report.

AVERAGE DISCHARGE.--38 years, 173 ft³/s (4.899 m³/s), 25.87 in/yr (657 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)
Oct. 7	1700	2900	82.1	7.67	2.338	Apr. 5	0045	6740	191	11.13	3.392
Mar. 13	0330	*10600	300	*13.70	4.176	Sept. 8	0945	2800	79.3	7.56	2.304

Minimum discharge, 42 ft³/s (1.19 m³/s) Aug. 8, gage height, 1.57 ft (0.479 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	152	165	150	105	270	313	159	235	186	48	88
2	68	135	125	145	100	221	266	152	163	155	50	62
3	60	128	115	140	100	191	402	201	136	124	47	59
4	53	122	107	130	100	322	754	445	118	108	51	62
5	50	115	98	127	100	326	3140	301	106	99	55	56
6	47	107	149	119	95	596	932	236	151	92	53	81
7	979	103	1080	116	95	514	564	217	162	86	46	105
8	1400	98	463	120	90	355	423	214	115	80	55	1730
9	1810	94	296	110	90	281	338	177	121	76	66	473
10	603	96	240	120	90	239	287	160	103	91	76	249
11	311	90	212	110	85	221	251	148	92	172	119	186
12	224	107	260	115	85	1170	224	138	94	272	82	148
13	180	92	287	110	125	4690	204	129	86	184	80	129
14	152	88	240	140	90	1070	189	122	125	115	119	108
15	133	94	335	135	88	597	174	115	97	95	83	97
16	121	93	359	125	85	425	160	110	89	83	69	131
17	201	86	296	120	80	331	147	103	154	75	119	122
18	145	84	245	115	78	287	141	98	183	71	172	108
19	124	80	214	115	75	243	154	94	118	69	94	131
20	136	79	227	110	75	289	160	90	114	64	72	179
21	132	78	214	110	72	235	136	86	99	61	66	122
22	116	75	210	110	75	301	127	83	120	60	66	107
23	108	79	194	110	80	258	207	120	196	60	57	97
24	109	82	189	110	950	230	373	98	214	54	80	93
25	169	74	172	105	536	208	210	135	229	73	69	87
26	264	74	158	105	362	190	177	274	214	88	58	90
27	185	98	152	105	430	177	161	199	249	58	56	86
28	157	119	140	105	367	168	147	136	201	54	53	80
29	142	235	134	105	---	166	216	121	158	53	52	74
30	138	165	175	105	---	483	169	233	196	57	55	73
31	188	---	152	105	---	421	---	172	---	51	73	---
TOTAL	8587	3122	7403	3647	4703	15475	11146	5066	4438	2966	2241	5213
MEAN	277	104	239	118	168	499	372	163	148	95.7	72.3	174
MAX	1810	235	1080	150	950	4690	3140	445	249	272	172	1730
MIN	47	74	98	105	72	166	127	83	86	51	46	56
CFSM	3.05	1.15	2.63	1.30	1.85	5.50	4.10	1.80	1.63	1.05	.80	1.92
IN.	3.52	1.28	3.03	1.49	1.93	6.34	4.57	2.08	1.82	1.22	.92	2.14

CAL YR 1976 TOTAL 80464 MEAN 220 MAX 2750 MIN 38 CFSM 2.42 IN 32.97
WTR YR 1977 TOTAL 74007 MEAN 203 MAX 4690 MIN 46 CFSM 2.24 IN 30.32

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) above mean sea level (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.--34 years, 395 ft³/s (11.19 m³/s), 38.32 in/yr (973 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft³/s (346 m³/s) Oct. 4, 1964; maximum gage height, 17.30 ft (5.273 m) Oct. 4, 1964; minimum discharge, 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)
Oct. 8	0345	1550	43.9	4.50	1.372	Mar. 30	1800	3670	104	9.04	2.755
Mar. 13	1200	*4290	121	*10.12	3.085	Apr. 5	1200	2880	81.6	8.12	2.475

Minimum discharge, 105 ft³/s (2.97 m³/s) Aug. 8, gage height, 1.45 ft (0.442 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	223	389	328	443	268	396	1220	506	418	205	127	167
2	192	337	299	394	267	356	1010	489	347	205	117	148
3	175	308	281	383	260	332	1620	501	318	190	122	128
4	165	291	261	373	265	571	1520	614	299	184	126	153
5	160	276	250	376	271	596	2640	522	288	180	117	130
6	160	263	265	379	246	709	1650	481	292	176	115	120
7	660	256	669	501	242	670	1270	456	364	170	110	390
8	1100	243	467	424	235	576	1110	441	283	164	107	1040
9	1210	233	380	416	237	504	994	420	270	157	189	385
10	670	231	341	515	241	464	913	400	255	161	139	262
11	478	227	324	415	246	447	852	390	250	198	146	212
12	390	281	459	416	278	855	802	380	259	175	125	180
13	339	245	428	366	497	3360	760	367	270	167	123	255
14	304	235	371	458	347	1660	725	359	448	156	290	519
15	279	256	675	578	310	1060	693	349	303	154	261	547
16	265	247	648	485	284	864	665	335	272	148	196	888
17	258	234	529	422	264	748	635	322	293	146	191	827
18	240	228	461	410	259	686	622	321	284	170	283	509
19	227	221	414	385	260	647	618	319	303	140	203	402
20	245	220	502	370	258	676	581	323	291	133	155	377
21	245	227	552	350	242	646	557	352	280	129	143	305
22	220	212	443	326	237	788	550	408	252	137	196	269
23	214	202	412	315	241	657	787	375	302	145	149	245
24	212	202	382	318	463	641	922	340	254	133	168	227
25	320	198	376	312	386	617	703	390	244	127	158	217
26	522	198	566	300	335	575	619	396	241	139	135	213
27	339	259	447	309	469	551	576	464	232	130	139	210
28	294	299	414	313	485	534	546	412	213	125	167	204
29	271	558	389	285	---	751	524	384	221	132	137	184
30	289	398	357	295	---	2790	513	363	209	140	126	186
31	516	---	534	287	---	2030	---	378	---	127	130	---
TOTAL	11182	7974	13224	11919	8393	26757	27197	12557	8555	4843	4890	9899
MEAN	361	266	427	384	300	863	907	405	285	156	158	330
MAX	1210	558	675	578	497	3360	2640	614	448	205	290	1040
MIN	160	198	250	285	235	332	513	319	209	125	107	120
CFSM	2.58	1.90	3.05	2.74	2.14	6.16	6.48	2.89	2.04	1.11	1.13	2.36
IN.	2.97	2.12	3.51	3.17	2.23	7.11	7.23	3.34	2.27	1.29	1.30	2.63

CAL YR 1976 TOTAL 180072 MEAN 492 MAX 6450 MIN 129 CFSM 3.51 IN 47.85
WTR YR 1977 TOTAL 147390 MEAN 404 MAX 3360 MIN 107 CFSM 2.89 IN 39.16

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) above mean sea level.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 368 of this report.

AVERAGE DISCHARGE.--16 years, 148 ft³/s (4.191 m³/s), 35.20 in/yr (894 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, 33 ft³/s (0.93 m³/s) Sept. 14, 1962, Aug. 30, 31, 1968.

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). A discharge of 30.8 ft³/s (0.87 m³/s) was measured on Oct. 16, 1954.

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)
Mar. 13	0445	1720	48.7	8.86	2.701	Apr. 5	0415	*1870	53.0	*9.29	2.832
Mar. 30	0430	1220	34.6	6.90	2.103						

Minimum discharge, 48 ft³/s (1.36 m³/s) Aug. 7, 8, gage height, 1.25 ft (0.381 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	92	98	185	96	167	369	177	130	72	55	58
2	64	84	87	151	95	144	295	160	104	71	55	55
3	62	79	81	140	91	132	624	181	97	68	62	54
4	60	75	77	132	94	229	623	195	94	67	55	53
5	60	72	75	129	92	189	1290	170	91	65	53	54
6	58	70	92	135	88	328	649	157	107	63	51	53
7	219	69	208	163	88	282	468	148	117	61	50	262
8	129	67	128	134	89	219	380	142	91	61	50	274
9	331	67	105	142	88	187	328	133	88	63	59	112
10	121	67	96	158	88	168	292	128	86	78	54	85
11	88	66	93	129	88	160	268	125	82	61	66	75
12	77	77	149	136	144	546	250	120	98	61	52	68
13	73	68	127	114	193	1190	235	116	104	65	51	79
14	70	67	110	157	124	503	221	113	107	58	61	91
15	67	71	260	168	117	348	211	110	94	58	73	95
16	65	69	204	147	106	274	199	106	92	58	76	246
17	69	67	158	114	99	231	189	104	99	57	86	173
18	64	66	133	110	99	212	184	105	90	57	176	118
19	63	65	118	105	99	188	180	105	119	53	86	120
20	67	65	233	105	98	229	170	109	110	53	68	108
21	65	64	213	100	93	198	164	109	99	55	63	86
22	62	62	164	100	92	246	162	124	89	61	64	80
23	61	61	142	100	95	205	280	111	114	61	59	75
24	63	62	126	107	245	188	311	107	90	55	138	72
25	134	62	127	103	156	174	223	131	85	58	87	72
26	149	63	176	102	137	162	196	118	98	61	69	79
27	97	89	131	112	237	154	180	112	85	54	78	74
28	83	112	124	107	208	157	169	130	79	54	74	72
29	76	204	115	98	---	247	162	128	80	57	64	67
30	97	122	108	95	---	971	161	111	78	59	60	68
31	113	---	282	95	---	552	---	134	---	55	56	---
TOTAL	2879	2324	4340	3873	3339	9180	9433	4019	2897	1880	2151	2978
MEAN	92.9	77.5	140	125	119	296	314	130	96.6	60.6	69.4	99.3
MAX	331	204	282	185	245	1190	1290	195	130	78	176	274
MIN	58	61	75	95	88	132	161	104	78	53	50	53
CFSM	1.63	1.36	2.45	2.19	2.08	5.18	5.50	2.28	1.69	1.06	1.22	1.74
IN.	1.88	1.51	2.83	2.52	2.18	5.98	6.15	2.62	1.89	1.22	1.40	1.94

CAL YR 1976 TOTAL 58433 MEAN 160 MAX 1930 MIN 58 CFSM 2.80 IN 38.07
WTR YR 1977 TOTAL 49293 MEAN 135 MAX 1290 MIN 50 CFSM 2.36 IN 32.11

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 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 (536.811 m) above mean sea level (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 368 of this report.

AVERAGE DISCHARGE.--34 years, 1,074 ft³/s (30.42 m³/s), 33.45 in/yr (850 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)
Mar. 13	1330	*11000	312	*8.22	2.505	Apr. 5	0430	10800	306	8.17	2.490
Mar. 30	2230	8670	246	7.28	2.219						

Minimum discharge, 283 ft³/s (8.01 m³/s) Aug. 31, gage height, 1.87 ft (0.570 m); minimum daily, 330 ft³/s (9.35 m³/s) Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	593	883	798	1260	651	1110	3450	1270	951	554	368	414
2	514	761	710	1050	677	984	2690	1190	870	580	364	407
3	454	724	666	1000	644	889	4180	1230	766	528	383	360
4	451	670	629	957	665	1240	4430	1540	743	507	378	330
5	419	645	607	943	676	1690	9620	1340	706	496	355	360
6	425	587	626	935	611	2200	5620	1190	714	488	354	359
7	1130	601	1650	1190	593	2210	3870	1130	925	485	345	719
8	2880	600	1210	1020	592	1650	3200	1080	712	465	342	3240
9	3310	559	960	995	595	1400	2760	1010	666	473	394	1050
10	1800	568	853	1210	601	1230	2450	968	641	500	409	700
11	1120	546	802	1050	653	1150	2190	949	609	519	399	579
12	905	627	1050	954	655	2070	2080	925	640	512	374	512
13	806	598	1120	950	1150	9680	1930	900	627	525	341	514
14	685	553	957	925	942	5380	1810	860	939	465	437	979
15	656	591	1610	1390	800	3130	1710	852	820	452	559	949
16	606	583	1910	1130	743	2440	1610	833	712	448	496	2140
17	629	556	1370	1010	677	2030	1530	791	686	428	552	2420
18	592	540	1160	940	654	1820	1460	816	670	453	711	1300
19	565	529	1020	900	656	1650	1490	841	779	423	613	962
20	564	523	1230	875	673	1790	1370	864	855	403	457	925
21	612	520	1630	830	685	1590	1300	934	769	406	399	766
22	552	511	1190	780	632	2060	1270	963	665	419	414	654
23	509	488	1070	750	611	1750	1920	1050	703	474	413	628
24	511	493	985	760	1250	1580	2770	875	637	408	494	570
25	697	486	922	740	1170	1430	1920	971	718	396	607	553
26	1300	498	1300	715	965	1330	1620	1090	730	415	428	598
27	795	622	1070	730	1180	1280	1440	1090	678	395	404	569
28	737	681	984	760	1430	1240	1360	977	604	378	479	556
29	654	1360	945	695	---	1580	1300	1040	552	387	434	498
30	647	1010	867	658	---	7000	1260	958	572	414	379	492
31	1080	---	1490	744	---	6180	---	919	---	392	352	---
TOTAL	27198	18913	33391	28846	21831	72763	75610	31446	21659	14188	13434	25103
MEAN	877	630	1077	931	780	2347	2520	1014	722	458	433	837
MAX	3310	1360	1910	1390	1430	9680	9620	1540	951	580	711	3240
MIN	419	486	607	658	592	889	1260	791	552	378	341	330
CFSM	2.01	1.45	2.47	2.14	1.79	5.38	5.78	2.33	1.66	1.05	.99	1.92
IN.	2.32	1.61	2.85	2.46	1.86	6.21	6.45	2.68	1.85	1.21	1.15	2.14

CAL YR 1976 TOTAL 449429 MEAN 1228 MAX 12500 MIN 363 CFSM 2.82 IN 38.35
WTR YR 1977 TOTAL 384382 MEAN 1053 MAX 9680 MIN 330 CFSM 2.42 IN 32.80

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) above mean sea level.

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 368 of this report.

AVERAGE DISCHARGE.--37 years, 205 ft³/s (5.806 m³/s), 53.64 in/yr (1,362 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)
Mar. 13	0115	2400	68.0	5.21	1.588	Apr. 4	2315	*2960	83.8	*5.91	1.801
Mar. 30	0200	1910	54.1	4.51	1.375						

Minimum discharge, 53 ft³/s (1.50 m³/s) Aug. 7, 8, gage height, 0.73 ft (0.223 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	186	185	299	145	276	573	232	208	106	63	90
2	81	174	167	279	140	241	503	237	159	107	61	68
3	76	165	156	265	140	222	907	272	148	95	62	64
4	72	157	148	249	140	378	994	320	140	92	63	62
5	69	151	143	244	141	299	1510	256	134	90	59	65
6	72	145	181	247	135	457	929	235	171	88	57	67
7	441	141	307	255	135	375	731	224	162	85	55	339
8	339	135	208	220	130	323	613	211	132	82	66	249
9	689	132	190	245	130	292	531	200	125	95	98	140
10	317	129	181	251	130	271	470	191	119	95	89	113
11	233	128	180	232	128	267	424	185	114	81	100	100
12	192	151	294	264	197	915	389	177	121	84	63	90
13	169	125	234	270	252	1300	361	171	110	96	64	134
14	154	125	210	354	171	703	338	166	138	81	114	172
15	142	139	407	294	166	563	317	162	119	79	105	168
16	134	124	340	250	154	484	297	157	176	76	94	372
17	136	119	290	243	152	424	280	153	146	75	192	291
18	121	115	261	240	153	398	288	165	124	75	284	219
19	116	113	241	230	146	355	268	159	202	71	126	220
20	138	113	457	235	142	389	245	157	167	70	93	197
21	119	109	384	225	135	358	233	148	149	68	85	167
22	111	105	326	215	138	399	225	156	143	84	81	151
23	108	102	293	220	144	340	573	176	140	76	73	141
24	116	102	268	190	384	317	516	151	124	70	84	132
25	354	102	287	179	239	298	363	195	120	72	75	127
26	319	113	354	173	233	281	319	195	135	84	69	135
27	214	156	271	171	455	269	291	198	118	69	110	129
28	184	256	256	168	341	278	272	183	109	68	85	118
29	168	363	240	161	---	447	257	171	121	73	73	106
30	204	216	243	160	---	1250	244	161	108	73	69	111
31	233	---	454	150	---	723	---	171	---	65	69	---
TOTAL	5911	4391	8156	7178	5096	13892	14261	5935	4182	2525	2781	4537
MEAN	191	146	263	232	182	448	475	191	139	81.5	89.7	151
MAX	689	363	457	354	455	1300	1510	320	208	107	284	372
MIN	69	102	143	150	128	222	225	148	108	65	55	62
CFSM	3.68	2.81	5.07	4.47	3.51	8.63	9.15	3.68	2.68	1.57	1.73	2.91
IN.	4.24	3.15	5.85	5.14	3.65	9.96	10.22	4.25	3.00	1.81	1.99	3.25

CAL YR 1976 TOTAL 89980 MEAN 246 MAX 2880 MIN 58 CFSM 4.74 IN 64.49
WTR YR 1977 TOTAL 78845 MEAN 216 MAX 1510 MIN 55 CFSM 4.16 IN 56.51

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) above mean sea level (levels by Tennessee Valley Authority).

REMARKS.--Records good. Flow regulated by Nantahala Lake 12 mi (19 km) upstream (see p. 308) and Queens Creek Lake, capacity, about 300 ft³/s-day (734,000 m³). Suspended-sediment records for the current year are published on page 368 of this report.

AVERAGE DISCHARGE.--35 years, 498 ft³/s (14.10 m³/s), 46.96 in/yr (1,193 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, 5,160 ft³/s (146 m³/s) Apr. 5, gage height, 6.92 ft (2.109 m) from indicator clip on recorder float tape; minimum, 21 ft³/s (0.59 m³/s) Aug. 8, gage height, 1.40 ft (0.427 m); minimum daily, 85 ft³/s (2.41 m³/s) Mar. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	566	554	724	466	130	980	756	463	439	385	371
2	379	570	250	704	481	111	960	755	436	370	371	377
3	405	474	464	698	229	168	950	750	439	447	365	366
4	381	497	501	693	265	147	1100	750	435	421	324	384
5	427	631	488	692	291	142	1500	755	364	476	355	389
6	422	605	496	695	555	271	1590	690	483	438	362	447
7	532	438	603	697	566	342	1650	626	371	443	113	454
8	487	485	689	684	456	203	1240	620	398	444	374	517
9	613	449	677	688	154	173	1160	620	439	463	411	460
10	561	253	669	768	178	298	1120	700	413	461	369	430
11	420	500	654	760	287	239	854	620	389	425	372	392
12	441	635	689	752	409	323	818	620	375	402	395	353
13	436	542	692	720	291	566	808	610	418	508	359	379
14	439	407	687	710	255	256	800	480	478	422	372	410
15	426	486	619	698	489	231	792	404	449	434	441	451
16	408	564	568	677	475	268	785	466	399	388	421	466
17	437	558	336	737	477	446	775	471	416	353	449	424
18	494	516	209	746	146	375	804	480	394	404	417	420
19	572	243	521	736	397	585	812	482	303	402	317	420
20	512	363	587	744	160	155	806	476	435	378	327	468
21	618	373	730	652	548	500	800	445	427	388	380	416
22	518	473	709	528	128	593	798	289	426	376	404	425
23	581	529	535	522	142	700	804	440	434	343	381	398
24	421	557	498	560	252	376	771	430	449	329	425	420
25	535	501	331	662	184	475	768	425	519	390	423	377
26	667	477	114	438	95	372	760	420	491	388	415	464
27	645	476	119	276	227	85	757	410	409	381	374	471
28	627	551	91	671	159	464	754	340	468	334	378	321
29	450	757	378	644	---	469	758	350	441	355	367	412
30	445	615	652	204	---	889	758	400	415	371	364	473
31	426	---	796	341	---	1000	---	500	---	354	396	---
TOTAL	14875	15091	15906	19821	8762	11352	28032	16580	12776	12527	11606	12555
MEAN	480	503	513	639	313	366	934	535	426	404	374	419
MAX	667	757	796	768	566	1000	1650	756	519	508	449	517
MIN	150	243	91	204	95	85	754	289	303	329	113	321
(†)	-3808.8	-5679.1	+1340.5	-4477.2	+2725.8	+16512.4	+4212.0	-2246.5	-1960.4	-5709.9	-4201.1	-3195.6
MEAN‡	357	314	556	495	410	899	1075	462	361	220	239	312
CFSM‡	2.48	2.18	3.86	3.44	2.85	6.24	7.46	3.21	2.51	1.53	1.66	2.17
IN.‡	2.86	2.43	4.45	3.96	2.97	7.20	8.33	3.70	2.79	1.76	1.91	2.42

CAL YR 1976 TOTAL 190374 MEAN 520 MAX 2490 MIN 19 MEAN‡ 539 CFSM‡ 3.74 IN.‡ 50.98
WTR YR 1977 TOTAL 179883 MEAN 493 MAX 1650 MIN 85 MEAN‡ 475 CFSM‡ 3.30 IN.‡ 44.78

† 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.

NOTE.--No gage-height record Mar. 31 to Apr. 5, May 8-13, 26-31.

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 mi^2 (899 km^2).

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) above mean sea level (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.308), and by Cedar Cliff Lake, Bear Creek Lake, and Tennessee Creek project lakes (see p. 310). Suspended-sediment records for the current year are published on page 369 of this report.

AVERAGE DISCHARGE.--49 years, 793 ft^3/s (22.46 m^3/s), 31.03 in/yr (788 mm/yr) unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,600 ft^3/s (1,490 m^3/s) Aug. 30, 1940, gage height, 21.96 ft (6.693 m), from floodmarks, from rating curve extended above 8,400 ft^3/s (238 m^3/s) on basis of slope-area measurements and computation of peak flow over dam; minimum, 35 ft^3/s (0.99 m^3/s) Sept. 17, 1953, gage height, 1.60 ft (0.488 m); minimum daily, 107 ft^3/s (3.03 m^3/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 ft^3/s (130 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 13	0330	9040	256	9.72	2.963	Apr. 5	0300	*11700	331	*10.93	3.331

Minimum discharge, 179 ft^3/s (5.07 m^3/s) Aug. 11, gage height, 2.24 ft (0.683 m); minimum daily, 211 ft^3/s (5.98 m^3/s) Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	497	550	650	852	595	665	1740	657	1110	800	394	544
2	390	988	507	600	568	705	1570	822	853	582	464	430
3	361	950	590	825	482	800	2220	1040	749	456	500	338
4	429	681	688	813	605	980	2670	1130	821	459	498	211
5	305	758	451	716	500	920	6860	1200	794	632	504	218
6	304	511	741	712	480	1520	3270	910	803	601	524	323
7	966	433	1170	1070	615	1260	2530	958	908	699	379	1070
8	1180	577	1150	626	607	1160	2090	739	613	700	398	1660
9	1950	425	1010	668	459	990	1830	701	560	584	568	1120
10	998	399	738	966	470	937	1710	970	632	568	444	1000
11	508	394	891	1070	475	849	1670	875	833	549	723	580
12	443	544	813	1050	612	1210	1490	791	567	539	693	360
13	477	470	821	816	692	4060	1510	894	956	658	425	556
14	416	428	768	601	573	2040	1570	698	1140	559	452	797
15	461	545	1260	608	812	1610	1550	518	769	537	468	725
16	487	470	1290	517	556	1410	1400	656	632	533	535	1940
17	566	564	968	719	615	1380	1080	669	767	499	584	1690
18	529	539	809	924	585	1330	1120	777	982	449	688	1170
19	465	499	624	841	510	1300	1050	817	728	496	465	1190
20	650	335	1010	913	420	1260	1230	732	763	479	346	1160
21	607	338	1290	716	460	1060	1140	701	747	501	345	1020
22	640	564	1130	494	522	1350	1150	874	704	606	336	677
23	664	653	751	480	476	1310	1310	935	1180	389	579	557
24	641	542	550	674	1040	1200	1610	817	852	364	644	600
25	974	419	461	726	724	1160	1190	821	860	350	488	739
26	870	432	710	655	956	1110	1130	944	887	500	554	727
27	603	521	631	663	877	1040	1070	1140	770	472	606	499
28	562	742	796	570	957	933	1040	1170	719	455	446	662
29	476	1330	693	566	---	1190	1270	904	787	484	594	422
30	506	743	756	500	---	3480	801	898	633	464	557	393
31	530	---	1120	506	---	2180	---	966	---	384	537	---
TOTAL	19455	17344	25837	22457	17243	42399	51871	26724	24119	16348	15738	23378
MEAN	628	578	833	724	616	1368	1729	862	804	527	508	779
MAX	1950	1330	1290	1070	1040	4060	6860	1200	1180	800	723	1940
MIN	304	335	451	480	420	665	801	518	560	350	336	211

CAL YR 1976 TOTAL 342319 MEAN 935 MAX 10300 MIN 302
WTR YR 1977 TOTAL 302913 MEAN 830 MAX 6860 MIN 211

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 mi^2 (477 km^2).

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) above mean sea level. Prior to Oct. 1, 1946, nonrecording gage at same site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 369 of this report.

AVERAGE DISCHARGE.--30 years, 519 ft^3/s (14.70 m^3/s), 38.30 in/yr (973 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,900 ft^3/s (450 m^3/s) Dec. 30, 1969, gage height, 12.46 ft (3.798 m), from floodmarks; minimum 80 ft^3/s (2.27 m^3/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 ft^3/s (110 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 13	0015	6850	194	7.07	2.155	Aug. 17	1815	4150	118	5.22	1.591
Apr. 4	Unknown	*12500	354	*10.42	3.176	Sept. 8	0115	4570	129	5.52	1.682

Minimum daily discharge, 161 ft^3/s (4.56 m^3/s) Oct. 6; minimum gage height, 1.16 ft (0.354 m) Aug. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	363	485	434	403	225	899	1190	509	376	474	206	346
2	273	420	394	409	220	748	980	488	326	542	199	265
3	221	378	349	387	215	659	1890	481	307	411	320	245
4	193	342	324	363	225	1240	3500	530	288	374	227	253
5	175	313	307	355	246	1080	6000	466	277	349	208	238
6	161	294	311	355	224	1750	3000	434	302	327	240	292
7	768	284	701	365	226	1400	1950	440	410	308	218	545
8	1020	265	513	321	229	1100	1480	436	289	288	268	1820
9	2120	248	420	348	235	948	1190	398	280	302	376	636
10	756	248	404	374	222	857	1010	378	263	334	247	481
11	475	239	398	280	231	819	887	367	246	322	218	435
12	379	281	624	275	276	1670	798	354	251	301	236	376
13	315	233	823	270	384	3210	734	341	303	327	212	382
14	274	224	551	280	325	1510	683	333	380	261	209	409
15	247	249	930	270	300	1190	637	323	395	244	266	389
16	229	233	853	265	290	1050	592	314	304	234	266	449
17	246	220	704	261	292	905	553	302	313	297	1230	642
18	209	216	606	260	290	827	527	303	324	255	926	616
19	196	208	534	255	285	753	510	307	420	235	489	551
20	202	208	703	255	285	784	480	314	370	243	386	477
21	209	202	647	255	288	697	464	331	447	219	337	396
22	189	195	538	250	285	933	442	356	363	327	302	352
23	182	184	498	245	312	771	768	375	561	294	268	338
24	202	189	453	240	973	713	938	311	487	225	566	322
25	857	187	431	240	752	676	663	395	1460	272	399	300
26	1040	191	457	240	767	634	582	429	1530	345	321	384
27	538	316	396	255	1860	608	536	394	910	246	333	350
28	412	484	388	250	1270	599	505	410	650	223	338	328
29	359	1100	377	239	---	732	632	425	533	226	292	283
30	434	580	352	240	---	2880	553	441	460	250	268	274
31	711	---	586	235	---	1870	---	373	---	214	255	---
TOTAL	13955	9216	16006	9040	11732	34512	34674	12058	13825	9269	10626	13174
MEAN	450	307	516	292	419	1113	1156	389	461	299	343	439
MAX	2120	1100	930	409	1860	3210	6000	530	1530	542	1230	1820
MIN	161	184	307	235	215	599	442	302	246	214	199	238
CFSM	2.45	1.67	2.80	1.59	2.28	6.05	6.28	2.11	2.51	1.63	1.86	2.39
IN.	2.82	1.86	3.24	1.83	2.37	6.98	7.01	2.44	2.80	1.87	2.15	2.66

CAL YR 1976 TOTAL 188728 MEAN 516 MAX 4610 MIN 127 CFSM 2.80 IN 38.16
WTR YR 1977 TOTAL 188087 MEAN 515 MAX 6000 MIN 161 CFSM 2.80 IN 38.03

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) above mean sea level (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. 308, 310), 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 369 of this report.

AVERAGE DISCHARGE.--80 years, 1,591 ft³/s (45.06 m³/s), 32.99 in/yr (838 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)
Mar. 13	0645	14300	405	8.70	2.652	Apr. 5	0345	*30800	872	*13.60	4.145
Mar. 30	1545	9600	272	6.92	2.109						

Minimum discharge, 439 ft³/s (12.4 m³/s) Oct. 6, gage height, 1.62 ft (0.494 m) Oct. 6; minimum daily, 550 ft³/s (15.6 m³/s) Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	996	1210	1320	1670	903	1870	3820	1520	1820	1360	713	1120
2	859	1540	1110	1240	949	1630	3270	1510	1440	1580	809	831
3	695	1530	1020	1350	870	1660	5300	1890	1300	1100	947	790
4	646	1190	1280	1460	912	2400	6990	2060	1350	907	864	585
5	579	1230	888	1360	972	2340	18300	2080	1300	1220	817	585
6	550	1040	1110	1300	748	3790	7790	1740	1330	1110	949	660
7	1710	867	2160	1730	845	3210	5660	1720	1620	1190	811	1470
8	2580	935	1980	1200	982	2690	4540	1680	1220	1180	724	4450
9	4730	892	1770	1250	795	2260	3840	1230	1030	1110	1160	2120
10	2230	704	1260	1490	776	2070	3410	1650	1020	1190	839	1780
11	1190	687	1500	1680	868	1900	3160	1600	1370	1120	989	1450
12	998	967	1840	1590	990	2830	2880	1360	1090	1040	1120	832
13	886	827	1860	1370	1500	8830	2710	1520	1270	1220	881	1080
14	880	764	1670	1180	975	4390	2730	1440	1910	1050	787	1460
15	741	876	2560	1300	1430	3410	2650	1090	1470	968	805	1200
16	913	837	2610	1080	1010	2910	2450	1110	1130	945	934	2340
17	887	851	2080	1000	971	2640	2030	1150	1230	1010	2180	2990
18	913	853	1740	1450	1010	2490	2030	1300	1520	936	2160	2140
19	753	820	1530	1240	1010	2360	1940	1400	1550	914	1290	1990
20	834	669	1910	1410	893	2400	2110	1180	1200	904	946	1970
21	1020	665	2400	1250	774	2100	1920	1400	1600	903	815	1710
22	834	648	2020	1010	906	2500	1940	1310	1310	1130	734	1310
23	969	1010	1660	953	889	2430	2610	1620	2170	1040	911	1150
24	943	810	1260	1020	2370	2180	3250	1370	1580	775	1460	1040
25	2020	746	1150	1220	1740	2040	2320	1490	2860	783	1190	1240
26	2530	689	1330	1130	2000	1990	2140	1620	3240	1000	1020	1400
27	1410	966	1270	1110	3130	1840	2000	1890	2110	857	1020	1100
28	1180	1220	1430	987	2810	1680	1930	1870	1700	871	1100	1220
29	1020	3050	1230	900	---	2080	2290	1700	1770	867	852	935
30	1060	1640	1350	858	---	7270	1810	1610	1440	949	1010	836
31	1540	---	2100	872	---	4560	---	1610	---	766	924	---
TOTAL	39096	30733	50398	38660	34028	88750	109820	47720	46950	31995	31761	43784
MEAN	1261	1024	1626	1247	1215	2863	3661	1539	1565	1032	1025	1459
MAX	4730	3050	2610	1730	3130	8830	18300	2080	3240	1580	2180	4450
MIN	550	648	888	858	748	1630	1810	1090	1020	766	713	585

CAL YR 1976 TOTAL 633151 MEAN 1730 MAX 15400 MIN 544
WTR YR 1977 TOTAL 593695 MEAN 1627 MAX 18300 MIN 550

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) above mean sea level (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 (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. 309). Suspended-sediment records for the current year are published on page 369 of this report.

AVERAGE DISCHARGE.--80 years (1897-1977), 922 ft³/s (26.11 m³/s), 30.84 in/yr (783 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, 11,500 ft³/s (326 m³/s) Apr. 5, gage height, 10.91 ft (3.325 m); minimum, 165 ft³/s (4.67 m³/s) Oct. 4, 5, gage height, 2.32 ft (0.707 m); minimum daily, 183 ft³/s (5.18 m³/s) Oct. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	648	647	1040	1680	448	658	1300	495	1300	913	737	865
2	792	716	532	1210	718	629	983	744	1060	681	1300	841
3	516	535	863	1270	465	425	3370	750	1140	265	1110	591
4	347	514	408	1060	231	499	2960	1340	1000	252	1060	194
5	752	457	265	1370	292	478	6810	1130	866	715	1050	188
6	709	248	602	1320	723	1050	2660	992	1180	1340	804	369
7	1270	228	741	1360	1080	946	2150	857	878	1180	582	1080
8	1260	581	1520	1890	957	711	2010	497	603	1340	335	1280
9	1840	915	1740	1850	570	588	1870	689	599	700	680	1080
10	1030	432	1140	2130	595	527	1530	1250	581	206	729	599
11	707	465	959	1670	274	489	1420	1280	549	696	979	240
12	982	468	832	1740	607	661	1660	1430	648	1190	646	531
13	1000	489	1490	1640	518	1960	1750	1570	667	1280	519	937
14	1090	542	1280	929	613	1060	1910	810	1050	1210	462	1040
15	951	901	1230	793	886	784	1870	408	1120	1230	583	996
16	996	760	1040	1160	956	660	1820	532	1110	732	852	1090
17	395	612	1110	1990	952	727	1800	793	1130	206	1120	1050
18	437	651	516	1710	743	582	1770	855	720	705	1310	1070
19	251	408	449	1820	309	1150	1360	844	378	1230	979	729
20	987	202	1010	1460	299	767	1120	869	639	1230	650	385
21	1460	197	1840	1660	524	632	1110	701	1050	1230	225	299
22	1150	674	1290	864	759	1560	1210	336	1040	1290	562	258
23	679	1480	1020	589	425	1610	1720	567	1070	768	894	233
24	183	1030	1140	911	1140	788	1510	979	998	201	960	224
25	1070	384	600	1470	490	890	1110	891	1050	665	928	219
26	2170	185	756	1160	456	585	1300	953	709	1320	885	244
27	1660	253	562	577	658	450	1490	943	583	1250	637	242
28	1730	752	515	1080	796	437	1070	1010	1010	1240	238	521
29	1040	1730	712	1150	---	707	1050	808	879	1260	434	875
30	586	1720	821	715	---	4030	806	654	832	1270	862	1010
31	483	---	1410	530	---	2160	---	967	---	736	856	---
TOTAL	29171	19176	29433	40758	17484	29200	54499	26944	26439	28531	23968	19280
MEAN	941	639	949	1315	624	942	1817	869	881	920	773	643
MAX	2170	1730	1840	2130	1140	4030	6810	1570	1300	1340	1310	1280
MIN	183	185	265	530	231	425	806	336	378	201	225	188

CAL YR 1976 TOTAL 401227 MEAN 1096 MAX 7660 MIN 183 MEAN‡ 1091 CFSM‡ 2.69 IN.‡ 36.58
WTR YR 1977 TOTAL 344883 MEAN 945 MAX 6810 MIN 183 MEAN‡ 941 CFSM‡ 2.32 IN.‡ 31.45

‡ 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 15 ft (4.6 m) downstream from 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) above mean sea level (levels by Tennessee Valley Authority). Prior to May 11, 1934, nonrecording gage at same site and datum.

REMARKS.--Records good except those for period of doubtful gage-height record, Nov. 28 to Feb. 22, which are fair. Suspended-sediment records for the current year are published on page 369 of this report.

AVERAGE DISCHARGE.--65 years (1904-9, 1914-16, 1919-77), 256 ft³/s (7.250 m³/s), 33.43 in/yr (849 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. 30	1445	1700	48.1	6.29	1.917	Apr. 5	0545	*6140	174	*14.55	4.435

Minimum discharge, 54 ft³/s (1.53 m³/s) Aug. 8, gage height, 1.81 ft (0.552 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	205	260	430	168	363	640	258	165	135	68	100
2	78	171	215	370	164	307	514	257	148	151	63	98
3	73	150	186	351	165	275	1590	269	140	123	62	84
4	70	136	168	324	167	322	1630	312	132	115	61	79
5	67	126	155	326	165	306	4080	269	127	110	60	91
6	67	118	191	348	153	659	1490	245	132	108	58	99
7	155	113	417	470	147	604	986	242	163	101	55	273
8	185	107	326	380	143	464	753	229	124	96	71	542
9	496	104	266	375	143	388	611	210	119	92	164	222
10	197	103	233	470	143	341	528	191	114	92	90	163
11	136	100	216	390	145	311	469	180	110	91	75	138
12	114	121	360	350	231	459	426	178	142	88	66	119
13	97	102	353	330	286	1130	399	171	118	111	65	131
14	99	101	303	459	221	675	370	165	203	86	76	156
15	90	128	499	465	207	511	353	159	139	81	80	202
16	86	113	462	412	191	428	332	152	124	80	77	191
17	88	107	374	349	177	374	310	146	130	85	214	214
18	82	102	313	333	178	352	295	147	123	79	504	191
19	80	101	273	290	174	319	289	150	327	74	163	219
20	97	99	510	285	169	331	273	154	255	71	113	233
21	92	97	500	265	162	308	259	176	201	68	96	178
22	82	94	410	245	159	388	248	164	161	86	402	151
23	80	92	355	232	158	337	452	208	166	88	132	135
24	86	92	305	236	384	312	447	187	140	72	277	125
25	328	90	325	223	302	292	353	166	135	75	211	121
26	439	94	464	212	269	274	323	239	224	102	139	194
27	223	149	368	236	482	261	289	226	179	75	128	175
28	166	417	329	221	467	259	266	216	148	69	116	162
29	140	634	295	190	---	324	254	219	154	74	101	137
30	202	357	274	182	---	1360	248	241	142	85	94	135
31	268	---	480	179	---	986	---	194	---	72	88	---
TOTAL	4549	4523	10185	9928	5920	14020	19477	6320	4685	2835	3969	5058
MEAN	147	151	329	320	211	452	649	204	156	91.5	128	169
MAX	496	634	510	470	482	1360	4080	312	327	151	504	542
MIN	67	90	155	179	143	259	248	146	110	68	55	79
CFSM	1.41	1.45	3.16	3.08	2.03	4.35	6.24	1.96	1.50	.88	1.23	1.63
IN.	1.63	1.62	3.64	3.55	2.12	5.01	6.97	2.26	1.68	1.01	1.42	1.81

CAL YR 1976 TOTAL 102722 MEAN 281 MAX 2940 MIN 60 CFSM 2.70 IN 36.74
WTR YR 1977 TOTAL 91469 MEAN 251 MAX 4080 MIN 55 CFSM 2.41 IN 32.72

Lakes and Reservoir in Ohio River basin

03460242 LAKE WALTERS.--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. GAGE, nonrecording gage read once daily. Datum of gage is at mean sea level.

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 (688.42 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 (688.42 m); minimum observed, 2,860 ft³/s-day (6.998 hm³) Oct. 26, 1973, elevation, 2,180.6 ft (664.65 m).

EXTREMES FOR CURRENT YEAR: Maximum contents observed, 12,800 ft³/s-day (31.32 hm³) Mar. 13, 14, 31, Apr. 1, 3-9, elevation 2258.6 ft (688.42 m); minimum observed, 3,900 ft³/s-day (9.543 hm³) Jan. 18, elevation, 192.9 ft (58.80 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 a local datum which is 122.16 ft (37.234 m) above mean sea level. Prior to June 3, 1942, nonrecording gage at same site and datum.

Reservoir is formed by rockfill dam with side channel gage-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 (880.72 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) Apr. 13, elevation, 2,889.86 ft (880.829 m); minimum, 43,800 ft³/s-day (107.2 hm³) Feb. 8, elevation, 2,853.58 ft (869.771 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 a local datum which is 391.75 ft (119.405 m) above mean sea level. 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 (944.88 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, 29,700 ft³/s-day (72.68 hm³) Apr. 25, elevation, 3091.76 ft (942.368 m); minimum, 17,000 ft³/s-day (41.60 hm³) Feb. 23, elevation, 3070.38 ft (935.852 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 at mean sea level.

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 (464.82 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, 630,900 ft³/s-day (1,544 hm³) May 9; elevation, 1,691.00 ft (515.417 m); minimum, 241,000 ft³/s-day (589.7 hm³) Nov. 15, elevation, 1,575.65 ft (480.258 m).

03516500 SANTEETLAH LAKE.--Lat 35°22'38", long 83°52'33". Graham County, Hydrologic Unit 06010204, at Santeetlah Dam on Cheoah River, 1 mi (1.6 km) downstream from Santeetlah Creek, 5.5 mi (8.8 km) northwest of Robbinsville, and at mile 9.3 (15.0 km). 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 a local datum which is 122.92 ft (37.466 m) above mean sea level. 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.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 81,100 ft³/s-day (198.5 hm³) Sept. 3, 1928, elevation, 1,817.90 (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, 78,900 ft³/s-day (193.1 hm³) Apr. 10, elevation, 1,817.06 ft (553.840 m); minimum, 37,300 ft³/s-day (91.27 hm³) Feb. 10, elevation, 1,780.35 ft (542.651 m).

Lakes and Reservoirs in Ohio River basin--Continued

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 at mean sea level. 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, 117,000 ft³/s-day (286.3 hm³) May 9, elevation, 1,926.76 ft (587.276 m); minimum, 66,000 ft³/s-day (161.5 hm³) Feb. 18, elevation, 1,908.23 ft (581.629 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 at mean sea level. Subtract 0.63 ft (0.192 m) from all elevations to reduce to datum of 1929, supplementary adjustment of 1936.

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, 204,600 ft³/s-day (500.7 hm³) May 14, elevation, 1,521.99 ft (463.903 m); minimum, 78,500 ft³/s-day (192.1 hm³) Feb. 12, elevation, 1,461.88 ft (445.581 m).

03555500 APALACHIA LAKE.--Lat 35°10'04", long 84°17'49" Cherokee County, Hydrologic Unit 06020002, at Apalachia 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 m² (2,637 km²). PERIOD OF RECORD, February 1943 to current year. GAGE, water-stage recorder. Datum of gage is at mean sea level.

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, 29,900 ft³/s-day (73.17 hm³) Jan. 11, elevation, 1,281.25 ft (390.525 m); minimum, 25,000 ft³/s-day (61.18 hm³) Dec. 28, elevation, 1272.60 ft (387.888 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 poole 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.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.

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.

Lakes and Reservoirs in Ohio River basin--Continued

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 03508000)

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 03508000)

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 stroage. Storage began Apr. 26, 1952. (See sta 03508000)

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 1976 TO SEPTEMBER 1977

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 Lake Walters			03504500 Nantahala Lake			03507500 Thorpe Reservoir			03514500 Fontana Lake		
Sept. 30	2202.1	4880	-	2873.94	57100	-	3085.09	25300	-	1636.96	411200	-
Oct. 31	2208.4	5650	+770	2868.53	53300	-3800	3084.82	25200	-100	1598.08	293900	-117300
Nov. 30	2219.7	7020	+1370	2859.76	47600	-5700	3078.69	21500	-3700	1584.61	261100	-32800
Dec. 31	2219.7	7020	0	2862.00	49000	+1400	3078.30	21300	-200	1610.95	329100	+68000
CAL YR 1976	-	-	-1920	-	-	+7000	-	-	-3800	-	-	-17800
Jan. 31	2222.0	7320	+300	2855.03	44600	-4400	3072.47	18100	-3200	1594.37	284500	-44600
Feb. 28	2227.4	8050	+730	2859.24	47300	+2700	3071.35	17500	-600	1598.57	295200	+10700
Mar. 31	2258.6	12840	+4790	2883.03	63800	+16500	3084.48	25000	+7500	1651.84	462500	+167300
Apr. 28	2230.3	8480	-4360	2888.40	68000	+4200	3091.31	29400	+4400	1689.31	622800	+160300
May 31	2247.0	10990	+2510	2885.46	65700	-2300	3090.49	28900	-500	1688.80	620400	-2400
June 30	2243.0	10370	-620	2882.86	63700	-2000	3087.96	27200	-1700	1687.68	615100	-5300
July 31	2251.3	11670	+1300	2875.13	58000	-5700	3083.45	24300	-2900	1676.59	564700	-50400
Aug. 31	2250.5	11540	-130	2869.21	53800	-4200	3078.40	21300	-3000	1663.51	509800	-54900
Sept. 30	2231.7	8660	-2880	2864.38	50600	-3200	3079.63	22000	+700	1656.44	481100	-28700
WTR YR 1977	-	-	+3780	-	-	-6500	-	-	-3300	-	-	+69900

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	1793.37	49600	-	1915.92	84400	-	1506.70	162500	-	1277.30	27600	-
Oct. 31	1796.18	52600	+3000	1912.41	75300	-9100	1493.38	131500	-31000	1275.20	26400	-1200
Nov. 30	1786.10	42400	-10200	1910.84	71700	-3600	1472.85	94200	-37300	1278.00	28000	+1600
Dec. 31	1786.45	42700	+300	1912.09	74600	+2900	1465.35	83100	-11100	1276.70	27200	-800
CAL YR 1976	-	-	-6100	-	-	-1900	-	-	+500	-	-	0
Jan. 31	1781.80	38500	-4200	1908.80	67200	-7400	1466.55	84700	+1600	1274.00	25700	-1500
Feb. 28	1786.58	42900	+4400	1909.35	68400	+1200	1467.68	86300	+1600	1276.47	27100	+1400
Mar. 31	1806.07	64200	+21300	1920.62	97100	+28700	1494.74	134400	+48100	1276.85	27300	+200
Apr. 30	1814.15	74900	+10700	1925.50	112600	+15500	1516.43	187800	+53400	1276.70	27200	-100
May 31	1811.67	71400	-3500	1926.48	115900	+3300	1519.65	197100	+9300	1277.60	27800	+600
June 30	1806.70	64900	-6500	1924.46	109100	-6800	1519.42	196400	-700	1275.70	26700	-1100
July 31	1798.00	54600	-10300	1919.64	94300	-14800	1512.76	178000	-18400	1276.40	27100	+400
Aug. 31	1792.56	48800	-5800	1916.28	85300	-9000	1503.16	153700	-24300	1276.80	27300	+200
Sept. 30	1793.80	50100	+1300	1915.36	82900	-2400	1496.00	137200	-16500	1276.20	27000	-300
WTR YR 1977	-	-	+500	-	-	-1500	-	-	-25300	-	-	-600

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 stations

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 date 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 (m)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (ft /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	1976-77	8-24-77	b25.00	274
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	1976-77	8-24-77	c21.87	530
		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.	35.4	1971-77	10- 8-76	8.26	2,450
02115845	Peters Creek at Winston-Salem, N. C.	Lat 36°04'56", long 80°15'30", Forsyth County, at downstream side of culvert off Peters Creek Parkway, 0.1 mile downstream from Academy Street, and 1.4 miles southwest of post office in Winston-Salem.	5.30	1965-77	9- 8-77	15.40	1,120
		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, 1972-77	10- 9-76	20.07	12,700

‡ Operated as a continuous record gaging station.
a Approximately.
b Datum of gage lowered 20.48 ft Aug. 10, 1977.
c Datum of gage lowered 17.17 ft Aug. 10, 1977.

MEASUREMENTS AT MISCELLANEOUS SITES

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table. Those that are measurements of base flow are designated by an asterisk (*).

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1977

Stream	Tributary to	Location	Drainage area (mi)	Measured previously (water years)	Measurements	
					Date	Discharge (ft /s)
		Roanoke River basin				
02068015 Dan River	Roanoke River	Lat 36°31'33", long 80°22'16", Stokes County, at bridge on Secondary Road 1412, 2.4 miles downstream from Little Dan River, and 2.8 miles east of Asbury.	a110	1970, 1973-74, 1975	11- 3-76	120
					2-24-77	140
					4-28-77	122
02069000 Dan River	Roanoke River	Lat 36°19'08", long 80°03'00", Stokes County, at bridge on Secondary Road 2023, at Pine Hall, 1.5 miles upstream from Belews Creek.	481	‡1923-26, 1975-76	11- 3-76	499
					4.28-77	426
02069222 Dan River	Roanoke River	Lat 36°22'20", long 80°59'38", Rockingham County, at bridge on Secondary Road 1138, 1 mile upstream from Beaver Island, and 1.8 miles southwest of Madison.	a600	1970, 1974, 1976	11- 3-76	525
					4-28-77	411
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	4-21-77	1.99
02074360 Wolf Island Creek	Dan River	Lat 36°31'54", long 79°30'07", Caswell County, at bridge on State Highway 700, 0.5 mile upstream from mouth, and 2.5 miles northwest of Pelham.	a69	1954, 1956-64, 1966, 1968, 1970 1974-76	11- 5-76	30.3
					4-20-77	30.6
02075198 Dan River	Roanoke River	Lat 36°32'27", long 79°12'53", Caswell County, at bridge on State Highway 62, at Milton, 0.5 mile upstream from Country Line Creek.	2,322	1970, 1974, 1976	4-21-77	2,020
0207520780 Country Line Creek	Dan River	Lat 36°18'46", long 79°30'48", Caswell County, at bridge on Secondary Road 1146, 1.2 miles south-southwest of Ashland.	a6.7	1974-76	11- 5-76	2.70
					5-19-77	1.81
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.	a130	1974-76		
0207718130 Hyco Creek	Hyco River	Lat 36°17'24", long 79°15'43", Caswell County, at bridge on Secondary Road 1767, 2.8 miles northeast of Baynes, and 3.2 miles upstream from confluence of Lynch Creek.	a5.1	1974-76	11- 5-76	.70
					4-21-77	1.59
		Pamlico River basin				
02084148 Chicod Creek	Tar River	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		11- 6-75	f6.57
					11-12-75	f3.66
					12-29-75	f66.5
					1-26-76	f16.6
					1-28-76	f266
					1-29-76	f186
					2- 2-76	f179
					2-17-76	f11.5
					4- 1-76	f22.4
					4-29-76	f.22
					5-13-76	f.87
					6- 2-76	f3.50
					6- 4-76	f53.5
					6-16-76	f1.07
					7-26-76	f0
					9- 2-76	f0
					12-30-76	21.6
					2-10-77	5.58
					3-28-77	24.3
					5-27-77	249
					5-27-77	247
					7-25-77	0
					8-25-77	253

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1977

Stream	Tributary to	Location	Drainage area (mi)	Measured previously (water (years)	Measurements Date	Measurements Discharge (ft /s)
		Pamlico River basin--Continued				
02084158 Cow Swamp	Chicod Creek	Lat 35°32'00", long 77°13'30", Pitt County, at bridge on Secondary Road 1756, 1 mile upstream from mouth, and 3 miles southwest of Grimesland.	a17	1959	11- 6-75	f2.57
					11-12-75	f1.68
					12-29-75	f26.6
					1-26-76	f13.2
					1-28-76	f229
					1-29-76	f107
					2- 2-76	f288
					2-17-76	f8.39
					4- 1-76	f123
					4-29-76	f.89
					5-13-76	f8.68
					6- 2-76	f.45
					6- 4-76	f38.2
					6-16-76	f.95
					8- 3-76	f0
					9- 2-76	f0
					10- 4-76	.09
					12-30-76	17.4
					2-10-77	5.61
					3-28-77	14.2
					5-10-77	.61
					5-26-77	182
					5-27-77	194
					7-25-77	0
					8-25-77	102
		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, 1973-76	11-11-76	.57
					4-26-77	3.63
					7- 7-77	.13
					8- 3-77	1.33
02093423 Little Troublesome Creek	Haw River	Lat 36°16'52", long 79°59'08", Rockingham County, at bridge on Secondary Road 2600, 0.8 mile west of Thompsonville, and 1 mile upstream from mouth.	a13	1970-73, 1976	11- 5-76	9.87
					4-21-77	18.6
02093599 Haw River	Cape Fear River	Lat 36°10'27", long 79°30'08", Alamance County, at bridge on Secondary Road 1561, 0.5 mile southwest of Altamahaw, and 0.8 mile upstream from Reedy Fork.	189	1969-71, 1973, 1976	11-10-76	64.8
0209374850 Reedy Fork	Haw River	Lat 36°08'00", long 80°00'52", Guilford County, at Secondary Road 1858, 3. 1 miles south-southeast of Oak Ridge, and 3.5 miles upstream from Beaver Creek.	a1.4	1973-74, 1976	11-11-76	3.13
					4-26-77	3.29
					7- 7-77	.76
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	4-26-77	18.7
02095554 Buffalo Creek	Reedy Fork	Lat 36°08'34", long 79°38'54", Guilford County, at bridge on Secondary Road 2795, 1.2 mile upstream from Blackwood Creek, and 2.6 miles north of McLeansville.	91.6	1969-71, 1973, 1976	11-10-76	48.8
					4-26-77	49.6
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	11-10-76	76.8
02096518 Haw River	Cape Fear River	Lat 36°02'56", long 79°21'46", Alamance County, at bridge on State Highway 54, 0.3 mile upstream from Back Creek, and 2.3 miles southeast of Graham.	608	1969-70, 1973, 1976	11- 9-76	155
0209659285 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	11-11-76	.36
					8- 3-77	0
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	1974-76	11- 9-76	36.9
02100747 Deep River	Cape Fear River	Lat 35°30'03", long 79°34'57", Moore County, at bridge on Secondary Road 1456, at Howards Mill, 3.2 miles upstream from Bear Creek, and 4.9 miles north of Robbins, and at river mile 55 upstream from mouth.	a630	1974-76	2-15-77	*360

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1977

Stream	Tributary to	Location	Drainage area (mi)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft /s)
		Cape Fear River basin--Continued				
02101686 North Branch Rocky River	Rocky River	Lat 35°51'20", long 79°32'30", Randolph County, at bridge on State Highway 49, 1.5 miles northeast of Liberty, and 6.3 miles upstream from mouth.	a230	1974, 1976	11- 3-76	.88
02102704 Little River	Cape Fear River	Lat 35°16'15", long 79°29'33", Moore County, at bridge on Secondary Road 1210, 2.8 miles southeast of Harris, and 4.5 miles upstream from Wads Creek.	a9.5	1965, 1974, 1976	11- 4-76 2-15-77 4- 3-77	3.27 *6.74 1.40
02106648 Black River	South River	Lat 35°20'52", long 78°37'28", Harnett County, at bridge on Secondary Road 1722, and 3.0 miles north-northwest of Dunn.	a38		3- 7-77 3- 9-77 3-15-77 3-29-77 4- 8-77 4-15-77 4-19-77 6-20-77 8- 1-77 9- 1-77 9- 8-77 9-13-77 9-22-77	117 151 223 80.4 69.4 22.8 16.0 0 0 0 0 85.5 12.5
02106681 Black River	South River	Lat 35°17/03", long 78°38'21", Harnett County, at bridge 1.5 miles downstream from Popes Pond, and 2.2 miles southwest of Dunn.	a49	1973	3- 7-77 3- 9-77 3-15-77 3-29-77 4- 8-77 4-15-77 4-19-77 6-20-77 7-13-77 8- 1-77 9- 1-77 9- 8-77 9-13-77	200 227 291 122 135 48.2 23.3 1.42 1.17 .58 0 0 243
		Pee Dee River basin				
02112245 Elkin River	Yadkin River	Lat 36°16'31", long 80°53'05", Wilkes County, at bridge on Secondary Road 2044, 1.6 miles north of West Elkin, and 3.2 miles upstream from mouth.	a24	1970-73, 1975	8- 5-77	9.5
02112257 Cobb Creek	Yadkin River	Lat 36°14'14", long 80°49'54", Yadkin County, at bridge on State Highway 67, 0.2 mile east of Jonesville, and 1 mile upstream from mouth.	a5.3	1970-71, 1973, 1975	8- 5-77	2.17
02113576 Ararat River	Yadkin River	Lat 36°33'12", long 80°34'07", Surry County, at bridge on State Highway 104, 2.1 miles northeast of Salem, and 2.2 miles upstream from Johnsons Creek.	36.2	1970-76	2-24-77 8- 2-77	49.7 10.5
02113620 Ararat River	Yadkin River	Lat 36°30'08", long 80°36'02", Surry County, at bridge on State Highway 103, at Mt. Airy, and 1.7 miles downstream from Champ Creek.	65.5	1925, 1947, 1952-58, 1963, 1970-73	8- 2-77	15.4
02113832 Stony Creek	Ararat River	Lat 36°26'32", long 80°33'23", Surry County, at bridge on Secondary Road 2012, 2.8 miles upstream from mouth, and 4.7 miles southeast of Mt. Airy.	a3.8	1970-73	8- a-77	.72
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.	a310	1974-76	2-23-77	250
02115802 Little Creek	Muddy Creek	Lat 36°03'14", long 80°19'43", Forsyth County, at bridge on Secondary Road 1126, 1.3 miles northwest of Frontis, and 3.4 miles upstream from mouth.	a3.3	1970-75	8- 2-77	.64
02115826 Kerners Mill Creek tributary	Kerners Mill Creek	Lat 36°06'58", long 80°05'37", Forsyth County, at Kernersville's water treatment plant upstream from sewage effluent outfall, 1.3 miles southwest from Kernersville, and 2.8 miles upstream from mouth.	a.72	1970-71, 1974-76	4-26-77 7- 7-77	.44 .14

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1977

Stream	Tributary to	Location	Drainage area (mi)	Measured previously (water (years)	Measurements Date	Measurements Discharge (ft /s)
		Pee Dee River basin--Continued				
02115865 Swain Creek	South Fork Muddy Creek	Lat 36°03'26", long 80°08'47", Forsyth County, at culvert on U.S. Highway 311, 0.1 mile upstream from mouth, and 1.6 miles northwest of Union Cross.	a1.5	1970-73, 1975	8- 3-77	0.57
0211668555 Dutchmans Creek	Yadkin River	Lat 36°01'13", long 80°39'13", Davie County, at bridge on Secondary Road 1002, 0.6 mile upstream from confluence of Steelman Creek, and 3.5 miles northwest of Stanleys Store.	a13	1974-76	4-19-77 7- 6-77 8- 5-77	9.14 2.99 1.67
02117022 Dutchmans Creek	Yadkin River	Lat 35°50'18", long 80°28'41", Davie County, at bridge on State Highway 801, 1.2 mile upstream from mouth, and 2.8 miles southwest of Fork.	a130	1970-76	4-19-77 7-11-77	57.9 9.95
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.	569	†1928-65, 1970-76	6- 7-77 7-11-77	264 191
02121332 Swearing Creek	Yadkin River	Lat 35°47'32", long 80°17'44", Davidson County, at bridge on U.S. Highway 29 North, 0.6 mile downstream from Beaverdam Creek, and 4.5 miles east of Tyro.	26.4	1970-71, 1973, 1975	8- 5-77	3.86
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.	35.3	1948-57, 1961-63, 1970-71, 1973, 1975-76	4-19-77 7- 6-77 8- 4-77	23.0 5.35 6.73
02121414 Abbotts Creek	Yadkin River	Lat 36°05'45", long 80°04'15", Forsyth County, at bridge on Secondary Road 2640, 0.8 mile downstream from sewage outfall, and 1.9 miles northeast of Mathis.	1.3	1970-72, 1974-76	4-26-77 7- 7-77 8- 4-77	.85 .21 .19
0212148335 Hamby Creek	Rich Fork	Lat 35°51'19", long 80°06'40", Davidson County, at bridge on Secondary Road 2085, 2.5 miles southwest of Thomasville, and 7.2 miles upstream from mouth.	a3.9	1970-71, 1973-75	8- 4-77	.36
02121490 Hamby Creek	Rich Fork	Lat 35°50'35", long 80°11'35", Davidson County, at mouth, and 1.8 miles north of Holly Grove.	29.3	1976	4-19-77 7- 6-77	15.1 2.97
02121500 Abbotts Creek	Yadkin River	Lat 35°48'23", long 80°14'05", Davidson County, on Secondary Road 1243, 1.5 miles southeast of Lexington, and 4.9 miles downstream from Rich Fork.	174	†1940-57, 1975-76	4-19-77 7- 6-77 8- 4-77	74.3 6.64 12.7
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.	a32	1962, 1974-76	4-19-77 7-11-77 8- 4-77	14.7 27.2 .48
02123881 Rocky River	Pee Dee River	Lat 35°28'28", long 80°46'47", Mecklenburg County, at bridge on Secondary Road 2420, 1.3 miles upstream from West Branch, and 4.2 miles southeast of Davidson.	13.4	1970-76	11-11-76 2-28-77 6-22-77	12.4 25.5 9.21
02124160 Mallard Creek	Rocky Creek	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.	41.2	1955-65, 1971, 1973, 1975-76	11-23-76 2-28-77 7- 5-77 9-15-77	14.6 61.2 4.70 3.72
02124374 Irish Buffalo Creek	Rocky River	Lat 35°20'50", long 80°32'52", Cabarrus County, at bridge on Secondary 1132, 1 mile south of Faggarts Crossroads, and 1 mile upstream from mouth.	44.7	1974-76	11-11-76 2-28-77 7- 5-77 9-15-77	40.2 75.7 11.4 20.4
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.	390	1970-71, 1973-76	11-11-76 2-28-77 7- 5-77 9-15-77	131 1,530 61.8 91.2
02124781 Rocky River	Pee Dee River	Lat 35°09'55", long 80°23'51", Stanly County, at bridge on State Highway 200, 0.5 mile downstream from Rock Hile Creek, and 5 miles southeast of Stanfield.	a700	1971, 1973-76	7- 5-77	82.0

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1977

Stream	Tributary to	Location	Drainage area (mi)	Measured previously (water (years)	Measurements Date	Measurements Discharge (ft /s)
		Pee Dee River basin--Continued				
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	1974-76	2-29-77 7- 9-77 9-15-77	2.33 0 .44
02125023 Big Bear Creek	Long Creek	Lat 35°15'22", long 80°17'15", Stanly County, at bridge on Secondary Road 1968, 1 mile southwest of St. Martin, and 2.2 miles downstream from Ramsey Creek.	73.6	1975-76	11-22-76 2-24-77 7- 8-77	22.3 35.7 1.40
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 4.4 miles east of Oakboro.	198	1970-71, 1973-76	2-24-77 7- 9-77	112 7.65
0212514705 Richardson Creek	Rocky River	Lat 34°54'39", long 80°35'38", Union County, at bridge on Secondary Road 2139, 2.3 miles upstream from Adams Branch, and 8.5 miles east of Waxhaw.	a3.2	1974-76	11-22-76 2-23-77 6-30-77	1.61 *.81 .02
02125310 Richardson Creek	Rocky River	Lat 35°01'58", long 80°28'20", Union County, at bridge on Secondary Road 1006, 0.5 mile upstream from Stewarts Creek, and 13.5 miles north of Wingate.	87.9	1953-54, 1956-58, 1970-71, 1973-74, 1976	2-23-77 7- 1-77	*12.3 6.55
02125464 Meadow Branch	Richardson Creek	Lat 35°01'53", long 80°27'07", Union County, at bridge on Secondary Road 1006, 1 mile upstream from mouth, and 2.3 miles north of Wingate.	6.6	1970-71, 1973, 1975-76	2-23-77 7- 1-77	*.69 .14
02125549 Niggerhead Creek	Richardson Creek	Lat 35°04'25", long 80°22'14", Union County, at bridge on Secondary Road 1006, 1.6 miles northeast of Fairfield, and 2.2 miles upstream from mouth.	a24	1961-62, 1970-71, 1973-76	2-23-77 7- 1-77	*3.20 .14
02132116 Gum Swamp Creek	Little Pee Dee River	Lat 34°58'26", long 79°34'33", Richmond County, at bridge on Secondary Road 1001, 1.1 miles south of Marston, and 1.8 miles upstream from Clay Branch.	1.79	1974	5-19-77	2.16
02132287 Big Shoe Heel Creek	Little Pee Dee River	Lat 34°48'16", long 79°22'37", Scotland County, at bridge on Secondary Road 1433, 1.5 miles upstream from Jordan Creek, and 7.7 miles northeast of Johns.	19.9	1962, 1974-76	7- 5-77 2-16-77 5-19-77	39.0 *10.8 10.8
0213284850 Drowning Creek	Lumber River	Lat 35°14'53", long 79°40'58", Moore County, at bridge on Secondary Road 1142, on Moore-Montgomery County line, and 3.7 miles south of Samarcand.	a6.0	1973-74, 1976	11- 4-76 2-16-77 5-19-77	9.96 *14.4 8.22
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	12- 9-76 5-20-77	495 168
02133609 Drowning Creek	Lumber River	Lat 34°58'27", long 79°22'42", Scotland County, at bridge on Secondary Road 1412, 1.6 miles downstream from Mountain Creek, and 1.6 miles northeast of Oak Hill.	307	1959, 1962, 1968, 1974, 1976	12- 9-76 2-20-77	526 201
02133811 Raft Swamp	Lumber River	Lat 34°57'21", long 79°16'31", Hoke County, at bridge on U.S. Highway 401, 1.3 miles upstream from Laurinburg and Southern Railroad, 1.9 miles northeast of Bowmore.	4.68	1974, 1976	11- 5-76 2-16-77 5-19-77	2.89 *5.37 .75
		Santee River basin				
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.	a5.7	1970-76	6- 1-77	42.2
02139036 Catawba River	Santee River	Lat 35°44'40", long 81°46'21", Burke County, at bridge on Secondary Road 1147, 1.2 miles northnorthwest of Glen Alpine, and 3.1 miles upstream from confluence of Canoe Creek.	506	1974	6-27-77	338
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.	593	1968, 1970-76	6-28-77	338

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1977

Stream	Tributary to	Location	Drainage area (mi)	Measured previously (water (years)	Measurements Date	Measurements Discharge (ft /s)
		Santee River basin--Continued				
0213997350 Johns River	Catawba River	Lat 35°58'50", long 81°40'56", Caldwell County, 0.1 mile donwstream from Hopewell Branch, 0.7 mile upstream from Secondary Road 1356, and 3.8 miles north of Collettsville.	a49	1973-76	6-10-77	52.5
02140991 Johns River	Catawba River	Lat 35°5 '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.	202	1974-76	6-10-77	233
02141148 Lower Creek	Catawba River	Lat 35°54'26", long 81°31'45", 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.	a13	1971-73, 1975-76	3-10-77 6-10-77	18.0 9.1
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.	86.6	1949-50, 1964-69, 1972-73, 1975-76	3-10-77 6-10-77	*106 56.9
02142660 McDowells Creek	Catawba River	Lat 35°23'22", long 80°55'16", Mecklenburg County, at bridge on Beatties Ford, 2.1 miles downstream from Torrence Creek, and 11.2 miles north of Charlotte.	26.3	1955-70, 1972-76	2-16-77 6-20-77	15.5 9.58
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 Mount Holly.	a3.9	1976	11-23-75 2-10-77 6-20-77	2.06 3.15 3.3
02142916 Long Creek	Catawba River	Lat 35°13'53", long 80°58'45", Mecklenburg County, at bridge on State Highway 27, 2.3 miles downstream from Gum Branch, and 3 miles northwest of Thrift.	32.2	1969-73, 1975-76	11-23-76 6-20-77	10.8 7.15
02142988 Henry Fork tributary	Henry Fork	Lat 35°39'07", long 81°36'28", Burke County, at Secondary Road 1924, 0.2 mile from mouth, and 1.9 miles northwest of Pleasant Grove.	a3.2	1970-73, 1975-76	3-21-77 5-25-77	5.45 3.67
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.	a210	1974-76	5-25-77	237
02143908 South Fork Catawba River	Catawba River	Lat 35°19'50", long 81°08'00", Gaston County, at bridge on State Highway 275, 0.1 mile downstream from Hoyle Creek, and 3 miles southwest of Stanley.	a560	1974-76	6-21-77	472
0214549995 Catawba Creek	Catawba River	Lat 35°14'57", long 81°11'24", Gaston County, at bridge on U.S. Highway 321, 0.9 mile south of Gastonia, and 2.1 miles upstream from confluence of Anthony Creek.	a1.2	1970-76	11-23-76 6-21-76	.46 .39
02145544 Crowders Creek	Catawba River	Lat 35°19'45", long 81°16'43", Gaston County, at bridge on Secondary Road 1122, 0.8 mile upstream from Abernathy Creek, and 3.8 miles east of Kings Mountain.	a6.8	1970-76	6-20-77	4.81
02145633 Crowders Creek	Catawba River	Lat 35°09'31", long 81°10'49", Gaston County, at bridge on Secondary Road 2424, 0.8 mile upstream from State line, 1.5 miles downstream' from South Fork, and 7.2 miles south of Gastonia.	a96	1970-76	6-21-77	45.5
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.	a96	1970-76	6-21-77	44.4
02146211 Irwin Creek	Sugar Creek	Lat 35°15'43", long 80°50'14", Mecklenburg County, at culvert on U.S. Highway 21 in Charlotte, and 3.4 miles upstream from mouth.	a26	1970-73, 1976	6-22-77	1.37
02146291 Sugar Creek	Catawba River	Lat 35°12'48", long 80°52'56", Mecklenburg County, at bridge on Remount Road, at Charlotte.	a26	1970-73, 1976	6-22-77	12.6

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1977

Stream	Tributary to	Location	Drainage area (mi)	Measured previously (water (years)	Measurements Date	Measurements Discharge (ft /s)
		Santee River basin--Continued				
02146398 Sugar Creek	Catawba River	Lat 35°04'30", long 80°54'20", Mecklenburg County, at railroad bridge at North Carolina-South Carolina State line, 1 mile upstream from Little Sugar Creek, and 1 mile southwest of Pineville.	a69	1964-76	6-29-77	41.1
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.	49.3	1969-76	11-23-76 2-23-77 6-29-77	23.7 40.6 22.1
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	1969-76	6-22-77	.95
02146760 McAlpine Creek	Sugar Creek	Lat 35°03'43", long 82°59'39", Mecklenburg County, at bridge on U.S. Highway 521, 1 mile downstream from McMullen Creek, and 2 miles south of Pineville.	91.7	1949-57, 1962-67, 1969-76	11-23-76 2-23-77 6-29-77	53.0 57.5 34.0
02146858 Sixmile 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.	a21	1974-76	11-22-76 2-23-77 6-30-77	10.5 *8.37 1.56
0214690555 Twelvemile Creek	Catawba River	Lat 34°56'40", long 80°46'20", Union County, at bridge on Secondary Road 1301, 2.2 miles northwest of Waxhaw, and 3 miles upstream from confluence of Sixmile Creek.	a76	1974-76	2-23-77 6-39-77	*23.7 8.08
02147126 Waxhaw Creek	Catawba River	Lat 34°50'12", long 80°47'31", Union County, at bridge on Secondary Road 1103, 6 miles upstream from mouth, and 6.5 miles south of Waxhaw.	a37	1957, 1961-62, 1974-76	6-30-77	3.72
02149377 Broad River	Santee River	Lat 35°17'30", long 81°59'33", Rutherford County, at bridge on Secondary Road 1005, 0.3 mile downstream from Cleghorn Creek, and 5.8 miles southwest of Rutherfordton.	a270	1970-73	5-27-77	682
02149716 Silver Creek	Green River	Lat 35°18'35", long 82°12'10", Polk County, at Secondary Road 1138, 1.6 miles upstream from mouth, and 2.4 miles west-northwest of Mill Springs..	a1.2	1975-76	5-31-77	1.73
02150062 Green River	Broad River	Lat 35°15'35", long 81°59'02", Polk County, at bridge on Secondary Road 1302, 1 mile upstream from mouth, and 4 miles east of Green River.	a240	1970-73	5-27-77	196
02150495 Second Broad River	Broad River	Lat 35°24'16", 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.	a89	1971, 1973, 1975-76	5-27-77	121
02151742 Sandy Run	Broad River	Lat 35°15'22", long 81°41'48", Cleveland County, at bridge on Secondary Road 1003, 0.8 mile downstream from Sandy Creek tributary 2, 1.8 miles northwest of Boiling Springs.	a52	1970-73	8- 2-77	*21.3
02152474 First Broad River	Broad River	Lat 35°24'55", long 81°33'42", Cleveland County, at bridge on State Highway 182, at Lawndale, and 0.8 mile downstream from Maple Creek.	a190	1959-60, 1962, 1964, 1970-73, 1975-76	5-26-77	155
02152544 Brushy Creek	First Broad River	Lat 35°20'24", long 81°37'00", Cleveland County, at bridge on Secondary Road 1323, 1.0 mile upstream from Little Creek, and 1 mile northeast of Washburn.	15.1	1959, 1964, 1970-73	8- 2-77	*8.32
02152546 Brushy Creek	First Broad River	Lat 35°19'15", long 81°35'35", Clevelan County, at bridge on Secondary Road 1342, 0.8 mile downstream from Little Creek, and 2 miles east of Washburn.	20.1	1970-76	5-26-77	17.4
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.	27.6	1952, 1955, 1964-67, 1970-76	5-26-77	34.5

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1977

Stream	Tributary to	Location	Drainage area (mi)	Measured previously (water (years)	Measurements Date	Measurements Discharge (ft /s)
		Santee River basin--Continued				
02152587 Hickory Creek	First Broad River	Lat 35°14'40", long 81°33'50", Cleveland County, at bridge on Secondary Road 1110, 0.2 mile upstream from Little Hickory Creek, and 3.8 miles south of Shelby.	14.6	1959, 1964, 1970-73	8- 2-77	*2.32
02152596 First Broad River	Broad River	Lat 35°13'03", long 81°37'37", Cleveland County, at bridge on Secondary Road 1140, 3 miles upstream from mouth, and 4.8 miles northwest of Earl.	292	1968-76	5-25-77	219
02152622 Broad River	Santee River	Lat 35°10'50", long 81°27'28", Cleveland County, at Ellis Ferry, 2 miles downstream from First Broad River, 5 miles west of Earl.	a1,270	1970, 1973	6-27-77	1,530
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.	a44	1950-56, 1959, 1962-64, 1976	5-26-77	23.0
02153296 Buffalo Creek	Broad River	Lat 25°19'40", long 81°28'40", Cleveland County, at Seaboard Coast Line Railroad bridge, downstream from Long Creek, and 0.5 mile west of Stubbs.	a53	1949, 1964, 1970-72, 1974	8- 2-77	* 9.67
02153311 Gilliam Creek tributary	Gilliam Creek	Lat 35°20'54", long 81°23'47", Gaston County, at bridge on Secondary Road 1422, 0.8 mile upstream from mouth, and 2.2 miles southwest of Cherryville.	a4.5	1970-72, 1974	8- 2-77	* 1.13
02153456 Buffalo Creek	Broad River	Lat 35°10'21", long 81°31'03", Cleveland County, at bridge on State Highwway 198, 0.1 mile upstream from North Carolina-South Carolina State line, and 4 miles west of Grover.	a170	1968-76	5-26-77. 7-21-77	73.9 46.7
02153872 North Pacolet River	Pacolet River	Lat 35°13'19", long 82°19'24", Polk County, at second bridge on U.S. Highway 176, 0.5 mile downstream from Beark Creek, and 2.6 miles southeast of Saluda.	a7.8	1970-71, 1973-76	5-31-77	25.0
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.	44.8	1968-76	5-27-77	103
		Savannah River basin				
02176908 Chattooga River	Tugaloo Creek	Lat 35°04'26", long 83°06'27", Jackson County, at bridge on Secondary Road 1107, 0.8 mile upstream from Fowler Creek, and 2.3 miles south of Cashiers.	7.69	1969-73	8- 3-77	10.8
		DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1977, IN OHIO RIVER BASIN				
		Kanawha River basin				
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.	421	1925, 1955-56, 1960, 1962, 1974-76	6- 2-77	67.9
03161361 South Fork New River	New River	Lat 36°28'15", long 81°20'14", Ashe County, downstream from Cranberry Creek, 1.2 miles downstream from Nathans Creek, and 2 miles southwest of Scottville.	294	1974-75	6- 2-77	675
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	6- 3-77	89.6
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	6- 3-77	224

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1977

Stream	Tributary to	Location	Drainage area (mi)	Measured previously (water (years)	Measurements Date	Measurements Discharge (ft /s)
		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	8- 3-77	35.6
03438881 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	8- 3-77	36.8
03440077 French Broad River	Tennessee River	Lat 35°11'51", long 82°43'50", Transylvania County, at bridge on Secondary Road 1114, 0.8 mile downstream from Haunty Branch, and 1 mile east of Glazener Gap.	140	1974, 1976	10-27-76 5-18-77	495 *434
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	8- 2-77	*3.62
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, at mile 192.1.	170	1968-70, 1973-74, 1976	10-27-76 5-18-77	566 483
0344033010 Davidson River	French Broad River	Lat 35°17'17", long 82°49'47", Transylvania County, 0.3 mile upstream from confluence of Laurel Fork, and 4.5 miles northeast of Balsam Grove.	47.2	1968-76	10-27-76	17.1
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	1968-76	10-27-76 5-31-77	75.7 156
0344600989 Mills River	French Broad River	Lat 35°23'29", long 82°31'06", Henderson County, at bridge on State Highways 191 and 280, 0.2 mile north of Mills River, and 2.4 miles upstream from mouth.	70.5	1974-76	10-26-76 8- 3-77	250 60.2
03446363 Mud Creek	French Broad River	Lat 35°20'30", long 82°28'05", Henderson County, at bridge on Secondary Road 1508, 0.4 mile southeast of Balfour, and 0.6 mile upstream from Clear Creek.	52.1	1968-74	10-28-76 5-17-77 8- 2-77	73.0 *73.3 *31.5
03446569 Mud Creek	French Broad River	Lat 35°21'10", long 82°27'51", Henderson County, at bridge on Secondary Road 1508, 0.2 mile downstream from Clear Creek, and 0.6 mile northeast of Clear Creek, and 0.6 mile northeast of Balfour.	97.4	1968-74	10-28-76 5-17-77	144 *161
0344745449 Pinner Creek tributary	Pinner Creek	Lat 35°26'58", long 83°30'00", Buncombe County, 250 ft upstream from mouth, and at Oak Park.	.4	1974-76	4-15-77 5-17-77	.89 *.47
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.	a2.0	1974-76	10-28-76 4-15-77 5-17-77	2.22 2.26 *2.28
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	10-27-76 5-26-77	.77 .51
03447687 French Broad River	Tennessee River	Lat 35°25'45", long 82°33'12", Henderson County, at Fanning Bridge on Secondary Road 1419, 0.4 mile downstream from McDowell Creek, 2.9 miles west of Fletcher, at mile 165.3.	640	1968-69, 1971-74	10-27-76 5-18-77	1,510 *1,220
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	5-26-77	24.0
03448616 Hominy Creek	French Broad River	Lat 35°32'41", long 82°38'05", Buncombe County, at bridge on Sand Hill Road downstream from Enka Plant, 1.2 miles downstream from Moore Creek, and 3.3 miles east of Candler.	91.1	1968-75	10-26-76 5-26-77	81.9 140

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1977

Stream	Tributary to	Location	Drainage area (mi)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft /s)
		Tennessee River basin--Continued				
0344889019 Swannanoa River	French Broad River	Lat 35°36'46", long 82°19'13", Buncombe County, at bridge on State Highway 9, 0.5 mile downstream from Flat Creek at Black Mountain.	a11		4-20-77	20.4
0344889078 Swannanoa River	French Broad River	Lat 35°36'29", long 82°20'27", Buncombe County, at bridge on Secondary Road 2500 (Blue Ridge Road), 300 ft upstream from Briar Branch, and 1.2 miles southwest of Black Mountain.	a18		4-20-77	33.8
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, 1963-55, 1958-60, 1973-75	10-26-76 5-18-77	33.5 31.1
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	5-18-77	10.0
03449500 Swannanoa River	French Broad River	Lat 35°36'11", long 82°23'42", Buncombe County, 1,000 ft upstream from bridge at Swannanoa, and 1.5 miles downstream from North Fori.	58.8	1926-31, 1973-75	10-26-76 5-18-77	58.5 48.4
0345019250 Beetree Creek	Swannanoa River	Lat 35°36'45", long 82°25'37", Buncombe County, at bridge on Secondary Road 2416, 800 ft upstream from mouth, and 1.8 miles northwest of Swannanoa.	a14		8-25-76	5.27
03451826 Reems Creek	French Broad River	Lat 35°41'20", long 82°35'40", Buncombe County, 800 ft upstream from Wagner Branch, and 2 miles west of Weaverville.	33.4	1968-76	10-26-76 4-12-77 5-10-77	234 * 54.4 * 19.6
03451890 Reems Creek	French Broad River	Lat 35°41'40", long 82°36'48", Buncombe County, at bridge on U.S. Highway 25, at mouth, and 0.5 mile south of Alexander.	36.3	1944, 1953-54, 1960-63, 1968-76	10-26-76 5-17-77	25.3 * 22.6
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	1969-76	6- 2-77	369
03457138 Pigeon River	French Broad River	Lat 35°32'55", long 82°56'21", Haywood County, at bridge on connecting Secondary Road 1513 and 1519, and 0.5 mile upstream from Richland Creek, 2 miles northeast of Lake Junaluska Dam, and at mile 55.5.	167	1969-76	6- 2-77	294
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 Cove, and 3 miles northeast of Clyde.	238	1968-76	6- 2-77	507
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 miles northwest of Crabtree.	278	1969-76	6- 2-77	662
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, 1973-76	10-29-76 5-17-77	536 133
03461910 North Toe River	Nolichucky River	Lat 36°05'01", long 81°55'43", Avery County, at culvert on State Highway 194, at Newland, and downstream from Kentucky Creek.	9.24	1954-55, 1962-69, 1971-75	10-27-76 5-23-77	24.6 12.4
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	10-27-76 5-23-77	168 *134
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	1968-76	10-28-76 5-24-77	679 *602
0346378850 Cane River	North Toe River	Lat 35°49'47", long 82°19'05", Yancey County, at bridge on State Highway 197, 100 ft downstream from confluence of Haney Creek and 0.1 mile west of Murchison.	a25	1974-76	10-27-76 5-23-77	76.3 *35.4

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1977

Stream	Tributary to	Location	Drainage area (mi)	Measured previously (water (years)	Measurements Date	Measurements Discharge (ft /s)
		Tennessee River basin--Continued				
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, 1975-76	10-27-76 5-23-77 8- 2-77	137 *66.7 *30.9
03463802 McIntosh Branch	Pine Branch	Lat 35°54'49", long 82°18'14", Yancey County, at culvert on West Main Street (old U.S. 19E) 0.1 mile upstream from mouth, and 1.2 miles west of Burnsville.	.39	1969-74	8- 2-77	* .19
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, 1974-76	10-28-76 5-24-76	240 *114
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	†1922-55, 1962-63, 1968-72, 1974-76	5-24-77	*716
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 Moodys Mill Creek.	10.6	1955, 1960-67, 1969, 1974-76	6- 2-77	39.8
03479269 Watauga River	South Fork Holston River	Lat 36°16'10", long 81°53'02", Watauga County, at bridge on Secondary Road 1200, 0.6 mile upstream from Beech Creek, and 1 mile northeast of community of Beech Creek.	126	1960, 1967-68, 1971-76	6- 1-77	4.06
03480454 Elk River	Watauga River	Lat 36°09'26", long 81°53'10", Avery County, at Banner Elk, 900 ft upstream from Wildcat Creek, and 0.6 mile downstream from from mill pond.	11.2	1971-73	6- 1-77	46.2
03480775 Cranberry Creek	Elk River	Lat 36°08'09", long 82°58'20", Avery County, at bridge on U.S. Highway 19E, 0.6 mile south of Cranberry, and 0.7 mile upstream from Cooper Branch.	3.17	1971-73, 1975	6- 1-77	4.65
03499936 Little Tennessee River	Tennessee River	Lat 35°01'00", long 83°22'53", Macon County, at bridge on Secondary Road 1683, at Norton, and 0.1 mile downstream from Norton Branch.	63.8	1968-70, 1972-75	2-19-77 6- 1-77	287 280
03502000 Little Tennessee River	Tennessee River	Lat 35°13'59", long 83°23'32", Macon County, 0.2 mile upstream from State Highway 28 at Iotla, and 0.2 mile upstream from Iotal Creek.	323	†1929-45, 1972-75, 1976	6- 1-77	917
03503561 Nantahala River	Little Tennessee River	Lat 35°05'39", long 83°33'38", Macon County, at bridge on U.S. Highway 64, at Rainbow Springs, and 0.3 mile upstream from Black Creek.	24.2	1953, 1974-76	6- 1-77	111
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, 1973-76	5-31-77	104
0354840250 Hiwassee River	Tennessee River	Lat 35°03'28", long 83°56'31", Clay County, at bridge on U.S. Highway 64, 1.5 miles upstream from Brasstown Creek, and 8.3 miles west of Hayesville.	a381	1974-76	6- 1-77	1,360
0354912310 Valley River	Hiwassee River	Lat 35°13'58", long 83°43'10", Cherokee County, at U.S. Highways 19 and 129, 0.1 mile upstream from confluence of Nelson Creek, and 1.6 miles southwest of Topton.	a2.3	1974-76	5-31-77	3.65
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	5-31-77	29.4

Samples are collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin. Such sites are referred to as miscellaneous sites.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS H+ (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)
CHOWAN RIVER BASIN												
02053021 - JACKS SWAMP NR PLEASANT HILL N C (LAT 36 30 55 LONG 077 32 35)												
JAN , 1977												
11...	1255	41	5.2	2.5	--	--	--	--	--	--	--	--
ROANOKE RIVER BASIN												
02070806 - HUFFINES MILL CR NR BETHANY N C (LAT 36 20 00 LONG 079 51 26)												
APR , 1977												
05...	1225	42	6.4	14.0	--	--	--	--	--	--	--	--
02077629 - MAYO CREEK TRIB NEAR ALLENSVILLE N C (LAT 36 23 55 LONG 078 54 05)												
APR , 1977												
05...	1045	41	6.4	14.5	--	9.4	--	--	--	--	--	--
02081082 - HARDISON CREEK NR ROBERSON STORE N C (LAT 35 43 20 LONG 076 57 30)												
JAN , 1977												
11...	1110	77	4.4	5.0	--	--	--	--	--	--	--	--
PAMLICO RIVER BASIN												
02082824 - FISHING CREEK NEAR MIDDLEBURG N C (LAT 36 23 06 LONG 078 19 05)												
JUN , 1977												
15...	1530	51	6.6	20.0	20	--	9	0	--	--	1.1	1.5
02082920 - WHITE OAK SWAMP NEAR ACTON N C (LAT 36 09 59 LONG 078 00 05)												
MAY , 1977												
25...	1130	33	5.3	17.5	200	8.5	11	5	--	--	2.3	1.3
NEUSE RIVER BASIN												
02086300 - ROCKY CREEK NEAR BAHAMA N C (LAT 36 10 30 LONG 078 49 20)												
APR , 1977												
05...	0930	52	5.8	15.0	--	9.1	--	--	--	--	--	--
JUN												
15...	0900	94	6.1	17.5	8	--	24	0	--	--	3.7	3.5
02087173 - HORSE CREEK TRIB AT SR 1140 NR POCOMOKE N C (LAT 36 02 33 LONG 078 31 03)												
JAN , 1977												
10...	1115	37	5.8	7.0	--	--	--	--	--	--	--	--
02087499 - NEUSE RIVER TRIB ABOVE SR 1705 NEAR CLAYTON N C (LAT 35 39 05 LONG 078 24 11)												
MAY , 1977												
25...	0945	48	6.1	19.5	30	--	16	2	--	--	3.4	1.9
02088314 - BEAVERDAM CREEK NEAR DOBBERSVILLE N C (LAT 35 17 56 LONG 078 15 57)												
JAN , 1977												
10...	1430	56	5.1	8.5	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)
CHOWAN RIVER BASIN--Continued												
02053021 - JACKS SWAMP NR PLEASANT HILL N C (LAT 36 30 55 LONG 077 32 35)												
JAN , 1977 11...	--	--	--	--	--	--	--	--	--	--	--	--
ROANOKE RIVER BASIN--Continued												
02070806 - HUFFINES MILL CR NR BETHANY N C (LAT 36 20 00 LONG 079 51 26)												
APR , 1977 05...	--	--	--	--	--	--	--	--	--	--	--	--
02077629 - MAYO CREEK TRIB NEAR ALLENSVILLE N C (LAT 36 23 55 LONG 078 54 05)												
APR , 1977 05...	--	--	--	--	--	--	--	--	--	--	--	--
02081082 - HARDISON CREEK NR ROBERSON STORE N C (LAT 35 43 20 LONG 076 57 30)												
JAN , 1977 11...	--	--	--	--	--	--	--	--	--	--	--	--
PAMLICO RIVER BASIN--Continued												
02082824 - FISHING CREEK NEAR MIDDLEBURG N C (LAT 36 23 06 LONG 078 19 05)												
JUN , 1977 15...	4.8	50	.7	1.1	23	0	19	9.2	.9	2.8	.0	25
02082920 - WHITE OAK SWAMP NEAR ACTON N C (LAT 36 09 59 LONG 078 00 05)												
MAY , 1977 25...	2.4	29	.3	1.5	7	0	6	56	4.9	2.6	.0	7.9
NEUSE RIVER BASIN--Continued												
02086300 - ROCKY CREEK NEAR BAHAMA N C (LAT 36 10 30 LONG 078 49 20)												
APR , 1977 05...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	6.0	35	.5	.7	30	0	25	38	3.1	6.7	.0	19
02087173 - HORSE CREEK TRIB AT SR 1140 NR POCOMOKE N C (LAT 36 02 33 LONG 078 31 03)												
JAN , 1977 10...	--	--	--	--	--	--	--	--	--	--	--	--
02087499 - NEUSE RIVER TRIB ABOVE SR 1705 NEAR CLAYTON N C (LAT 35 39 05 LONG 078 24 11)												
MAY , 1977 25...	3.6	31	.4	1.2	17	0	14	22	3.3	3.2	.0	13
02088314 - BEAVERDAM CREEK NEAR DOBBERSVILLE N C (LAT 35 17 56 LONG 078 15 57)												
JAN , 1977 10...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA (NH4) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)
CHOWAN RIVER BASIN--Continued												
02053021 - JACKS SWAMP NR PLEASANT HILL N C (LAT 36 30 55 LONG 077 32 35)												
JAN , 1977 11...	--	--	--	--	--	--	--	--	--	--	--	--
ROANOKE RIVER BASIN--Continued												
02070806 - HUFFINES MILL CR NR BETHANY N C (LAT 36 20 00 LONG 079 51 26)												
APR , 1977 05...	--	--	--	--	.36	.00	.36	.35	.08	.03	.04	.61
02077629 - MAYO CREEK TRIB NEAR ALLENSVILLE N C (LAT 36 23 55 LONG 078 54 05)												
APR , 1977 05...	--	--	--	--	.13	.00	.13	.13	.05	.00	.00	.73
02081082 - HARDISON CREEK NR ROBERSON STORE N C (LAT 35 43 20 LONG 076 57 30)												
JAN , 1977 11...	--	--	--	--	--	--	--	--	--	--	--	--
PAMLICO RIVER BASIN--Continued												
02082824 - FISHING CREEK NEAR MIDDLEBURG N C (LAT 36 23 06 LONG 078 19 05)												
JUN , 1977 15...	58	49	.08	--	.10	.00	.10	.10	.01	.00	.00	.14
02082920 - WHITE OAK SWAMP NEAR ACTON N C (LAT 36 09 59 LONG 078 00 05)												
MAY , 1977 25...	56	27	.08	--	--	--	.29	.28	.09	.02	.03	.73
NEUSE RIVER BASIN--Continued												
02086300 - ROCKY CREEK NEAR BAHAMA N C (LAT 36 10 30 LONG 078 49 20)												
APR , 1977 05...	--	--	--	--	.05	.01	.06	.06	.07	.00	.00	1.1
JUN 15...	62	58	.08	--	.99	.01	1.0	1.0	.07	--	--	.38
02087173 - HORSE CREEK TRIB AT SR 1140 NR POCOMOKE N C (LAT 36 02 33 LONG 078 31 03)												
JAN , 1977 10...	--	--	--	--	--	--	--	--	--	--	--	--
02087499 - NEUSE RIVER TRIB ABOVE SR 1705 NEAR CLAYTON N C (LAT 35 39 05 LONG 078 24 11)												
MAY , 1977 25...	45	38	.06	--	.08	.01	.09	.09	.13	.02	.03	.26
02088314 - BEAVERDAM CREEK NEAR DOBBERSVILLE N C (LAT 35 17 56 LONG 078 15 57)												
JAN , 1977 10...	--	--	--	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	SUS-PENDED KJEL. NITRO-GEN (N) (MG/L)	DIS-SOLVED KJEL. NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
CHOWAN RIVER BASIN--Continued												
02053021 - JACKS SWAMP NR PLEASANT HILL N C (LAT 36 30 55 LONG 077 32 35)												
JAN , 1977 11...	--	--	--	--	--	--	--	--	--	--	--	1
ROANOKE RIVER BASIN--Continued												
02070806 - HUFFINES MILL CR NR BETHANY N C (LAT 36 20 00 LONG 079 51 26)												
APR , 1977 05...	.35	.69	.31	.38	1.1	4.6	.13	.03	.06	.00	.00	4
02077629 - MAYO CREEK TRIB NEAR ALLENSVILLE N C (LAT 36 23 55 LONG 078 54 05)												
APR , 1977 05...	.39	.78	.39	.39	.91	4.0	.14	.02	.07	.00	.00	2
02081082 - HARDISON CREEK NR ROBERSON STORE N C (LAT 35 43 20 LONG 076 57 30)												
JAN , 1977 11...	--	--	--	--	--	--	--	--	--	--	--	0
PAMLICO RIVER BASIN--Continued												
02082824 - FISHING CREEK NEAR MIDDLEBURG N C (LAT 36 23 06 LONG 078 19 05)												
JUN , 1977 15...	.14	.15	.01	.14	.25	1.1	.04	.01	.02	.01	.03	2
02082920 - WHITE OAK SWAMP NEAR ACTON N C (LAT 36 09 59 LONG 078 00 05)												
MAY , 1977 25...	.48	.82	.32	.50	1.1	4.9	.11	.03	.05	.01	.03	2
NEUSE RIVER BASIN--Continued												
02086300 - ROCKY CREEK NEAR BAHAMA N C (LAT 36 10 30 LONG 078 49 20)												
APR , 1977 05...	.45	1.2	.75	.45	1.3	5.6	.13	.01	.07	.00	.00	3
JUN 15...	--	.45	.24	.21	1.5	6.4	.02	.02	.03	--	--	1
02087173 - HORSE CREEK TRIB AT SR 1140 NR POCOMOKE N C (LAT 36 02 33 LONG 078 31 03)												
JAN , 1977 10...	--	--	--	--	--	--	--	--	--	--	--	1
02087499 - NEUSE RIVER TRIB ABOVE SR 1705 NEAR CLAYTON N C (LAT 35 39 05 LONG 078 24 11)												
MAY , 1977 25...	.30	.39	.07	.32	.48	2.1	.05	.01	.09	.01	.03	2
02088314 - BEAVERDAM CREEK NEAR DOBBERSVILLE N C (LAT 35 17 56 LONG 078 15 57)												
JAN , 1977 10...	--	--	--	--	--	--	--	--	--	--	--	1

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)
CHOWAN RIVER BASIN--Continued									
02053021 - JACKS SWAMP NR PLEASANT HILL N C (LAT 36 30 55 LONG 077 32 35)									
JAN , 1977 11...	<10	<10	0	3	2	1	850	270	8
ROANOKE RIVER BASIN--Continued									
02070806 - HUFFINES MILL CR NR BETHANY N C (LAT 36 20 00 LONG 079 51 26)									
APR , 1977 05...	10	8	2	3	3	0	5800	100	4
02077629 - MAYO CREEK TRIB NEAR ALLENSVILLE N C (LAT 36 23 55 LONG 078 54 05)									
APR , 1977 05...	<20	<19	1	3	0	3	4900	220	6
02081082 - HARDISON CREEK NR ROBERSON STORE N C (LAT 35 43 20 LONG 076 57 30)									
JAN , 1977 11...	<10	<9	1	1	0	1	430	190	6
PAMLICO RIVER BASIN--Continued									
02082824 - FISHING CREEK NEAR MIDDLEBURG N C (LAT 36 23 06 LONG 078 19 05)									
JUN , 1977 15...	<20	<19	1	2	0	2	940	340	27
02082920 - WHITE OAK SWAMP NEAR ACTON N C (LAT 36 09 59 LONG 078 00 05)									
MAY , 1977 25...	<10	<4	6	4	2	2	5300	390	12
NEUSE RIVER BASIN--Continued									
02086300 - ROCKY CREEK NEAR BAHAMA N C (LAT 36 10 30 LONG 078 49 20)									
APR , 1977 05...	<20	<19	1	11	6	5	11000	240	10
JUN 15...	<10	<8	2	4	4	0	430	160	11
02087173 - HORSE CREEK TRIB AT SR 1140 NR POCOMOKE N C (LAT 36 02 33 LONG 078 31 03)									
JAN , 1977 10...	10	10	0	3	1	2	22000	170	18
02087499 - NEUSE RIVER TRIB ABOVE SR 1705 NEAR CLAYTON N C (LAT 35 39 05 LONG 078 24 11)									
MAY , 1977 25...	<10	<6	4	2	2	0	1100	260	11
02088314 - BEAVERDAM CREEK NEAR DOBBERSVILLE N C (LAT 35 17 56 LONG 078 15 57)									
JAN , 1977 10...	<10	<10	0	1	1	0	1600	160	10

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	SUS-PENDED SEDI-MENT (MG/L)
CHOWAN RIVER BASIN--Continued								
02053021 - JACKS SWAMP NR PLEASANT HILL N C (LAT 36 30 55 LONG 077 32 35)								
JAN , 1977								
11...	8	0	.0	0	10	10	0	--
ROANOKE RIVER BASIN--Continued								
02070806 - HUFFINES MILL CR NR BETHANY N C (LAT 36 20 00 LONG 079 51 26)								
APR , 1977								
05...	4	0	.0	0	0	0	0	130
02077629 - MAYO CREEK TRIB NEAR ALLENSVILLE N C (LAT 36 23 55 LONG 078 54 05)								
APR , 1977								
05...	6	0	.0	0	10	10	0	138
02081082 - HARDISON CREEK NR ROBERSON STORE N C (LAT 35 43 20 LONG 076 57 30)								
JAN , 1977								
11...	1	5	.0	0	0	0	10	--
PAMLICO RIVER BASIN--Continued								
02082824 - FISHING CREEK NEAR MIDDLEBURG N C (LAT 36 23 06 LONG 078 19 05)								
JUN , 1977								
15...	16	11	.0	0	0	0	0	9
02082920 - WHITE OAK SWAMP NEAR ACTON N C (LAT 36 09 59 LONG 078 00 05)								
MAY , 1977								
25...	0	14	.0	0	10	0	10	172
NEUSE RIVER BASIN--Continued								
02086300 - ROCKY CREEK NEAR BAHAMA N C (LAT 36 10 30 LONG 078 49 20)								
APR , 1977								
05...	10	0	.0	0	10	10	0	672
JUN								
15...	9	2	.0	0	10	10	0	5
02087173 - HORSE CREEK TRIB AT SR 1140 NR POCOMOKE N C (LAT 36 02 33 LONG 078 31 03)								
JAN , 1977								
10...	11	7	.0	0	20	20	0	--
02087499 - NEUSE RIVER TRIB ABOVE SR 1705 NEAR CLAYTON N C (LAT 35 39 05 LONG 078 24 11)								
MAY , 1977								
25...	4	7	.0	0	10	10	0	19
02088314 - BEAVERDAM CREEK NEAR DOBBERSVILLE N C (LAT 35 17 56 LONG 078 15 57)								
JAN , 1977								
10...	6	4	.0	0	10	0	10	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS H+ (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)
NEUSE RIVER BASIN--Continued												
02089168 - MILL CREEK NEAR SEVENS SPRINGS N C (LAT 35 14 14 LONG 077 52 57)												
MAY , 1977												
25...	1200	52	4.6	19.0	--	--	--	--	--	--	--	--
SEP												
08...	0945	60	3.8	--	--	--	--	--	--	--	--	--
02090666 - WHITE OAK SWAMP NEAR MOUNT PLEASANT N C (LAT 35 48 55 LONG 078 04 42)												
JAN , 1977												
10...	1300	50	5.4	8.5	--	--	--	--	--	--	--	--
02091476 - RAINBOW CREEK AT US 258 NEAR BROWNTOWN N C (LAT 35 24 00 LONG 077 34 50)												
JAN , 1977												
11...	0935	78	4.9	4.0	--	--	--	--	--	--	--	--
02091949 - CLAYFOOT SWAMP NEAR SHELMERDINE N C (LAT 35 27 16 LONG 077 13 12)												
JUN , 1977												
13...	1600	37	6.6	24.5	70	5.1	4	0	--	--	.5	.6
02092551 - CROOKED RUN AT SR 1123 NEAR TRENTON N C (LAT 35 02 25 LONG 077 22 07)												
JAN , 1977												
11...	0830	76	4.2	4.0	--	--	--	--	--	--	--	--
02092569 - BRICE CREEK AT SR 1100 AT CROATAN N C (LAT 34 57 56 LONG 076 58 26)												
JAN , 1977												
11...	0800	51	4.5	3.0	--	--	--	--	--	--	--	--
CAPE FEAR RIVER BASIN												
02096845 - CANE CREEK NEAR BUCKHORN N C (LAT 36 01 19 LONG 079 10 29)												
MAR , 1977												
30...	0905	38	6.1	13.5	--	7.8	--	--	--	--	--	--
SEP												
08...	1305	33	5.4	23.0	120	--	12	8	--	--	3.1	1.1
02097715 - NEW HOPE CR TRIB AT SR 1715 NR FARRINGTON N C (LAT 35 47 08 LONG 079 01 50)												
MAR , 1977												
30...	0900	37	6.8	13.0	--	9.0	--	--	--	--	--	--
SEP												
08...	1200	37	5.5	23.0	--	--	--	--	--	--	--	--
02100459 - SANDY CREEK TRIB AT MELANCTON N C (LAT 35 50 26 LONG 079 39 17) (FORMERLY PUBLISHED AS SANDY CR AT MELANCTON N C, LAT 35 50 40 LONG 079 39 40)												
MAR , 1977												
30...	1015	60	7.0	14.0	--	9.2	--	--	--	--	--	--
02100749 - GRASSY CREEK NEAR JUGTOWN N C (LAT 35 29 13 LONG 079 37 30) (FORMERLY PUBLISHED AS DEEP R TRIB #4 NR JUGTOWN N C, LAT 35 29 10 LONG 079 36 13)												
MAR , 1977												
30...	1045	44	6.7	15.0	--	9.0	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)
NEUSE RIVER BASIN--Continued												
02089168 - MILL CREEK NEAR SEVENS SPRINGS N C (LAT 35 14 14 LONG 077 52 57)												
MAY , 1977 25...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	--	--	--	--	--	--	--	--	--	--	--	--
02090666 - WHITE OAK SWAMP NEAR MOUNT PLEASANT N C (LAT 35 48 55 LONG 078 04 42)												
JAN , 1977 10...	--	--	--	--	--	--	--	--	--	--	--	--
02091476 - RAINBOW CREEK AT US 258 NEAR BROWNTOWN N C (LAT 35 24 00 LONG 077 34 50)												
JAN , 1977 11...	--	--	--	--	--	--	--	--	--	--	--	--
02091949 - CLAYFOOT SWAMP NEAR SHELMERDINE N C (LAT 35 27 16 LONG 077 13 12)												
JUN , 1977 13...	4.0	67	.9	.5	5	0	4	2.0	3.5	5.2	.0	9.8
02092551 - CROOKED RUN AT SR 1123 NEAR TRENTON N C (LAT 35 02 25 LONG 077 22 07)												
JAN , 1977 11...	--	--	--	--	--	--	--	--	--	--	--	--
02092569 - BRICE CREEK AT SR 1100 AT CROATAN N C (LAT 34 57 56 LONG 076 58 26)												
JAN , 1977 11...	--	--	--	--	--	--	--	--	--	--	--	--
CAPE FEAR RIVER BASIN--Continued												
02096845 - CANE CREEK NEAR BUCKHORN N C (LAT 36 01 19 LONG 079 10 29)												
MAR , 1977 30...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	1.5	18	.2	1.7	5	0	4	32	6.6	2.3	.0	3.1
02097715 - NEW HOPE CR TRIB AT SR 1715 NR FARRINGTON N C (LAT 35 47 08 LONG 079 01 50)												
MAR , 1977 30...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	--	--	--	--	--	--	--	--	--	--	--	--
02100459 - SANDY CREEK TRIB AT MELANCTON N C (LAT 35 50 26 LONG 079 39 17)												
MAR , 1977 30...	--	--	--	--	--	--	--	--	--	--	--	--
02100749 - GRASSY CREEK NEAR JUGTOWN N C (LAT 35 29 13 LONG 079 37 30)												
MAR , 1977 30...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA (NH4) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)
					NEUSE RIVER BASIN--Continued							
					02089168 - MILL CREEK NEAR SEVENS SPRINGS N C (LAT 35 14 14 LONG 077 52 57)							
MAY , 1977												
25...	--	--	--	--	.06	.00	.06	.06	.01	.00	.00	.32
SEP												
08...	--	--	--	--	--	--	--	--	--	--	--	--
					02090666 - WHITE OAK SWAMP NEAR MOUNT PLEASANT N C (LAT 35 48 55 LONG 078 04 42)							
JAN , 1977												
10...	--	--	--	--	--	--	--	--	--	--	--	--
					02091476 - RAINBOW CREEK AT US 258 NEAR BROWNTOWN N C (LAT 35 24 00 LONG 077 34 50)							
JAN , 1977												
11...	--	--	--	--	--	--	--	--	--	--	--	--
					02091949 - CLAYFOOT SWAMP NEAR SHELMERDINE N C (LAT 35 27 16 LONG 077 13 12)							
JUN , 1977												
13...	44	27	.06	--	.02	.01	.03	.01	--	.08	.10	--
					02092551 - CROOKED RUN AT SR 1123 NEAR TRENTON N C (LAT 35 02 25 LONG 077 22 07)							
JAN , 1977												
11...	--	--	--	--	--	--	--	--	--	--	--	--
					02092569 - BRICE CREEK AT SR 1100 AT CROATAN N C (LAT 34 57 56 LONG 076 58 26)							
JAN , 1977												
11...	--	--	--	--	.02	.00	.02	.02	.01	.00	.00	.24
					CAPE FEAR RIVER BASIN--Continued							
					02096845 - CANE CREEK NEAR BUCKHORN N C (LAT 36 01 19 LONG 079 10 29)							
MAR , 1977												
30...	--	--	--	--	.00	.01	.01	.01	.01	.00	.00	.48
SEP												
08...	59	22	.08	--	--	--	--	--	--	--	--	--
					02097715 - NEW HOPE CR TRIB AT SR 1715 NR FARRINGTON N C (LAT 35 47 08 LONG 079 01 50)							
MAR , 1977												
30...	--	--	--	--	.00	.01	.01	.01	.01	.00	.00	.38
SEP												
08...	--	--	--	--	--	--	--	--	--	--	--	--
					02100459 - SANDY CREEK TRIB AT MELANCTON N C (LAT 35 50 26 LONG 079 39 17)							
MAR , 1977												
30...	--	--	--	--	.31	.02	.33	.33	.06	.01	.01	.58
					02100749 - GRASSY CREEK NEAR JUGTOWN N C (LAT 35 29 13 LONG 079 37 30)							
MAR , 1977												
30...	--	--	--	--	.41	.02	.43	.42	.09	.01	.01	.90

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	SUS-PENDED KJEL. NITRO-GEN (N) (MG/L)	DIS-SOLVED KJEL. NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (P04) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
					NEUSE RIVER BASIN--Continued							
					02089168 - MILL CREEK NEAR SEVENS SPRINGS N C (LAT 35 14 14 LONG 077 52 57)							
MAY , 1977												
25...	.32	.33	.01	.32	.39	1.7	.02	.01	.00	.01	.03	1
SEP												
08...	--	--	--	--	--	--	--	--	--	--	--	0
					02090666 - WHITE OAK SWAMP NEAR MOUNT PLEASANT N C (LAT 35 48 55 LONG 078 04 42)							
JAN , 1977												
10...	--	--	--	--	--	--	--	--	--	--	--	1
					02091476 - RAINBOW CREEK AT US 258 NEAR BROWNTOWN N C (LAT 35 24 00 LONG 077 34 50)							
JAN , 1977												
11...	--	--	--	--	--	--	--	--	--	--	--	1
					02091949 - CLAYFOOT SWAMP NEAR SHELMERDINE N C (LAT 35 27 16 LONG 077 13 12)							
JUN , 1977												
13...	.23	--	--	.31	--	--	.03	.01	.04	.01	.03	2
					02092551 - CROOKED RUN AT SR 1123 NEAR TRENTON N C (LAT 35 02 25 LONG 077 22 07)							
JAN , 1977												
11...	--	--	--	--	--	--	--	--	--	--	--	1
					02092569 - BRICE CREEK AT SR 1100 AT CROATAN N C (LAT 34 57 56 LONG 076 58 26)							
JAN , 1977												
11...	.27	.25	.00	.27	.27	1.2	.01	.00	.01	.00	.00	1
					CAPE FEAR RIVER BASIN--Continued							
					02096845 - CANE CREEK NEAR BUCKHORN N C (LAT 36 01 19 LONG 079 10 29)							
MAR , 1977												
30...	.17	.49	.32	.17	.50	2.2	.04	.01	.01	.00	.00	1
SEP												
08...	--	--	--	--	--	--	--	--	--	--	--	0
					02097715 - NEW HOPE CR TRIB AT SR 1715 NR FARRINGTON N C (LAT 35 47 08 LONG 079 01 50)							
MAR , 1977												
30...	.46	.39	.00	.46	.40	1.8	.04	.02	.01	.02	.06	--
SEP												
08...	--	--	--	--	--	--	--	--	--	--	--	0
					02100459 - SANDY CREEK TRIB AT MELANCTON N C (LAT 35 50 26 LONG 079 39 17)							
MAR , 1977												
30...	.25	.64	.38	.26	.97	4.3	.15	.04	.07	.03	.09	1
					02100749 - GRASSY CREEK NEAR JUGTOWN N C (LAT 35 29 13 LONG 079 37 30)							
MAR , 1977												
30...	.54	.99	.44	.55	1.4	6.3	.20	.10	.11	.08	.25	2

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL CHROMIUM (CR) (UG/L)	SUS-PENDED CHROMIUM (CR) (UG/L)	DIS-SOLVED CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)
NEUSE RIVER BASIN--Continued									
02089168 - MILL CREEK NEAR SEVENS SPRINGS N C (LAT 35 14 14 LONG 077 52 57)									
MAY , 1977									
25...	<10	<10	0	0	0	2	340	100	10
SEP									
08...	<10	<8	2	4	0	4	320	100	4
02090666 - WHITE OAK SWAMP NEAR MOUNT PLEASANT N C (LAT 35 48 55 LONG 078 04 42)									
JAN , 1977									
10...	<10	<9	1	2	1	1	890	200	18
02091476 - RAINBOW CREEK AT US 258 NEAR BROWNTOWN N C (LAT 35 24 00 LONG 077 34 50)									
JAN , 1977									
11...	<10	<10	0	1	1	0	450	180	7
02091949 - CLAYFOOT SWAMP NEAR SHELMERDINE N C (LAT 35 27 16 LONG 077 13 12)									
JUN , 1977									
13...	<10	<8	2	6	0	8	2000	230	14
02092551 - CROOKED RUN AT SR 1123 NEAR TRENTON N C (LAT 35 02 25 LONG 077 22 07)									
JAN , 1977									
11...	<10	<10	0	0	0	0	110	110	2
02092569 - BRICE CREEK AT SR 1100 AT CROATAN N C (LAT 34 57 56 LONG 076 58 26)									
JAN , 1977									
11...	<10	<10	0	0	0	0	330	250	4
CAPE FEAR RIVER BASIN--Continued									
02096845 - CANE CREEK NEAR BUCKHORN N C (LAT 36 01 19 LONG 079 10 29)									
MAR , 1977									
30...	<10	<2	8	3	1	2	1400	150	4
SEP									
08...	<10	<10	0	5	3	2	1200	140	4
02097715 - NEW HOPE CR TRIB AT SR 1715 NR FARRINGTON N C (LAT 35 47 08 LONG 079 01 50)									
MAR , 1977									
30...	10	--	--	2	--	--	940	--	8
SEP									
08...	<10	<10	0	2	1	1	3700	210	4
02100459 - SANDY CREEK TRIB AT MELANCTON N C (LAT 35 50 26 LONG 079 39 17)									
MAR , 1977									
30...	<10	<10	0	7	5	2	9700	110	10
02100749 - GRASSY CREEK NEAR JUGTOWN N C (LAT 35 29 13 LONG 079 37 30)									
MAR , 1977									
30...	<10	<8	2	5	0	5	5200	220	5

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	SUS-PENDED SEDI-MENT (MG/L)
NEUSE RIVER BASIN--Continued								
02089168 - MILL CREEK NEAR SEVENS SPRINGS N C (LAT 35 14 14 LONG 077 52 57)								
MAY , 1977								
25...	0	10	.0	0	--	--	0	9
SEP								
08...	0	4	<.5	0	10	0	10	18
02090666 - WHITE OAK SWAMP NEAR MOUNT PLEASANT N C (LAT 35 48 55 LONG 078 04 42)								
JAN , 1977								
10...	2	16	.0	0	20	10	10	--
02091476 - RAINBOW CREEK AT US 258 NEAR BROWNTOWN N C (LAT 35 24 00 LONG 077 34 50)								
JAN , 1977								
11...	5	2	.0	0	20	10	10	--
02091949 - CLAYFOOT SWAMP NEAR SHELMERDINE N C (LAT 35 27 16 LONG 077 13 12)								
JUN , 1977								
13...	5	9	--	0	20	10	10	20
02092551 - CROOKED RUN AT SR 1123 NEAR TRENTON N C (LAT 35 02 25 LONG 077 22 07)								
JAN , 1977								
11...	0	2	.0	0	10	10	0	--
02092569 - BRICE CREEK AT SR 1100 AT CROATAN N C (LAT 34 57 56 LONG 076 58 26)								
JAN , 1977								
11...	1	3	.0	0	10	10	0	5
CAPE FEAR RIVER BASIN--Continued								
02096845 - CANE CREEK NEAR BUCKHORN N C (LAT 36 01 19 LONG 079 10 29)								
MAR , 1977								
30...	4	0	.1	0	10	0	10	31
SEP								
08...	1	3	<.5	0	--	--	0	119
02097715 - NEW HOPE CR TRIB AT SR 1715 NR FARRINGTON N C (LAT 35 47 08 LONG 079 01 50)								
MAR , 1977								
30...	--	--	--	--	10	--	--	36
SEP								
08...	1	3	<.5	0	20	20	0	235
02100459 - SANDY CREEK TRIB AT MELANCTON N C (LAT 35 50 26 LONG 079 39 17)								
MAR , 1977								
30...	10	0	.1	0	20	10	10	194
02100749 - GRASSY CREEK NEAR JUGTOWN N C (LAT 35 29 13 LONG 079 37 30)								
MAR , 1977								
30...	3	2	.0	0	20	10	10	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS H+ (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)
CAPE FEAR RIVER BASIN--Continued												
02101357 - BIG GOVERNORS CREEK TRIB NEAR CARTHAGE N C (LAT 35 23 05 LONG 079 19 56) (FORMERLY PUBLISHED AS BIG GOVERNORS CR AT SR 1660 NR CARTHAGE N C, LAT 35 23 10 LONG 079 19 27)												
JAN , 1977 10...	1430	38	5.8	8.5	--	--	--	--	--	--	--	--
02102908 - FLAT CREEK NEAR INVERNESS N C (LAT 35 10 54 LONG 079 10 40)												
JAN , 1977 10...	1515	29	4.5	9.0	--	--	--	--	--	--	--	--
SEP 08...	0930	22	4.1	23.0	150	--	3	3	.3	15	.5	.4
02107154 - SOUTH RIVER TRIB AT N C 41 AT TOMAHAWK N C (LAT 34 42 15 LONG 078 20 25)												
JAN , 1977 10...	1745	67	4.3	8.0	--	--	--	--	--	--	--	--
PEE DEE RIVER BASIN												
02115496 - LITTLE FORBUSH CREEK NEAR FORBUSH N C (LAT 36 11 13 LONG 080 34 59)												
JUN , 1977 16...	1215	66	6.8	26.0	140	8.3	13	0	--	--	1.6	2.1
02115946 - FRYES CREEK TRIB AT SR 1506 NEAR MIDWAY N C (LAT 35 57 30 LONG 080 14 32)												
APR , 1977 05...	1045	67	6.1	--	--	--	--	--	--	--	--	--
02129028 - BONES FORK CREEK NEAR HOFFMAN N C (LAT 35 01 26 LONG 079 38 02)												
JAN , 1977 10...	1205	29	4.7	7.5	--	--	--	--	--	--	--	--
SANTEE RIVER BASIN												
02140304 - WILSON CREEK NEAR GRAGG N C (LAT 37 05 49 LONG 081 48 28)												
MAR , 1977 04...	1200	32	5.7	.5	--	15.0	--	--	--	--	--	--
02142122 - LOWER LITTLE R TRIB AT SR 1124 NR TAYLORSVILLE N (LAT 35 53 24 LONG 081 13 52)												
MAR , 1977 30...	0900	22	5.5	--	--	--	--	--	--	--	--	--
02142692 - KILLIAN CREEK AT SR 1349 NEAR DENVER N C (LAT 35 32 10 LONG 080 03 13)												
MAR , 1977 30...	1015	50	5.8	--	--	--	--	--	--	--	--	--
02152514 - LITTLE HARRIS CREEK AT SR 1821 NEAR CAMPBELL N C (LAT 35 22 34 LONG 081 35 45)												
MAR , 1977 30...	0745	38	6.0	13.5	--	11.5	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)
CAPE FEAR RIVER BASIN--Continued												
02101357 - BIG GOVERNORS CREEK TRIB NEAR CARTHAGE N C (LAT 35 23 05 LONG 079 19 56)												
JAN , 1977 10...	--	--	--	--	--	--	--	--	--	--	--	--
02102908 - FLAT CREEK NEAR INVERNESS N C (LAT 35 10 54 LONG 079 10 40)												
JAN , 1977 10...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	.9	33	.2	.8	--	0	--	--	4.0	2.0	.0	5.5
02107154 - SOUTH RIVER TRIB AT N C 41 AT TOMAHAWK N C (LAT 34 42 15 LONG 078 20 25)												
JAN , 1977 10...	--	--	--	--	--	--	--	--	--	--	--	--
PEE DEE RIVER BASIN--Continued												
02115496 - LITTLE FORBUSH CREEK NEAR FORBUSH N C (LAT 36 11 13 LONG 080 34 59)												
JUN , 1977 16...	4.0	35	.5	2.9	25	0	21	6.3	4.0	2.9	.1	17
02115946 - FRYES CREEK TRIB AT SR 1506 NEAR MIDWAY N C (LAT 35 57 30 LONG 080 14 32)												
APR , 1977 05...	--	--	--	--	--	--	--	--	--	--	--	--
02129028 - BONES FORK CREEK NEAR HOFFMAN N C (LAT 35 01 26 LONG 079 38 02)												
JAN , 1977 10...	--	--	--	--	--	--	--	--	--	--	--	--
SANTEE RIVER BASIN--Continued												
02140304 - WILSON CREEK NEAR GRAGG N C (LAT 37 05 49 LONG 081 48 28)												
MAR , 1977 04...	--	--	--	--	--	--	--	--	--	--	--	--
02142122 - LOWER LITTLE R TRIB AT SR 1124 NR TAYLORSVILLE N (LAT 35 53 24 LONG 081 13 52)												
MAR , 1977 30...	--	--	--	--	6	0	5	30	--	--	--	--
02142692 - KILLIAN CREEK AT SR 1349 NEAR DENVER N C (LAT 35 32 10 LONG 080 03 13)												
MAR , 1977 30...	--	--	--	--	7	0	6	18	--	--	--	--
02152514 - LITTLE HARRIS CREEK AT SR 1821 NEAR CAMPBELL N C (LAT 35 22 34 LONG 081 35 45)												
MAR , 1977 30...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED AMMONIA (NH4) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)
CAPE FEAR RIVER BASIN--Continued												
02101357 - BIG GOVERNORS CREEK TRIB NEAR CARTHAGE N C (LAT 35 23 05 LONG 079 19 56)												
JAN , 1977 10...	--	--	--	--	.25	.01	.26	.25	.01	.00	.00	.46
02102908 - FLAT CREEK NEAR INVERNESS N C (LAT 35 10 54 LONG 079 10 40)												
JAN , 1977 10...	--	--	--	--	.04	.01	.05	.06	.00	.01	.01	.26
SEP 08...	26	--	.04	1.83	.06	.01	.07	.08	.04	.00	.00	.61
02107154 - SOUTH RIVER TRIB AT N C 41 AT TOMAHAWK N C (LAT 34 42 15 LONG 078 20 25)												
JAN , 1977 10...	--	--	--	--	.01	.00	.01	.01	.00	.00	.00	.54
PEE DEE RIVER BASIN--Continued												
02115496 - LITTLE FORBUSH CREEK NEAR FORBUSH N C (LAT 36 11 13 LONG 080 34 59)												
JUN , 1977 16...	61	47	.08	--	--	--	--	--	--	--	--	--
02115946 - FRYES CREEK TRIB AT SR 1506 NEAR MIDWAY N C (LAT 35 57 30 LONG 080 14 32)												
APR , 1977 05...	--	--	--	--	.70	.01	.71	.70	.26	.14	.18	1.0
02129028 - BONES FORK CREEK NEAR HOFFMAN N C (LAT 35 01 26 LONG 079 38 02)												
JAN , 1977 10...	--	--	--	--	--	--	--	--	--	--	--	--
SANTEE RIVER BASIN--Continued												
02140304 - WILSON CREEK NEAR GRAGG N C (LAT 37 05 49 LONG 081 48 28)												
MAR , 1977 04...	--	--	--	--	--	--	.88	.87	.02	.02	.03	.18
02142122 - LOWER LITTLE R TRIB AT SR 1124 NR TAYLORSVILLE N (LAT 35 53 24 LONG 081 13 52)												
MAR , 1977 30...	--	--	--	--	.05	.00	.05	.05	.01	.01	.01	.16
02142692 - KILLIAN CREEK AT SR 1349 NEAR DENVER N C (LAT 35 32 10 LONG 080 03 13)												
MAR , 1977 30...	--	--	--	--	--	--	--	--	--	--	--	--
02152514 - LITTLE HARRIS CREEK AT SR 1821 NEAR CAMPBELL N C (LAT 35 22 34 LONG 081 35 45)												
MAR , 1977 30...	--	--	--	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	SUS-PENDED KJEL. NITRO-GEN (N) (MG/L)	DIS-SOLVED KJEL. NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (P04) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
CAPE FEAR RIVER BASIN--Continued												
02101357 - BIG GOVERNORS CREEK TRIB NEAR CARTHAGE N C (LAT 35 23 05 LONG 079 19 56)												
JAN , 1977 10...	.23	.47	.24	.23	.73	3.2	.04	.00	.01	.00	.00	2
02102908 - FLAT CREEK NEAR INVERNESS N C (LAT 35 10 54 LONG 079 10 40)												
JAN , 1977 10...	.21	.26	.04	.22	.31	1.4	.01	.01	.01	.01	.03	1
SEP 08...	.26	.65	.39	.26	.72	3.2	--	.01	.02	.00	.00	--
02107154 - SOUTH RIVER TRIB AT N C 41 AT TOMAHAWK N C (LAT 34 42 15 LONG 078 20 25)												
JAN , 1977 10...	.44	.54	.10	.44	.55	2.4	.01	.01	.00	.00	.00	1
PEE DEE RIVER BASIN--Continued												
02115496 - LITTLE FORBUSH CREEK NEAR FORBUSH N C (LAT 36 11 13 LONG 080 34 59)												
JUN , 1977 16...	--	--	--	--	--	--	--	--	--	--	--	1
02115946 - FRYES CREEK TRIB AT SR 1506 NEAR MIDWAY N C (LAT 35 57 30 LONG 080 14 32)												
APR , 1977 05...	.45	1.3	.71	.59	2.0	8.9	.25	.01	.15	.00	.00	3
02129028 - BONES FORK CREEK NEAR HOFFMAN N C (LAT 35 01 26 LONG 079 38 02)												
JAN , 1977 10...	--	--	--	--	--	--	--	--	--	--	--	0
SANTEE RIVER BASIN--Continued												
02140304 - WILSON CREEK NEAR GRAGG N C (LAT 37 05 49 LONG 081 48 28)												
MAR , 1977 04...	.22	.20	.00	.24	1.1	4.8	.02	.01	.00	.00	.00	0
02142122 - LOWER LITTLE R TRIB AT SR 1124 NR TAYLORSVILLE N (LAT 35 53 24 LONG 081 13 52)												
MAR , 1977 30...	.04	.17	.12	.05	.22	.97	.03	.01	.00	.00	.00	0
02142692 - KILLIAN CREEK AT SR 1349 NEAR DENVER N C (LAT 35 32 10 LONG 080 03 13)												
MAR , 1977 30...	--	--	--	--	--	--	--	--	--	--	--	4
02152514 - LITTLE HARRIS CREEK AT SR 1821 NEAR CAMPBELL N C (LAT 35 22 34 LONG 081 35 45)												
MAR , 1977 30...	--	--	--	--	--	--	--	--	--	--	--	7

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL CHROMIUM (CR) (UG/L)	SUSPENDED CHROMIUM (CR) (UG/L)	DISSOLVED CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUSPENDED COPPER (CU) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)
CAPE FEAR RIVER BASIN--Continued									
02101357 - BIG GOVERNORS CREEK TRIB NEAR CARTHAGE N C (LAT 35 23 05 LONG 079 19 56)									
JAN , 1977 10...	<10	<10	0	2	1	1	13000	100	8
02102908 - FLAT CREEK NEAR INVERNESS N C (LAT 35 10 54 LONG 079 10 40)									
JAN , 1977 10...	10	10	0	1	1	0	340	130	8
SEP 08...	--	--	--	--	--	--	--	--	--
02107154 - SOUTH RIVER TRIB AT N C 41 AT TOMAHAWK N C (LAT 34 42 15 LONG 078 20 25)									
JAN , 1977 10...	<10	<10	0	1	1	0	250	230	5
PEE DEE RIVER BASIN--Continued									
02115496 - LITTLE FORBUSH CREEK NEAR FORBUSH N C (LAT 36 11 13 LONG 080 34 59)									
JUN , 1977 16...	10	8	2	5	3	2	2900	380	10
02115946 - FRYES CREEK TRIB AT SR 1506 NEAR MIDWAY N C (LAT 35 57 30 LONG 080 14 32)									
APR , 1977 05...	--	--	1	3	3	0	16000	70	14
02129028 - BONES FORK CREEK NEAR HOFFMAN N C (LAT 35 01 26 LONG 079 38 02)									
JAN , 1977 10...	<10	<10	0	1	0	1	180	170	7
SANTEE RIVER BASIN--Continued									
02140304 - WILSON CREEK NEAR GRAGG N C (LAT 37 05 49 LONG 081 48 28)									
MAR , 1977 04...	--	--	6	--	--	2	--	30	--
02142122 - LOWER LITTLE R TRIB AT SR 1124 NR TAYLORSVILLE N (LAT 35 53 24 LONG 081 13 52)									
MAR , 1977 30...	--	--	1	0	0	0	2000	90	11
02142692 - KILLIAN CREEK AT SR 1349 NEAR DENVER N C (LAT 35 32 10 LONG 080 03 13)									
MAR , 1977 30...	--	--	3	12	10	2	29000	110	--
02152514 - LITTLE HARRIS CREEK AT SR 1821 NEAR CAMPBELL N C (LAT 35 22 34 LONG 081 35 45)									
MAR , 1977 30...	10	8	2	8	1	7	23000	140	18

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	SUS-PENDED SEDI-MENT (MG/L)
CAPE FEAR RIVER BASIN--Continued								
02101357 - BIG GOVERNORS CREEK TRIB NEAR CARTHAGE N C (LAT 35 23 05 LONG 079 19 56)								
JAN , 1977								
10...	3	5	.0	0	10	10	0	39
02102908 - FLAT CREEK NEAR INVERNESS N C (LAT 35 10 54 LONG 079 10 40)								
JAN , 1977								
10...	8	0	.0	0	20	20	0	145
SEP								
08...	--	--	--	--	--	--	--	114
02107154 - SOUTH RIVER TRIB AT N C 41 AT TOMAHAWK N C (LAT 34 42 15 LONG 078 20 25)								
JAN , 1977								
10...	0	5	.0	0	10	10	0	12
PEE DEE RIVER BASIN--Continued								
02115496 - LITTLE FORBUSH CREEK NEAR FORBUSH N C (LAT 36 11 13 LONG 080 34 59)								
JUN , 1977								
16...	4	6	.0	0	10	10	0	26
02115946 - FRYES CREEK TRIB AT SR 1506 NEAR MIDWAY N C (LAT 35 57 30 LONG 080 14 32)								
APR , 1977								
05...	14	0	.0	0	20	20	0	411
02129028 - BONES FORK CREEK NEAR HOFFMAN N C (LAT 35 01 26 LONG 079 38 02)								
JAN , 1977								
10...	5	2	.0	0	0	0	0	--
SANTEE RIVER BASIN--Continued								
02140304 - WILSON CREEK NEAR GRAGG N C (LAT 37 05 49 LONG 081 48 28)								
MAR , 1977								
04...	--	2	.0	0	--	--	20	--
02142122 - LOWER LITTLE R TRIB AT SR 1124 NR TAYLORSVILLE N (LAT 35 53 24 LONG 081 13 52)								
MAR , 1977								
30...	11	0	.1	0	0	0	10	23
02142692 - KILLIAN CREEK AT SR 1349 NEAR DENVER N C (LAT 35 32 10 LONG 080 03 13)								
MAR , 1977								
30...	--	2	.1	0	--	--	10	630
02152514 - LITTLE HARRIS CREEK AT SR 1821 NEAR CAMPBELL N C (LAT 35 22 34 LONG 081 35 45)								
MAR , 1977								
30...	16	2	.1	0	--	--	10	788

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS H+ (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)
TENNESSEE RIVER BASIN												
03445376 - NORTH FORK MILLS RIVER ABOVE MILLS RIVER N C (LAT 35 24 25 LONG 082 38 47)												
MAR , 1977 30...	1110	16	--	10.0	--	--	--	--	--	--	--	--
03450000 - BEETREE CREEK NEAR SWANNANOA N C (LAT 35 39 11 LONG 082 24 20)												
MAR , 1977 30...	0920	20	--	9.0	--	--	--	--	--	--	--	--

DATE	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)
03445376 - NORTH FORK MILLS RIVER ABOVE MILLS RIVER N C (LAT 35 24 25 LONG 082 38 47)												
MAR , 1977 30...	--	--	--	--	--	--	--	--	--	--	--	--
03450000 - BEETREE CREEK NEAR SWANNANOA N C (LAT 35 39 11 LONG 082 24 20)												
MAR , 1977 30...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA NITROGEN (N) (MG/L)	DISSOLVED AMMONIA (NH4) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)
03445376 - NORTH FORK MILLS RIVER ABOVE MILLS RIVER N C (LAT 35 24 25 LONG 082 38 47)												
MAR , 1977 30...	--	--	--	--	.19	.00	.19	.19	.01	.00	.00	.26
03450000 - BEETREE CREEK NEAR SWANNANOA N C (LAT 35 39 11 LONG 082 24 20)												
MAR , 1977 30...	--	--	--	--	.01	.00	.01	.02	.00	.00	.00	.29

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	SUS-PENDED KJEL. NITRO-GEN (N) (MG/L)	DIS-SOLVED KJEL. NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)	TOTAL ORTHO PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	TOTAL ARSENIC (AS) (UG/L)
TENNESSEE RIVER BASIN--Continued												
03445376 - NORTH FORK MILLS RIVER ABOVE MILLS RIVER N C (LAT 35 24 25 LONG 082 38 47)												
MAR , 1977 30...	.32	.27	.00	.32	.46	2.0	.01	.01	.00	.00	.00	0
03450000 - BEETREE CREEK NEAR SWANNANOA N C (LAT 35 39 11 LONG 082 24 20)												
MAR , 1977 30...	.36	.29	.00	.36	.30	1.3	.00	.01	.00	.00	.00	0

DATE	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)
03445376 - NORTH FORK MILLS RIVER ABOVE MILLS RIVER N C (LAT 35 24 25 LONG 082 38 47)									
MAR , 1977 30...	10	10	0	0	0	0	750	20	7
03450000 - BEETREE CREEK NEAR SWANNANOA N C (LAT 35 39 11 LONG 082 24 20)									
MAR , 1977 30...	--	--	0	8	8	0	1500	20	8
SEP 08...	--	--	--	--	--	--	--	--	--

DATE	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	SUS-PENDED SEDI-MENT (MG/L)
03445376 - NORTH FORK MILLS RIVER ABOVE MILLS RIVER N C (LAT 35 24 25 LONG 082 38 47)								
MAR , 1977 30...	0	8	.0	0	20	20	0	15
03450000 - BEETREE CREEK NEAR SWANNANOA N C (LAT 35 39 11 LONG 082 24 20)								
MAR , 1977 30...	5	3	.0	0	20	20	0	8
SEP 08...	--	--	--	--	--	--	--	4

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
CHOWAN RIVER BASIN				
02053200 - POTECASI CREEK NEAR UNION, N. C. (LAT 36 22 14 LONG 077 01 36)				
OCT , 1976				
05...	0831	22	8	.48
NOV				
23...	1701	88	16	3.8
DEC				
23...	1010	326	13	11
JAN , 1977				
11...	0830	1080	158	461
11...	1655	1160	117	366
12...	1010	1140	54	166
MAR				
23...	0910	455	50	61
02053500 - AHOSKIE CREEK AT AHOSKIE N C (LAT 36 16 50 LONG 077 00 00)				
OCT , 1976				
04...	1548	2.7	4	.03
NOV				
23...	1059	4.0	7	.08
DEC				
23...	0835	16	21	.91
JAN , 1977				
11...	1030	557	128	192
11...	1230	543	116	170
11...	1710	460	105	130
12...	0850	181	63	31
12...	1000	174	65	31
MAR				
24...	1215	102	41	11
ROANOKE RIVER BASIN				
02068500 - DAN RIVER NEAR FRANCISCO, N.C. (LAT 36 30 53 LONG 080 18 11)				
MAR , 1977				
28...	1141	134	5	1.8
APR				
28...	1250	145	11	4.3
JUN				
07...	1335	103	36	10
JUL				
19...	1335	90	22	5.3
AUG				
23...	1338	91	267	66
SEP				
13...	1313	67	8	1.4
02071000 - DAN RIVER NEAR WENTWORTH N C (LAT 36 24 47 LONG 079 49 45)				
MAR , 1977				
31...	1045	955	43	111
MAY				
05...	0910	816	55	121
JUN				
08...	1025	533	52	75
JUL				
22...	1035	246	29	19
AUG				
25...	1008	316	113	96

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
		ROANOKE RIVER BASIN--Continued		
02074000 - SMITH RIVER AT EDEN, N. C. (LAT 36 31 30 LONG 079 45 54)				
MAR , 1977				
31...	1429	513	16	22
MAY				
05...	1108	811	42	92
JUN				
08...	1318	391	36	38
SEP				
15...	1233	274	12	8.9
02077660 - MAYO CREEK NEAR WOODSDALE N C (LAT 36 31 48 LONG 078 52 42)				
AUG , 1977				
19...	1605	15	190	7.7
02081000 - ROANOKE RIVER NEAR SCOTLAND NECK NC (LAT 36 12 33 LONG 077 23 02)				
OCT , 1976				
01...	1110	2270	19	116
DEC				
01...	1255	10300	13	362
		PAMLICO RIVER BASIN		
02081500 - TAR RIVER NEAR TAR RIVER N C (LAT 36 11 41 LONG 078 35 00)				
NOV , 1976				
15...	1045	4.2	9	.10
JUL , 1977				
25...	1030	.90	16	.04
02081747 - TAR R AT US 401 AT LOUISBURG N C (LAT 36 05 41 LONG 078 17 43)				
OCT , 1976				
07...	1418	42	52	5.9
NOV				
16...	1440	212	17	9.7
DEC				
20...	0920	263	18	13
JAN , 1977				
26...	1655	214	15	8.7
FEB				
02...	0935	142	4	1.5
07...	0941	104	7	2.0
MAR				
01...	0810	1970	243	1290
21...	0835	376	33	34
APR				
26...	1100	144	19	7.4
JUN				
13...	0935	53	22	3.1
JUL				
25...	1100	19	29	1.5
AUG				
29...	0930	21	35	2.0
02082770 - SWIFT CREEK AT HILLIARDSTON, N. C. (LAT 36 06 42 LONG 077 55 16)				
NOV , 1976				
16...	0947	163	19	8.4
JUL , 1977				
12...	0940	12	7	.23

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
PAMLICO RIVER BASIN--Continued				
02082950 - LITTLE FISHING CREEK NEAR WHITE OAK N C (LAT 36 11 08 LONG 077 52 34)				
NOV , 1976				
16...	1206	226	24	15
JUL , 1977				
12...	0900	66	38	6.8
02083000 - FISHING CREEK NEAR ENFIELD, N. C. (LAT 36 09 00 LONG 077 42 00)				
OCT , 1976				
04...	1220	103	10	2.8
NOV				
17...	0945	507	15	21
DEC				
22...	1512	499	11	15
JAN , 1977				
10...	1220	1130	53	162
12...	1330	2350	91	577
MAR				
22...	1505	822	32	71
02083800 - CONETOE CREEK NEAR BETHEL, N. C. (LAT 35 46 30 LONG 077 27 40)				
OCT , 1976				
06...	0940	3.9	2	.02
NOV				
22...	1258	5.7	1	.02
DEC				
21...	1130	58	9	1.4
JAN , 1977				
10...	1425	582	315	495
11...	1430	630	49	83
12...	1130	340	26	24
MAR				
22...	0953	223	100	60
02084500 - HERRING RUN NEAR WASHINGTON N C (LAT 35 34 03 LONG 077 01 09)				
OCT , 1976				
06...	1650	1.0	3	.01
NOV				
17...	1020	8.8	53	1.3
DEC				
29...	1730	13	9	.32
FEB , 1977				
09...	0840	3.2	5	.04
MAR				
23...	1400	30	72	5.8
MAY				
24...	1400	231	2340	1460
24...	1540	254	1050	720
24...	1753	146	473	186
24...	1850	134	404	146
JUN				
15...	1635	1.4	30	.11
JUL				
28...	1440	.70	13	.02
AUG				
30...	1732	8.0	14	.30

ANALYSES OF SAMPLES COLLECTED AT GAGING STATIONS AND MISCELLANEOUS SITES

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
PAMLICO RIVER BASIN--Continued				
02084540 - DURHAM CREEK AT EDWARD N C (LAT 35 19 25 LONG 076 52 26)				
OCT , 1976				
06...	1015	9.2	13	.32
NOV				
17...	1215	40	9	.97
DEC				
29...	1505	82	2	.44
FEB , 1977				
09...	1230	21	3	.17
MAR				
29...	0945	48	3	.39
MAY				
05...	1355	4.9	12	.16
JUN				
16...	0948	27	17	1.2
JUL				
27...	1634	.20	43	.02
AUG				
29...	1525	.34	12	.01
02084571 - VAN SWAMP NEAR HOKE N C (LAT 35 43 49 LONG 076 44 49)				
JUN , 1977				
15...	1330	6.7	8	.14
AUG				
31...	1707	14	7	.26
NEUSE RIVER BASIN				
02085070 - ENO RIVER NEAR DURHAM, N. C. (LAT 36 04 21 LONG 078 54 24)				
NOV , 1976				
19...	0900	16	5	.22
02085220 - LITTLE RIVER NEAR ORANGE FACTORY N C (LAT 36 08 20 LONG 078 54 24)				
JUL , 1977				
26...	1515	.58	16	.03
02085500 - FLAT RIVER AT BAHAMA, N. C. (LAT 36 10 57 LONG 078 52 44)				
NOV , 1976				
19...	0930	15	8	.32
JUL , 1977				
26...	1410	8.1	16	.35
02087000 - NEUSE RIVER NEAR NORTHSIDE N C (LAT 36 02 54 LONG 078 44 50)				
NOV , 1976				
15...	1200	25	8	.54
02087183 - NEUSE RIVER NEAR FALLS N C (LAT 35 56 24 LONG 078 34 32)				
JUL , 1977				
12...	1400	55	7	1.0
25...	0745	17	4	.18

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
		NEUSE RIVER BASIN--Continued		
02087570 - NEUSE RIVER AT SMITHFIELD, N.C. (LAT 35 30 46 LONG 078 21 00)				
OCT , 1976				
01...	1250	124	10	3.3
NOV				
19...	0800	395	21	22
JUL , 1977				
12...	1630	121	37	12
22...	1105	69	11	2.0
02088000 - MIDDLE CREEK NEAR CLAYTON, N. C. (LAT 35 34 12 LONG 078 35 30)				
NOV , 1976				
15...	0845	23	5	.31
JUL , 1977				
12...	1745	3.5	7	.07
22...	1310	.62	6	.01
02088470 - LITTLE RIVER NEAR KENLY, N. C. (LAT 35 35 18 LONG 078 11 12)				
NOV , 1976				
16...	1115	102	11	3.0
JUL , 1977				
29...	0830	5.8	15	.23
02088500 - LITTLE RIVER NEAR PRINCETON, N. C. (LAT 35 30 40 LONG 078 09 36)				
NOV , 1976				
16...	1140	86	8	1.9
JUL , 1977				
29...	0930	8.2	8	.18
02089000 - NEUSE RIVER NEAR GOLDSBORO, N. C. (LAT 35 20 14 LONG 077 59 51)				
NOV , 1976				
17...	1045	767	19	39
JUL , 1977				
12...	1430	187	32	16
02090380 - CONTENTNEA CREEK NEAR LUCAMA, N. C. (LAT 35 41 29 LONG 078 06 29)				
NOV , 1976				
15...	1040	.78	16	.03
JUL , 1977				
12...	0845	19	8	.41
22...	0845	1.9	7	.04
02090625 - TURNER SWAMP NEAR EUREKA, N. C. (LAT 35 34 10 LONG 077 52 40)				
NOV , 1976				
16...	1310	.86	7	.02
JUL , 1977				
28...	1700	.38	27	.03
02091000 - NAHUNTA SWAMP NEAR SHINE, N. C. (LAT 35 29 20 LONG 077 48 22)				
NOV , 1976				
16...	1430	58	17	2.7
JUL , 1977				
12...	1310	11	24	.71
28...	1600	6.3	16	.27

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
		NEUSE RIVER BASIN--Continued		
02091500 - CONTENTNEA CREEK AT HOOKERTON, N. C. (LAT 35 25 40 LONG 077 35 10)				
OCT , 1976				
05...	1630	56	11	1.7
NOV				
17...	1445	293	16	13
JAN , 1977				
10...	1107	691	39	73
MAR				
15...	1030	2360	43	274
02091700 - LITTLE CONTENTNEA CREEK NEAR FARMVILLE, N. C. (LAT 35 32 08 LONG 077 30 41)				
OCT , 1976				
04...	1020	3.2	6	.05
NOV				
18...	0920	30	5	.40
JAN , 1977				
06...	1220	45	3	.36
11...	1030	1280	65	225
11...	1500	1250	53	179
FEB				
11...	1145	38	5	.51
MAR				
30...	1120	81	5	1.1
MAY				
09...	1705	6.4	20	.35
JUN				
13...	0925	15	13	.53
AUG				
29...	1115	4.6	8	.10
02092000 - SWIFT CREEK NEAR VANCEBORO N C (LAT 35 20 42 LONG 077 11 45)				
OCT , 1976				
07...	0900	12	73	2.4
NOV				
17...	1515	102	38	10
JAN , 1977				
06...	0930	166	5	2.2
11...	1300	1120	74	224
FEB				
10...	0925	82	6	1.3
MAR				
29...	1240	242	19	12
MAY				
06...	0910	24	15	.97
JUN				
17...	0805	41	19	2.1
AUG				
25...	1617	380	66	68
02092500 - TRENT RIVER NEAR TRENTON, N.C. (LAT 35 03 54 LONG 077 27 24)				
OCT , 1976				
06...	1300	26	3	.21
NOV				
18...	1225	195	11	5.8
JAN , 1977				
11...	1010	501	9	12

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)

CAPE FEAR RIVER BASIN

02093229 - HEWLETTS CR AT SR1102 NEAR WILMINGTON N.C. (LAT 34 11 28 LONG 077 53 32)

NOV , 1976				
17...	1050	2.3	4	.02
DEC				
29...	1020	5.9	7	.11
JAN , 1977				
12...	1450	3.1	3	.03
25...	1345	4.0	6	.06
FEB				
15...	1355	1.8	4	.02
MAR				
22...	1355	14	32	1.2
MAY				
25...	1118	54	504	73
26...	1504	3.8	5	.05
JUN				
14...	1250	.98	2	.01
AUG				
30...	1607	.80	8	.02

02093800 - REEDY FORK NEAR OAK RIDGE, N. C. (LAT 36 10 24 LONG 079 57 15)

OCT , 1976				
05...	1730	5.6	21	.32
09...	1010	680	492	903
09...	1300	740	393	785
09...	1705	650	286	502
09...	2020	383	297	307
NOV				
11...	1155	10	18	.49
DEC				
07...	1435	292	414	326
19...	1155	20	25	1.3
MAR , 1977				
02...	1435	18	47	2.3
APR				
01...	1309	14	26	.98
JUN				
20...	1020	4.0	34	.37
JUL				
20...	1335	2.8	21	.16
SEP				
08...	1430	603	3800	6190
09...	1410	75	376	76

02094500 - REEDY FORK NEAR GIBSONVILLE, N. C. (LAT 36 10 31 LONG 079 36 57)

OCT , 1976				
05...	1350	6.4	42	.73
09...	1550	182	368	181
NOV				
10...	1110	8.0	7	.15
DEC				
07...	1105	273	156	115
15...	1300	86	15	3.5
JAN , 1977				
18...	1500	19	9	.46
MAR				
02...	0854	42	20	2.3
APR				
04...	1130	28	15	1.1
JUN				
20...	1430	6.0	231	3.7
JUL				
25...	1440	2.0	15	.08
AUG				
17...	1340	2.9	15	.12
SEP				
14...	0948	5.7	36	.55

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
		CAPE FEAR RIVER BASIN--Continued		
02095500 - NORTH BUFFALO CREEK NEAR GREENSBORO, N.C. (LAT 36 07 13 LONG 079 42 30)				
OCT , 1976				
05...	1545	29	19	1.5
09...	1443	1120	186	562
NOV				
10...	1540	42	60	6.8
DEC				
07...	1322	353	198	189
15...	1345	109	49	14
JAN , 1977				
19...	1000	33	19	1.7
MAR				
02...	1150	42	34	3.9
APR				
01...	1045	33	15	1.3
05...	1035	760	691	1420
JUN				
20...	1330	25	14	.94
JUL				
20...	1130	16	8	.35
AUG				
18...	1345	172	116	54
SEP				
14...	1228	24	8	.52
02096500 - HAW RIVER AT HAW RIVER, N.C. (LAT 36 05 13 LONG 079 22 02)				
MAR , 1977				
30...	1340	387	25	26
MAY				
19...	0915	133	8	2.9
JUL				
20...	0810	90	13	3.2
AUG				
18...	0920	144	84	33
SEP				
16...	1028	139	11	4.1
02096700 - BIG ALAMANCE CREEK NEAR ELON COLLEGE N C (LAT 36 02 21 LONG 079 31 45)				
MAR , 1977				
30...	1106	102	26	7.2
APR				
05...	1215	750	626	1270
MAY				
18...	1450	12	21	.68
26...	1004	42	18	2.0
JUN				
20...	1830	10	56	1.5
JUL				
20...	0952	1.7	33	.15
AUG				
18...	0823	45	380	46
SEP				
16...	1250	30	94	7.6
02098200 - HAW RIVER NEAR HAYWOOD, N. C. (LAT 35 38 56 LONG 079 03 59)				
NOV , 1976				
18...	1530	630	12	20

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)

CAPE FEAR RIVER BASIN--Continued

02099000 - EAST FORK DEEP RIVER NEAR HIGH POINT, N.C. (LAT 36 02 15 LONG 079 56 46)

OCT , 1976				
04...	1550	3.8	19	.19
12...	1450	6.5	25	.44
NOV				
02...	1330	7.1	7	.13
DEC				
07...	1230	134	894	323
16...	1745	29	29	2.3
JAN , 1977				
18...	1220	12	9	.29
FEB				
25...	1030	16	26	1.1
JUL				
25...	1830	1.6	11	.05
SEP				
07...	1200	2.3	18	.11

02099500 - DEEP RIVER NEAR RANDLEMAN, N.C. (LAT 35 54 06 LONG 079 51 05)

OCT , 1976				
04...	1150	14	59	2.2
12...	1540	55	33	4.9
NOV				
07...	1720	50	9	1.2
DEC				
15...	1320	209	26	15
16...	1710	405	33	36
FEB , 1977				
25...	1400	125	75	25
MAR				
22...	1645	368	67	67
JUL				
25...	1550	10	11	.30
SEP				
07...	1505	14	8	.30

02100500 - DEEP RIVER AT RAMSEUR, N.C. (LAT 35 43 36 LONG 079 39 15)

OCT , 1976				
04...	0945	70	55	10
DEC				
08...	1030	1220	127	418
16...	1625	1450	149	583
JAN , 1977				
18...	1615	242	24	16
FEB				
25...	1545	374	30	30
MAR				
22...	1220	1570	81	343
JUN				
28...	1600	44	9	1.1
JUL				
25...	1250	22	13	.77
SEP				
02...	1400	31	21	1.8

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
		CAPE FEAR RIVER BASIN--Continued		
02101800 - TICK CREEK NEAR MOUNT VERNON SPRINGS, N. C. (LAT 35 39 37 LONG 079 20 08)				
OCT , 1976				
01...	1100	.34	12	.01
NOV				
18...	1100	1.4	10	.04
JAN , 1977				
10...	1100	385	189	196
10...	1300	285	172	132
10...	1500	196	134	71
FEB				
07...	1050	3.9	7	.07
MAR				
24...	1100	22	37	2.2
JUN				
17...	1300	.44	19	.02
JUL				
27...	1200	.01	5	.00
02102000 - DEEP RIVER AT MONCURE, N.C. (LAT 35 37 41 LONG 079 06 48)				
OCT , 1976				
01...	1130	97	7	1.8
NOV				
24...	1230	183	13	6.4
JUL , 1977				
13...	0835	137	11	4.1
27...	1145	45	18	2.2
02102192 - BUCKHORN CREEK NR CORINTH, N.C. (LAT 35 34 18 LONG 078 58 09)				
OCT , 1976				
01...	1045	16	14	.60
NOV				
23...	0905	19	15	.77
MAR , 1977				
28...	1355	60	19	3.1
02102908 - FLAT CREEK NEAR INVERNESS N C (LAT 35 10 54 LONG 079 10 40)				
OCT , 1976				
01...	1450	9.4	8	.20
NOV				
15...	0925	25	17	1.1
JAN , 1977				
10...	1515	61	145	24
11...	1125	18	6	.29
24...	1010	11	4	.12
AUG				
18...	1515	37	68	6.8
19...	1030	14	16	.60
SEP				
08...	0930	26	114	8.0
08...	1120	31	128	11
08...	1300	34	81	7.4

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
		CAPE FEAR RIVER BASIN--Continued		
02104387 - BUCKHEAD CREEK NEAR OWENS N.C. (LAT 35 01 37 LONG 078 57 08)				
NOV , 1976				
15...	1330	52	70	9.8
DEC				
27...	1200	2.8	15	.11
JAN , 1977				
11...	1010	10	28	.76
24...	1140	2.8	8	.06
FEB				
07...	1320	1.8	11	.05
JUL				
25...	1210	1.6	7	.03
AUG				
16...	1230	11	50	1.5
18...	1220	157	381	162
18...	1513	136	308	113
29...	1150	1.4	6	.02
SEP				
08...	0945	17	50	2.3
02105500 - CAPE FEAR R AT WILM O HUSKE LOCK NR TARHEEL N C (LAT 34 50 05 LONG 078 49 27)				
OCT , 1976				
04...	1125	1010	6	16
JAN , 1977				
24...	1455	3830	9	93
FEB				
14...	1200	2360	9	57
MAY				
05...	1145	1510	9	37
JUN				
13...	1525	945	10	26
JUL				
29...	1130	517	6	8.4
AUG				
29...	1515	760	10	21
02106000 - LITTLE COHARIE CREEK NEAR ROSEBORO, N. C. (LAT 34 57 13 LONG 078 29 17)				
OCT , 1976				
07...	1740	10	6	.16
NOV				
22...	1205	59	4	.64
JAN , 1977				
04...	1055	94	3	.76
MAR				
25...	1355	471	3	3.8
02106500 - BLACK RIVER NEAR TOMAHAWK N C (LAT 35 45 17 LONG 078 17 21)				
OCT , 1976				
07...	1015	69	4	.75
NOV				
19...	1045	689	8	15
JAN , 1977				
03...	1545	719	1	1.9
26...	1140	1180	2	6.4
MAR				
24...	1640	2730	9	66
02107000 - SOUTH RIVER NEAR PARKERSBURG, N. C. (LAT 34 48 45 LONG 018 27 26)				
OCT , 1976				
07...	1450	6.2	5	.08
NOV				
19...	1401	185	2	1.0
JAN , 1977				
26...	1220	670	1	1.8
MAR				
25...	1115	1670	4	18

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
		CAPE FEAR RIVER BASIN--Continued		
02108000 - NORTHEAST CAPE FEAR RIVER NEAR CHINQUAPIN, N. C. (LAT 34 49 45 LONG 077 49 57)				
OCT , 1976				
06...	1130	63	3	.51
NOV				
18...	1135	630	14	24
DEC				
30...	1000	1440	5	19
JAN , 1977				
13...	1500	2210	11	66
20...	0915	1620	2	8.7
MAR				
23...	1255	3480	16	150
24...	1300	3670	12	119
02108500 - ROCKFISH CREEK NEAR WALLACE, N. C. (LAT 34 44 32 LONG 078 02 22)				
NOV , 1976				
18...	1530	169	10	4.6
JAN , 1977				
03...	1320	67	2	.36
13...	1040	316	4	3.4
MAR				
23...	1440	807	16	35
02108548 - LITTLE ROCKFISH CREEK AT WALLACE N C (LAT 34 44 02 LONG 077 58 03)				
JAN , 1977				
12...	1615	23	3	.19
26...	0950	11	2	.06
FEB				
16...	1425	3.0	4	.03
MAR				
24...	0930	43	13	1.5
MAY				
25...	1411	61	43	7.1
25...	1431	67	41	7.4
25...	1530	78	76	16
26...	1310	90	18	4.4
31...	1240	12	5	.16
JUN				
14...	1225	24	20	1.3
AUG				
31...	1330	.54	9	.01
		WACCAMAW RIVER BASIN		
02109500 - WACCAMAW RIVER AT FREELAND, N. C. (LAT 34 05 43 LONG 078 32 56)				
OCT , 1976				
05...	1125	87	14	3.3
NOV				
16...	1530	88	8	1.9
DEC				
28...	1455	1200	4	13
JAN , 1977				
12...	1225	1190	3	9.6
25...	0945	900	4	9.7
MAR				
22...	0945	1600	12	52

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
		PEE DEE RIVER BASIN		
02111000 - YADKIN RIVER AT PATTERSON, N. C. (LAT 35 59 29 LONG 081 33 30)				
MAR , 1977				
30...	1545	168	99	45
MAY				
02...	1400	57	2	.31
JUN				
29...	1100	31	14	1.2
JUL				
28...	1530	19	4	.21
AUG				
30...	1400	20	10	.54
SEP				
08...	1500	175	114	54
02111180 - ELK CREEK AT ELKVILLE, N.C. (LAT 36 04 16 LONG 081 24 13)				
MAR , 1977				
30...	1600	232	154	96
MAY				
02...	1515	95	3	.77
JUN				
29...	0930	60	7	1.1
JUL				
28...	1615	33	6	.53
AUG				
30...	1500	33	4	.36
SEP				
08...	1540	344	119	111
02111500 - REDDIES RIVER AT NORTH WILKESBORO, N. C. (LAT 36 10 29 LONG 081 10 09)				
APR , 1977				
04...	1310	210	19	11
MAY				
02...	1300	158	9	3.8
31...	1245	117	13	4.1
JUL				
28...	1230	63	6	1.0
AUG				
31...	1230	72	13	2.5
02112000 - YADKIN RIVER AT WILKESBORO N C (LAT 36 09 LONG 081 09				
APR , 1977				
04...	1120	1360	29	106
MAY				
02...	1100	835	25	56
31...	1045	605	20	33
JUL				
28...	1000	466	13	16
02112120 - ROARING RIVER NEAR ROARING RIVER, N. C. (LAT 36 14 59 LONG 081 02 41)				
APR , 1977				
04...	1420	267	16	12
MAY				
02...	1500	185	5	2.5
31...	1525	141	8	3.0
JUL				
08...	1100	87	14	3.3
28...	1435	73	5	.99
AUG				
31...	1515	78	5	1.1

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
PEE DEE RIVER BASIN--Continued				
02112250 - YADKIN RIVER AT ELKIN, N. C. (LAT 36 14 40 LONG 080 50 42)				
MAR , 1977				
29...	1354	1230	36	120
APR				
08...	1045	2930	192	1520
MAY				
02...	1045	1480	40	160
JUN				
24...	1125	999	41	111
JUL				
01...	0840	737	24	48
27...	1035	737	18	36
SEP				
01...	0930	682	28	52
02112360 - MITCHELL RIVER NEAR STATE ROAD, N. C. (LAT 36 18 58 LONG 080 48 36)				
APR , 1977				
05...	1020	1230	433	1440
08...	1347	190	25	13
MAY				
04...	0900	114	8	2.5
JUN				
06...	1450	76	13	2.7
JUL				
27...	1310	41	11	1.2
SEP				
01...	1228	46	6	.75
02113000 - FISHER RIVER NEAR COPELAND, N. C. (LAT 36 20 27 LONG 080 40 20)				
MAR , 1977				
28...	1355	165	7	3.1
APR				
05...	1240	2200	913	5420
MAY				
04...	1123	160	10	4.3
JUL				
18...	1409	44	10	1.2
AUG				
23...	0928	63	134	23
02113500 - YADKIN RIVER AT SILOAM, N. C. (LAT 35 16 42 LONG 080 33 18)				
MAR , 1977				
25...	1100	2040	81	446
APR				
06...	1410	9560	650	16800
MAY				
02...	1430	1790	30	145
JUN				
06...	1240	1200	34	110
JUL				
27...	1615	854	21	48

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
		PEE DEE RIVER BASIN--Continued		
02113850 - ARARAT RIVER AT ARARAT, N. C. (LAT 36 24 16 LONG 080 33 43)				
MAR , 1977				
28...	0905	276	10	7.5
APR				
05...	1515	2960	1680	13400
MAY				
04...	1245	283	15	11
JUN				
07...	1055	202	40	22
JUL				
19...	1003	101	92	25
AUG				
23...	1052	210	956	542
02114450 - LITTLE YADKIN RIVER AT DALTON, N. C. (LAT 36 17 56 LONG 080 25 53)				
APR , 1977				
01...	1630	23	6	.37
05...	1115	740	927	1850
MAY				
03...	1145	19	25	1.3
JUL				
15...	1710	5.3	70	1.0
02115360 - YADKIN RIVER AT ENON, N. C. (LAT 36 07 55 LONG 080 26 39)				
MAR , 1977				
24...	1430	2890	75	585
APR				
01...	1800	3070	152	1260
04...	1330	2910	52	409
JUL				
27...	1410	1030	17	47
SEP				
09...	1550	3390	500	4580
02115856 - SALEM CREEK NR ATWOOD, N. C (LAT 36 02 16 LONG 080 18 18)				
APR , 1977				
01...	1510	33	18	1.6
MAY				
03...	1700	26	10	.70
SEP				
08...	1145	3290	1380	12300
08...	1715	1330	1140	4090
02115860 - MUDDY CREEK NEAR MUDDY CREEK, N. C. (LAT 36 00 01 LONG 080 20 25)				
APR , 1977				
01...	1115	142	35	13
05...	1630	2500	1020	6890
06...	1003	710	366	702
MAY				
03...	1615	120	39	13
JUL				
01...	1445	86	29	6.7
22...	1515	78	24	5.1
SEP				
08...	1245	4190	1430	16200
08...	1645	4890	793	10500
09...	1140	1020	438	1210

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
PEE DEE RIVER BASIN--Continued				
02115900 - SOUTH FORK MUDDY CREEK NR. CLEMMONS, N.C. (LAT 36 00 22 LONG 080 18 07)				
APR , 1977				
01...	1315	29	25	2.0
05...	1440	908	881	2160
06...	1130	116	320	100
MAY				
03...	1345	21	53	3.0
SEP				
08...	1045	753	2490	5060
08...	1745	856	1020	2360
02117030 - HUMPY CREEK NEAR FORK N C (LAT 35 51 17 LONG 080 26 24)				
MAR , 1977				
28...	1145	.68	21	.04
APR				
04...	1115	1.8	38	.18
25...	1100	.70	13	.02
MAY				
24...	1440	.58	14	.02
JUN				
02...	0930	.40	11	.01
JUL				
25...	1230	.10	8	.00
AUG				
31...	1430	.16	15	.01
SEP				
09...	1230	2.3	57	.35
02118000 - SOUTH YADKIN RIVER NEAR MOCKSVILLE N C (LAT 35 50 39 LONG 080 39 38)				
MAR , 1977				
28...	1100	249	16	11
31...	1415	825	195	434
APR				
04...	1045	451	40	49
06...	1515	3090	333	2780
25...	0930	366	55	54
MAY				
24...	1320	214	89	51
JUN				
02...	0800	273	349	257
27...	0915	157	62	26
JUL				
25...	1100	82	41	9.1
02118500 - HUNTING CREEK NEAR HARMONY, N. C. (LAT 36 00 01 LONG 080 44 45)				
MAR , 1977				
09...	1625	190	12	6.2
APR				
08...	0925	331	69	62
MAY				
24...	1343	139	49	18
JUN				
13...	1020	101	54	15
JUL				
19...	0832	57	17	2.6
AUG				
18...	1445	504	804	1090
SEP				
09...	1000	693	232	434

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
		PEE DEE RIVER BASIN--Continued		
02125000 - BIG BEAR CREEK NEAR RICHFIELD, N. C. (LAT 35 20 02 LONG 080 20 09)				
MAR , 1977				
31...	1045	501	61	83
MAY				
12...	0900	4.7	75	.95
02128000 - LITTLE RIVER NEAR STAR, N. C. (LAT 35 23 11 LONG 079 49 56)				
MAR , 1977				
31...	1700	481	50	65
MAY				
12...	1640	36	6	.58
JUN				
30...	1350	14	46	1.7
SEP				
02...	0830	3.5	19	.18
02133500 - DROWNING CREEK NEAR HOFFMAN, N. C. (LAT 35 03 38 LONG 079 29 39)				
OCT , 1976				
01...	1700	108	7	2.0
NOV				
04...	1600	136	5	1.8
DEC				
09...	1745	435	4	4.7
JAN , 1977				
19...	1215	390	8	8.4
AUG				
31...	1700	58	6	.94
		SANTEE RIVER BASIN		
02138000 - CATAWBA RIVER NEAR MARION, N.C. (LAT 35 42 26 LONG 082 02 00)				
MAR , 1977				
04...	1415	396	162	173
13...	0230	10800	1760	51300
13...	0845	9200	885	22000
28...	1115	362	10	9.8
APR				
13...	1045	451	19	23
MAY				
04...	1300	964	295	768
JUN				
09...	1235	230	20	12
JUL				
19...	1330	123	11	3.7
AUG				
24...	1400	157	24	10
02138500 - LINVILLE RIVER NEAR NEBO N C (LAT 35 47 43 LONG 081 53 27)				
MAR , 1977				
29...	1345	145	2	.78
30...	1420	703	49	93
APR				
22...	1130	117	2	.63
MAY				
09...	1400	86	3	.70
JUN				
28...	1300	110	6	1.8
JUL				
27...	1500	47	3	.38
AUG				
17...	1145	52	12	1.7
SEP				
08...	1340	1230	151	501

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
SANTEE RIVER BASIN--Continued				
02141150 - LOWER CREEK AT MULBERRY ST AT LENOIR, N. C. (LAT 35 54 20 LONG 081 31 59)				
MAR , 1977				
30...	1215	282	1630	1240
APR				
05...	1240	416	925	1040
22...	1445	26	18	1.3
MAY				
19...	1050	20	18	.97
JUN				
29...	1345	21	64	3.6
JUL				
27...	1200	14	15	.57
AUG				
17...	1515	50	117	16
30...	1145	12	21	.68
SEP				
08...	1245	170	793	364
02142000 - LOWER LITTLE RIVER NEAR ALL HEALING SPRINGS, N. (LAT 35 56 50 LONG 081 13 57)				
MAR , 1977				
30...	1005	92	183	45
MAY				
02...	1100	27	8	.58
19...	1000	21	11	.62
JUN				
29...	1600	17	11	.50
JUL				
27...	0940	10	10	.27
AUG				
30...	0945	12	15	.49
SEP				
08...	1200	1210	1170	3820
02142900 - LONG CREEK NEAR PAW CREEK, N. C. (LAT 35 19 42 LONG 080 54 35)				
MAR , 1977				
08...	1030	24	36	2.3
APR				
01...	1030	36	67	6.5
MAY				
04...	1015	4.6	10	.12
JUN				
08...	1025	4.8	55	.71
JUL				
13...	1345	2.1	116	.66
SEP				
08...	0935	23	619	38
02143000 - HENRY FORK NEAR HENRY RIVER, N.C. (LAT 35 41 06 LONG 081 24 03)				
MAR , 1977				
21...	1100	126	5	1.7
30...	1410	594	104	167
JUN				
30...	0930	77	41	8.5
JUL				
25...	0930	39	7	.74
SEP				
08...	1055	692	123	230

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
SANTEE RIVER BASIN--Continued				
02144000 - LONG CREEK NEAR BESSEMER CITY, N. C. (LAT 35 18 23 LONG 081 14 03)				
MAR , 1977				
18...	1545	32	9	.78
30...	1700	1750	435	2060
APR				
21...	1200	31	15	1.3
JUL				
13...	1030	6.0	11	.18
AUG				
29...	1030	4.1	48	.53
SEP				
08...	1330	125	609	206
02146300 - IRWIN CREEK NEAR CHARLOTTE, N. C. (LAT 35 11 50 LONG 080 54 20)				
MAR , 1977				
08...	1210	40	23	2.5
31...	1520	102	140	39
MAY				
04...	1130	20	6	.32
JUL				
13...	1540	11	3	.09
AUG				
23...	1115	8.6	4	.09
SEP				
08...	1005	326	672	591
02146500 - LITTLE SUGAR CREEK NEAR CHARLOTTE N C (LAT 35 09 13 LONG 080 51 18)				
MAR , 1977				
08...	1430	39	83	8.7
30...	1155	3500	2230	21100
31...	1420	109	96	28
MAY				
04...	1530	14	19	.72
JUL				
14...	1040	7.4	19	.38
27...	1035	5.9	17	.27
AUG				
23...	1410	5.2	7	.10
SEP				
08...	1105	484	1580	2070
08...	1245	215	539	313
08...	1725	297	465	373
02146600 - MCALPINE CREEK AT SARDIS ROAD NEAR CHARLOTTE N C (LAT 35 08 13 LONG 080 46 06)				
MAR , 1977				
09...	1030	36	27	2.6
30...	1010	3280	1000	8860
MAY				
05...	1200	17	20	.92
JUL				
14...	1320	3.7	10	.10
AUG				
24...	1100	2.8	18	.14
SEP				
08...	1220	88	862	205

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
		SANTEE RIVER BASIN--Continued		
02146700 - MCMULLEN CR AT SHARON VIEW RD NEAR CHARLOTTE N C (LAT 35 08 27 LONG 080 49 13)				
MAR , 1977				
08...	1600	4.9	25	.33
30...	1135	341	1050	967
APR				
01...	1240	5.3	23	.33
MAY				
05...	1095	4.2	28	.32
JUN				
08...	1500	.99	18	.05
JUL				
14...	1155	.42	19	.02
27...	1145	.20	7	.00
AUG				
23...	1530	.18	8	.00
SEP				
08...	1235	8.6	150	3.5
02146750 - MCALPINE CR BELOW MCMULLEN CR NR PINEVILLE N C (LAT 35 03 59 LONG 080 52 12)				
MAR , 1977				
09...	1400	95	56	14
23...	1400	218	110	65
30...	1440	7060	388	7400
31...	1130	1450	160	626
MAY				
05...	1450	40	13	1.4
JUL				
14...	1510	7.2	7	.14
26...	1410	2.8	13	.10
SEP				
08...	1135	370	856	855
02146900 - TWELVE MILE CREEK NEAR WAXHAW, N. C. (LAT 34 57 06 LONG 080 45 23)				
MAR , 1977				
09...	1230	104	37	10
30...	1835	4300	253	2940
APR				
01...	1520	177	68	32
MAY				
09...	1400	16	11	.48
JUL				
15...	1320	4.9	6	.08
26...	1115	1.4	17	.06
02149000 - COVE CREEK NEAR LAKE LURE, N.C. (LAT 35 25 24 LONG 082 06 42)				
APR , 1977				
01...	1245	265	49	35
05...	1600	782	465	982
MAY				
09...	0930	129	18	6.3
JUL				
18...	1045	66	9	1.6
AUG				
24...	0940	75	136	28
02151000 - SECOND BROAD RIVER AT CLIFFSIDE, N.C. (LAT 35 14 08 LONG 081 45 57)				
MAR , 1977				
30...	1620	3690	873	8700
JUN				
14...	1430	244	47	31
JUL				
12...	1155	216	17	9.9
AUG				
24...	1435	225	22	13

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
		SANTEE RIVER BASIN--Continued		
02151500 - BROAD RIVER NEAR BOILING SPRINGS, N.C. (LAT 35 12 29 LONG 081 41 52)				
MAR , 1977				
31...	1000	7520	384	7800
MAY				
05...	1530	1510	28	114
JUN				
14...	1300	1390	57	214
JUL				
12...	1420	812	27	59
AUG				
23...	1030	694	23	43
02152100 - FIRST BROAD RIVER NEAR CASAR, N. C. (LAT 35 29 35 LONG 081 40 56)				
MAR , 1977				
31...	1630	260	68	48
MAY				
09...	1300	74	4	.80
JUN				
08...	1115	59	8	1.3
JUL				
18...	1515	41	3	.33
AUG				
23...	1435	34	6	.55
02152610 - SUGAR BRANCH NEAR BOILING SPRINGS N C (LAT 35 15 00 LONG 081 37 20)				
MAR , 1977				
30...	1320	40	572	62
MAY				
05...	1045	1.1	21	.06
JUN				
08...	1530	.71	1	.00
JUL				
18...	1300	.37	8	.01
AUG				
24...	1130	.27	3	.00
24...	1255	11	1590	47
		OHIO RIVER BASIN		
03161000 - SOUTH FORK NEW RIVER NEAR JEFFERSON, N. C. (LAT 36 24 LONG 081 25)				
MAR , 1977				
13...	1330	5180	1540	21500
29...	1444	483	11	14
APR				
28...	1010	524	17	24
JUN				
08...	1445	377	34	35
JUL				
13...	1430	418	52	59
AUG				
26...	1115	246	9	6.0

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
TENNESSEE RIVER BASIN				
03439000 - FRENCH BROAD RIVER AT ROSMAN N C (LAT 35 08 32 LONG 082 49 28)				
MAR , 1977				
14...	1350	786	32	68
APR				
06...	1415	675	120	219
MAY				
03...	1200	259	7	4.9
JUN				
10...	1030	179	4	1.9
JUL				
19...	1145	88	5	1.2
AUG				
29...	1205	88	5	1.2
SEP				
16...	1445	4690	237	3000
16...	1545	3620	221	2160
16...	1630	3050	197	1620
03441000 - DAVIDSON RIVER NEAR BREVARD, N.C. (LAT 35 16 23 LONG 082 42 21)				
MAR , 1977				
04...	1120	362	47	46
14...	1300	415	12	13
APR				
04...	1335	301	5	4.1
MAY				
03...	1030	146	2	.79
JUN				
10...	1230	100	4	1.1
JUL				
13...	1115	55	3	.45
AUG				
29...	1030	55	3	.45
SEP				
16...	1050	2630	555	3940
16...	1630	1510	92	375
16...	1705	1370	81	300
03441440 - LITTLE RIVER AB HIGH FALLS NEAR CEDAR MT N C (LAT 35 11 32 LONG 082 36 49)				
JUL , 1977				
19...	1445	37	5	.50
03443000 - FRENCH BROAD RIVER AT BLANTYRE N C (LAT 35 17 56 LONG 082 37 27)				
MAR , 1977				
04...	1150	916	46	114
14...	1220	7160	47	909
APR				
04...	1500	3110	53	445
MAY				
04...	1455	1310	48	170
JUN				
07...	1530	772	21	44
JUL				
08...	1330	428	15	17
AUG				
22...	1400	378	28	29
SEP				
16...	1650	4720	181	2310
16...	1725	4780	170	2190

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
		TENNESSEE RIVER BASIN--Continued		
03446000 - MILLS RIVER NEAR MILLS RIVER, N. C. (LAT 35 23 56 LONG 082 35 46)				
MAR , 1977				
04...	1230	273	76	56
14...	1455	630	42	71
APR				
04...	1000	363	42	41
MAY				
04...	1550	270	13	9.5
JUN				
10...	1445	108	3	.87
JUL				
13...	1200	74	5	1.0
AUG				
22...	1100	71	2	.38
SEP				
16...	1725	2460	120	797
16...	1800	2330	156	981
03448000 - FRENCH BROAD RIVER AT BENT CREEK N C (LAT 35 30 07 LONG 082 35 35)				
MAR , 1977				
14...	1530	9140	157	3870
29...	1630	1880	29	147
MAY				
04...	1645	2310	27	168
JUN				
13...	1400	1030	13	36
JUL				
11...	1130	849	98	225
AUG				
25...	1355	794	65	139
03448500 - HOMINY CREEK AT CANDLER, N.C. (LAT 35 32 28 LONG 082 40 35)				
APR , 1977				
04...	1345	258	155	108
MAY				
05...	1305	130	22	7.7
JUN				
07...	1615	81	34	7.4
JUL				
12...	1200	57	16	2.5
AUG				
23...	1005	44	27	3.2
03448960 - N FK SWANNANOA R BL BURNETT RES NR BLACK MTN NC (LAT 35 39 28 LONG 082 20 51.01)				
APR , 1977				
05...	1225	682	10	18
MAY				
04...	1615	163	3	1.3
JUN				
09...	1500	1.0	1	.00
JUL				
19...	1030	.36	2	.00
AUG				
29...	1215	.14	1	.00

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)

TENNESSEE RIVER BASIN--Continued

03451000 - SWANNANOA RIVER AT BILTMORE, N. C. (LAT 35 34 06 LONG 082 32 42)

MAR , 1977				
04...	1330	194	643	337
29...	0930	149	10	4.0
MAY				
04...	1140	585	579	915
JUN				
17...	1120	89	27	6.5
JUL				
13...	1430	60	56	9.1
AUG				
25...	1240	38	58	6.0

03451500 - FRENCH BROAD RIVER AT ASHEVILLE, N. C. (LAT 35 36 32 LONG 082 34 41)

MAR , 1977				
04...	1430	1870	295	1490
13...	0645	12700	1510	51800
14...	1535	10100	377	10300
29...	1245	2230	48	289
MAY				
04...	0920	2920	331	2610
JUN				
13...	1230	1260	16	54
JUL				
11...	1230	1160	63	197
AUG				
25...	0940	1280	97	335

03455500 - W FK PIGEON R AB LAKE LOGAN NEAR HAZELWOOD N C (LAT 35 23 46 LONG 082 56 17)

MAR , 1977				
13...	0520	1050	47	133
30...	1335	802	19	41
MAY				
03...	1115	95	3	.77
JUN				
07...	1155	70	1	.19
JUL				
11...	1115	32	2	.17
AUG				
25...	1015	27	1	.07
SEP				
16...	1220	1780	50	240

03456000 - W FK PIGEON R BL LAKE LOGAN NR WAYNESVILLE N C (LAT 35 26 38 LONG 082 54 46)

MAR , 1977				
13...	0500	1880	59	299
31...	1330	508	6	8.2
MAY				
03...	1415	162	2	.87
JUN				
07...	1405	133	3	1.1
JUL				
11...	1245	59	4	.64
AUG				
25...	1200	55	5	.74
SEP				
16...	1145	2360	21	134

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
		TENNESSEE RIVER BASIN--Continued		
03456500 - EAST FORK PIGEON RIVER NEAR CANTON, N.C. (LAT 35 27 42 LONG 082 52 12)				
MAR , 1977				
13...	0430	3070	318	2640
31...	1500	435	8	9.4
MAY				
03...	1545	148	2	.80
JUN				
07...	1020	134	4	1.4
JUL				
11...	1445	57	5	.77
AUG				
25...	1500	47	146	19
SEP				
16...	1000	2870	199	1540
16...	1335	2690	228	1660
03457000 - PIGEON RIVER AT CANTON, N. C. (LAT 35 31 30 LONG 082 50 28)				
MAR , 1977				
13...	0605	5570	368	5530
30...	1715	2130	108	621
MAY				
05...	1035	352	2	1.9
JUN				
07...	1515	270	6	4.4
JUL				
12...	0945	113	4	1.2
AUG				
23...	1115	90	2	.49
03459500 - PIGEON RIVER NEAR HEPCO, N. C. (LAT 35 38 07 LONG 082 59 22)				
APR , 1977				
04...	1045	2220	84	503
03463300 - SOUTH TOE RIVER NEAR CELO, N. C. (LAT 35 49 52 LONG 082 11 04)				
MAR , 1977				
13...	1730	900	28	68
28...	1450	149	3	1.2
MAY				
04...	1115	666	21	38
JUN				
09...	0945	99	1	.27
JUL				
19...	1600	38	4	.41
AUG				
24...	1130	42	5	.57
03479000 - WATAUGA RIVER NEAR SUGAR GROVE, N. C. (LAT 36 14 18 LONG 081 49 22)				
MAR , 1977				
13...	0955	4350	485	5700
29...	1100	165	4	1.8
JUN				
07...	1115	154	60	25
JUL				
13...	1130	177	84	40
AUG				
26...	1420	62	11	1.8

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
TENNESSEE RIVER BASIN--Continued				
03500240 - CARTOOGECHAYE CREEK NEAR FRANKLIN N C (LAT 35 09 31 LONG 083 23 39)				
MAR , 1977				
29...	1435	205	90	50
30...	1030	980	602	1590
MAY				
05...	1415	173	16	7.5
JUN				
16...	1400	93	17	4.3
JUL				
14...	1215	58	24	3.8
AUG				
25...	1415	86	30	7.0
03503000 - LITTLE TENNESSEE RIVER AT NEEDMORE, N. C. (LAT 35 20 11 LONG 083 31 39)				
MAR , 1977				
29...	1100	1550	31	130
MAY				
10...	1645	964	21	55
JUN				
10...	1140	634	21	36
JUL				
14...	1420	459	29	36
AUG				
31...	1045	361	16	16
03504000 - NANTAHALA RIVER NEAR RAINBOW SPRINGS, N. C. (LAT 35 07 35 LONG 083 37 11)				
APR , 1977				
05...	1050	1430	36	139
MAY				
10...	1400	196	5	2.6
JUN				
13...	1200	113	3	.92
JUL				
12...	1045	84	6	1.4
AUG				
25...	1200	75	4	.81
03505500 - NANTAHALA RIVER AT NANTAHALA, N. C. (LAT 35 17 55 LONG 083 39 22)				
APR , 1977				
05...	1750	1800	66	321
MAY				
13...	1630	637	7	12
JUN				
13...	1400	620	3	5.0
JUL				
18...	1330	630	13	22
AUG				
30...	1645	579	5	7.8

INSTANTANEOUS SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
TENNESSEE RIVER BASIN--Continued				
03510500 - TUCKASEGEE RIVER AT DILLSBORO, N.C. (LAT 35 21 59 LONG 083 15 38)				
MAR , 1977				
31...	1430	2140	56	324
JUN				
13...	1715	2440	461	3040
JUL				
11...	1440	348	16	15
AUG				
31...	1330	291	14	11
03512000 - OCONALUFTEE RIVER AT BIRDTOWN, N. C. (LAT 35 27 42 LONG 083 21 13)				
MAR , 1977				
31...	1200	1700	35	161
MAY				
04...	1245	568	11	17
JUN				
10...	1530	277	5	3.7
JUL				
11...	1020	290	1	.78
AUG				
22...	1200	278	9	6.8
03513000 - TUCKASEGEE RIVER AT BRYSON CITY, N. C. (LAT 35 25 40 LONG 083 26 50)				
MAR , 1977				
31...	1230	5090	59	811
MAY				
04...	1530	1760	25	119
JUN				
10...	1240	1000	9	24
JUL				
11...	1220	1140	112	345
AUG				
22...	1500	638	28	48
03548500 - HIWASSEE RIVER ABOVE MURPHY, N.C. (LAT 35 04 50 LONG 084 00 10)				
APR , 1977				
05...	1445	5780	131	2040
MAY				
13...	1145	1600	14	60
JUN				
14...	1345	637	82	141
JUL				
12...	1320	242	5	3.3
AUG				
30...	1230	251	4	2.7
03550000 - VALLEY RIVER AT TOMOTLA, N. C. (LAT 35 08 20 LONG 083 58 50)				
MAY , 1977				
13...	1315	177	5	2.4
JUN				
14...	1450	202	97	53
JUL				
12...	1440	89	17	4.1
AUG				
30...	1430	93	22	5.5

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 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, 68.30 ft (20.82 m) below land-surface datum, Sept. 30, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	63.85	62.88	63.26	60.82	65.14	66.16	65.11	66.70	66.14	65.94	---	67.55
10	64.23	62.69	62.81	62.42	65.50	66.66	65.54	66.65	65.54	66.17	---	67.15
15	64.33	62.78	62.63	62.66	66.01	66.79	65.45	66.63	65.07	65.15	---	67.38
20	64.40	62.63	62.45	64.19	65.58	66.72	66.33	66.85	65.80	64.40	---	67.76
25	63.65	62.93	63.06	64.81	64.98	66.25	66.09	66.69	66.06	64.67	---	66.28
EOM	62.48	63.14	62.28	65.00	65.58	65.55	66.69	66.25	65.93	---	67.11	68.14
MEAN	63.92	62.84	62.82	63.17	65.56	66.32	65.91	66.65	65.77	65.28	---	67.38

WTR YR 1977 MEAN 65.06 HIGH 60.45 JAN 6 LOW 68.14 SEP 30

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 (2.87 m) above mean sea level. 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.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.00	17.18	23.01	10.96	19.60	---	21.51	13.14	20.54	20.76	20.04	19.84
2	11.09	22.84	23.19	12.71	19.80	---	21.73	18.93	20.65	20.60	20.43	20.09
3	10.10	23.17	16.18	18.76	20.00	---	13.04	21.30	20.75	11.63	19.65	12.28
4	19.49	23.36	10.56	19.60	19.49	---	19.05	20.97	20.41	9.32	18.95	10.96
5	22.47	23.24	10.07	19.80	11.98	---	21.39	21.01	11.04	9.58	20.66	9.92
6	22.83	13.41	19.46	19.95	9.70	---	21.64	21.43	18.74	9.47	21.17	16.21
7	22.89	10.52	22.61	20.00	19.24	---	21.50	16.43	20.50	8.81	12.50	19.51
8	12.17	16.59	23.04	11.02	22.41	---	20.25	10.64	20.72	9.27	20.39	19.38
9	10.21	22.71	23.19	9.03	22.73	---	10.92	19.07	20.64	9.08	20.90	19.40
10	9.90	23.32	21.68	17.87	22.96	---	9.77	20.85	21.28	9.84	21.13	---
11	16.28	23.60	11.56	19.60	22.99	---	9.42	21.14	19.91	19.61	21.07	---
12	22.51	23.65	10.20	19.80	---	---	19.64	21.28	10.61	19.56	21.22	---
13	22.99	18.63	19.68	19.90	---	---	21.65	21.43	15.10	20.04	18.19	---
14	23.01	11.00	22.50	19.50	---	---	21.40	12.69	20.42	20.37	11.07	---
15	23.04	20.57	22.60	12.15	---	---	21.24	10.11	20.41	20.55	17.50	---
16	13.79	23.11	22.42	9.26	---	---	19.86	15.59	20.66	14.84	20.78	---
17	10.46	23.38	22.65	17.31	---	---	10.65	20.74	20.76	10.34	20.69	---
18	16.70	23.48	---	19.60	---	---	18.70	21.11	15.67	19.59	20.64	---
19	22.62	21.29	---	19.80	---	---	21.28	21.05	10.32	20.60	20.48	---
20	23.08	11.51	---	19.90	---	---	21.09	21.09	18.97	20.78	11.72	---
21	23.28	10.45	---	19.50	---	---	21.12	21.21	20.68	20.84	9.53	---
22	23.53	20.40	---	11.51	---	---	21.39	11.72	20.45	21.42	16.01	---
23	16.62	23.04	---	9.38	---	21.80	18.09	16.92	20.65	19.25	19.84	---
24	10.61	23.25	---	17.86	---	21.89	10.28	20.80	20.65	11.91	18.29	---
25	19.00	12.40	---	18.87	---	21.97	18.07	20.75	20.69	19.55	19.70	---
26	22.81	10.56	---	19.60	---	20.63	20.96	20.56	11.55	20.57	19.93	---
27	23.19	10.10	9.05	19.70	---	11.36	21.24	20.68	19.33	20.75	18.10	---
28	23.29	9.87	9.05	19.50	---	19.40	21.13	20.78	20.83	21.09	11.27	---
29	23.12	19.94	10.40	12.96	---	21.38	21.33	12.02	20.22	20.97	19.64	---
30	15.97	22.90	9.50	9.38	---	21.44	19.87	18.67	20.52	17.64	20.62	---
31	10.59	---	9.62	18.17	---	21.65	---	20.25	---	13.39	20.28	---
MEAN	18.31	18.64	16.91	16.54	19.17	20.16	18.64	18.52	18.78	16.51	18.46	16.39

WTR YR 1977 MEAN 18.02 HIGH 8.81 LOW 23.65

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 (1.07 m) above mean sea level. 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	11.17	DEC 28	10.86	MAR 23	11.12	JUN 15	11.34	JUL 27	11.76	AUG 31	11.95
NOV. 12	11.56	FEB 8	11.18	MAY 2	11.12						

353052077002201. Local number, NC-49.
LOCATION.--Lat 35°30'52", long 77°00'22", Hydrologic Unit 03020104, near Washington. Owner: Moose Club.
AQUIFER.--Castle Hayne Limestone at middle and late Eocene age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 185 ft (56.4 m), cased to 123 ft (37.5 m).
DATUM.--Land-surface datum is 13.95 ft (4.25 m) above mean sea level. Measuring point: Top of casing, 1.00 ft (0.30 m) below land-surface datum.
PERIOD OF RECORD.--December 1965 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.17 ft (1.58 m) below land-surface datum, Oct. 25, 1971; lowest, 9.66 ft (2.94 m) below land-surface datum, July 19, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.61	8.93	8.47	7.81	7.91	7.74	7.49	8.22	7.87	8.23	8.66	8.55
10	8.84	---	8.31	7.46	7.92	7.35	7.70	8.05	8.18	8.79	9.11	8.04
15	8.82	---	8.02	7.34	7.89	7.23	7.97	8.49	8.11	8.73	9.16	8.19
20	8.67	8.54	7.65	7.65	7.86	7.21	7.84	8.64	8.28	9.37	8.28	8.45
25	8.67	8.69	7.88	7.54	7.87	7.31	7.66	7.81	8.00	9.19	8.07	8.45
EOM	8.79	8.61	7.77	7.91	7.82	7.40	7.84	7.46	8.41	9.23	8.11	8.76
MEAN	8.74	8.76	8.08	7.67	7.91	7.40	7.75	8.13	8.03	8.88	8.62	8.36

WTR YR 1977 MEAN 8.19 HIGH 7.05 MAR 22 LOW 9.63 JUL 19

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 points: 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, 13.66 ft (4.16 m) below land-surface datum, Aug. 19, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.56	---	---	7.51	7.80	7.17	7.29	7.76	7.19	9.12	10.21	9.93
10	7.84	---	---	6.78	7.99	7.10	7.05	7.70	7.84	9.60	10.25	9.99
15	8.78	---	---	7.54	7.60	6.95	7.54	8.06	7.61	9.45	10.50	9.58
20	8.50	---	---	9.54	7.59	6.82	7.64	8.92	7.98	9.77	10.19	9.35
25	---	---	---	9.91	7.74	6.86	7.33	8.40	8.27	9.66	9.99	9.42
EOM	---	---	7.04	8.19	7.19	6.87	7.21	7.53	9.01	10.35	9.97	9.74
MEAN	8.38	---	7.17	8.29	7.80	6.97	7.35	8.07	7.92	9.60	10.18	9.72

WTR YR 1977 MEAN 8.42 HIGH 6.51 MAR 22 LOW 11.02 JAN 26

BEAUFORT COUNTY--Continued

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 Tertiary 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 (17.57 m) above mean sea level.
PERIOD OF RECORD.--January 1972 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 36.94 ft (11.26 m) above mean sea level, Feb. 3, 1972; lowest, 30.86 ft (9.41 m) above mean sea level, Dec. 7, 1973.

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	31.88	31.42	32.23	34.24	35.31	35.27	35.71	34.90	34.32	34.18	32.75	32.89
10	31.73	31.39	32.45	34.63	35.21	35.30	35.47	34.66	34.43	34.05	32.50	33.18
15	31.62	31.48	32.88	34.81	35.25	35.44	35.43	34.42	34.47	33.88	32.27	33.21
20	31.62	31.79	33.31	34.92	35.27	35.57	35.28	34.17	34.46	33.64	32.32	33.40
25	31.53	31.84	33.53	35.17	35.24	35.56	35.26	34.23	34.38	33.33	32.49	33.43
EOM	31.51	32.06	34.01	35.19	35.23	35.67	34.98	34.15	34.22	32.99	32.64	33.37
MEAN	31.64	31.61	32.98	34.71	35.22	35.44	35.38	34.44	34.38	33.74	32.50	33.19

WTR YR 1977 MEAN 33.76 MAX 35.71 APR 5 MIN 31.33 NOV 13 AND OTHERS

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 (17.72 m) above mean sea level.
PERIOD OF RECORD.--August 1971 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 57.37 ft (17.49 m) above mean sea level, Oct. 23, 1971; lowest, 51.70 ft (15.76 m) above mean sea level Dec. 7, 1973.

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	52.25	52.20	53.31	---	56.67	56.88	56.59	55.12	56.49	54.89	52.69	54.74
10	52.18	52.08	53.82	---	56.62	56.91	56.23	54.78	56.19	54.07	52.44	56.26
15	52.10	52.25	55.56	---	56.59	56.88	55.78	54.27	55.57	53.60	52.26	55.46
20	52.08	52.83	56.48	---	56.60	56.96	55.81	53.94	54.99	53.21	53.08	55.35
25	52.29	52.92	56.42	56.90	56.84	56.87	56.23	54.49	54.79	52.89	55.70	54.80
EOM	52.23	53.17	56.62	56.72	56.89	56.74	55.67	56.68	54.41	52.64	55.27	---
MEAN	52.20	52.51	55.24	56.73	56.64	56.87	56.08	55.07	55.58	53.68	53.09	55.20

WTR YR 1977 MEAN 54.80 MAX 57.13 MAR 22 MIN 52.04 NOV 13 AND OTHERS

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 (8.65 m) above mean sea level. Measuring point: Top of instrument shelf, 1.40 ft (0.43 m) above land-surface datum.
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.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	28.94	29.52	29.76	29.68	---	30.05	29.73	29.19	29.41	28.78	29.92	32.55
10	29.07	29.41	29.60	29.64	30.68	29.99	30.28	29.05	29.26	28.96	30.20	32.38
15	29.27	29.30	29.50	29.88	30.46	29.84	30.32	29.31	29.05	28.89	31.67	32.07
20	29.22	29.40	29.49	30.38	30.26	29.84	30.34	29.54	28.88	29.16	34.27	31.24
25	29.09	29.50	29.96	30.41	30.12	29.79	29.76	29.01	29.11	29.46	36.18	31.20
EOM	29.18	29.43	29.69	---	29.95	29.51	29.53	28.81	29.12	30.20	32.82	30.96
MEAN	29.14	29.41	29.63	29.99	30.35.	29.86	30.00	29.20	29.10	29.20	32.31	31.84

WTR YR 1977 MEAN 29.99 HIGH 28.76 JUL 6 LOW 36.65 AUG 24

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 (6.2 m) above mean sea level. 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.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.28	---	20.50	20.74	21.10	20.63	20.70	21.36	21.90	18.12	22.58	22.12
10	20.24	---	20.57	20.30	21.76	20.67	21.47	21.02	21.56	18.63	20.69	21.22
15	---	---	20.14	20.48	21.35	20.66	22.56	21.03	19.67	20.30	19.20	22.33
20	---	20.22	19.97	21.60	21.22	20.55	21.68	21.12	21.69	19.52	17.48	22.41
25	---	30.19	20.40	24.06	21.05	20.69	20.58	21.17	21.59	18.11	17.25	22.78
EOM	---	20.59	20.20	21.21	22.44	20.15	21.19	21.64	23.11	21.94	21.83	22.49
MEAN	20.26	21.61	20.40	21.41	21.38	20.62	21.44	21.36	21.76	19.81	19.98	22.26

WTR YR 1977 MEAN 21.03 HIGH 17.11 AUG 22 LOW 30.19 NOV 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 Resources and Community Develpment.
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 (2.66 m) above mean sea level. 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 7.54 ft (2.30 m) below land-surface datum, July 23, 1976, Sept. 4, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.81	5.61	5.44	5.18	5.34	5.03	4.93	6.05	6.21	6.85	---	7.26
10	6.08	5.69	5.52	4.91	5.52	5.32	5.69	5.70	6.12	---	---	7.01
15	5.92	5.38	5.17	5.23	5.17	5.03	5.60	6.19	6.25	---	---	7.10
20	5.45	5.13	4.95	5.42	5.01	4.95	5.88	6.46	6.49	---	---	7.02
25	5.77	5.60	5.24	5.41	5.35	5.12	5.69	6.12	6.40	---	---	6.56
EOM	5.53	5.45	5.08	5.69	5.19	5.16	5.87	5.93	6.71	---	---	6.36
MEAN	5.83	5.49	5.19	5.37	5.35	5.09	5.61	6.09	6.25	6.86	---	6.91

WTR YR 1977 MEAN 5.74 HIGH 4.79 DEC 26 LOW 7.31 SEP 4 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 (11.43 m) above mean sea level. 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, 18.22 ft (5.55 m) below land-surface datum, Aug. 31, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	17.90	JAN 5	17.70	MAR 23	17.60	JUN 15	17.76	JUL 26	17.98	AUG 31	18.22
NOV 24	17.92	FEB 9	17.71	MAY 2	17.86						

CHOWAN COUNTY--Continued

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 (8.10 m) above mean sea level. 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, 13.17 ft (4.01 m) below land-surface datum, Aug. 31, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	12.29	JAN 5	12.30	MAR 23	11.93	JUN 15	11.93	JUL 26	12.03	AUG 31	13.17
NOV 24	12.50	FEB 9	12.32	MAY 2	11.97						

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, 0.78 ft (0.24 m) above land-surface datum, Nov. 26, 1972; lowest, 6.91 ft (2.11 m) below land-surface datum, Dec. 6, 1973.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.77	5.78	5.02	1.00	1.48	0.69	1.25	1.37	1.66	1.26	4.86	5.39
10	5.81	6.11	2.96	0.56	1.85	0.90	2.23	1.45	1.18	1.18	5.32	4.14
15	6.04	5.30	1.03	0.51	1.50	0.85	2.94	2.90	2.61	1.77	5.63	5.03
20	5.48	4.51	0.88	1.20	1.21	1.06	2.68	3.91	1.41	3.36	2.95	5.63
25	4.70	5.15	1.27	0.89	0.84	1.28	1.47	0.45	1.63	4.01	4.18	6.04
EOM	5.43	4.50	0.86	1.27	0.68	1.51	2.58	1.64	1.43	4.69	4.90	6.33
MEAN	5.48	5.29	2.02	0.95	1.40	0.99	2.32	2.24	1.84	2.56	4.64	5.36

WTR YR 1977 MEAN 2.93 HIGH 0.43 DEC 16 LOW 6.33 SEP 30

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, 22.66 ft (6.91 m) below land-surface datum, Aug. 29, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	22.11	DEC 30	22.13	MAR 24	22.15	JUN 16	22.14	JUL 25	22.65	AUG 29	22.66
NOV 12	22.24	FEB 7	22.31	MAY 5	22.33						

CRAVEN COUNTY--Continued

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 (11.20 m) above mean sea level. 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, 82.42 ft (25.12 m) below land-surface datum, Aug. 25, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	74.65	73.40	72.72	74.01	75.24	---	---	*73.51	---	---	---	---
10	73.23	73.15	73.17	74.48	75.92	---	---	---	---	---	---	---
15	74.12	72.69	72.76	73.62	---	---	---	---	75.17	---	---	---
20	73.80	72.93	72.74	74.24	---	---	---	---	75.15	---	---	---
25	73.35	72.85	73.10	75.80	---	*74.15	---	---	---	---	---	---
EOM	72.87	72.99	73.56	74.22	---	---	---	---	---	---	*78.39	---
MEAN	73.91	73.02	73.02	74.23	75.44	---	---	---	75.19	---	---	---

WTR YR 1977 MEAN 73.78 HIGH 71.68 NOV 8 LOW 78.39 AUG 30

* Instantaneous Measurements

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 current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.10 ft (0.64 m) below land-surface datum, Oct. 25, 1971; lowest, 13.04 ft (3.97 m) below land-surface datum, Oct. 16, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.61	7.60	6.00	4.02	4.11	4.18	3.85	6.24	3.40	3.95	8.27	9.79
10	7.85	7.86	5.26	3.47	4.45	3.34	4.32	6.73	3.85	4.73	8.70	9.35
15	8.11	7.81	4.22	3.23	4.64	3.27	4.73	7.27	4.50	5.60	9.12	9.34
20	8.16	6.37	3.67	3.55	4.79	3.52	5.30	7.83	5.11	6.46	9.06	9.58
25	7.04	6.64	4.11	3.74	4.38	3.06	5.49	6.78	5.76	7.24	9.20	9.89
EOM	7.29	6.08	3.77	3.97	4.11	3.57	5.86	5.02	6.22	7.94	9.50	10.17
MEAN	7.64	7.15	4.57	3.69	4.48	3.49	4.79	6.66	4.69	5.89	8.89	9.66

WTR YR 1977 MEAN 5.97 HIGH 2.89 MAR 23 LOW 10.17 SEP 30

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, 6.89 ft (2.10 m) below land-surface datum, Aug. 13, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.02	6.08	6.13	6.03	6.05	6.17	6.13	6.35	6.33	6.57	6.85	6.83
10	6.02	6.09	6.15	5.88	6.25	6.22	6.35	6.39	6.35	6.64	6.84	6.69
15	6.05	6.04	6.00	5.95	6.17	6.13	6.31	6.47	6.42	6.70	6.83	6.81
20	5.99	6.00	5.95	6.04	6.12	6.10	6.37	6.55	6.39	6.74	6.68	6.78
25	6.00	6.11	6.08	6.00	6.14	6.17	6.24	6.31	6.45	6.78	6.71	6.85
EOM	6.00	6.09	5.96	6.12	6.17	6.18	6.37	6.34	6.54	6.79	6.79	6.86
MEAN	6.02	6.08	6.02	6.04	6.18	6.16	6.30	6.41	6.39	6.69	6.79	6.80

WTR YR 1977 MEAN 6.32 HIGH 5.88 JAN 10 LOW 6.88 AUG 13

CRAVEN COUNTY--Continued

345417076534001. Local number, NC-64.
LOCATION.--Lat 34°54'17", long 76°53'40", Hydrologic Unit 03020204, Cherry Point Marine Corps Base, Havelock. Owner: U.S. Marine Corps.
AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 120 ft (36.6 m), drilled to 122 ft (37.2 m), cased to 94 ft (28.7 m).
DATUM.--Land-surface datum is 25.11 ft (7.65 m) above mean sea level. Measuring point: Top of casing, at land-surface datum.
REMARKS.--Well destroyed Aug. 3, 1977.
PERIOD OF RECORD.--March 1967 to August 1977 (discontinued).
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.56 ft (5.35 m) below land-surface datum, Feb. 19, 1972; lowest, 21.76 ft (6.63 m) below land-surface datum, July 26-27, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	19.27	---	---	---	19.43	19.24	19.01	19.61	19.92	20.44	---	---
10	19.51	---	---	---	19.72	19.14	18.87	19.53	20.12	20.11	---	---
15	19.55	---	---	19.04	19.31	18.83	19.27	19.54	19.95	21.58	---	---
20	19.70	19.62	---	19.63	19.16	18.75	19.64	19.97	20.05	21.27	---	---
25	19.12	19.72	---	19.29	19.28	19.23	19.27	19.84	20.16	21.30	---	---
EOM	19.55	19.65	---	19.36	19.20	19.14	19.56	19.26	20.63	21.21	---	---
MEAN	19.48	19.57	---	19.33	19.38	19.06	19.30	19.63	20.03	20.98	---	---

WTR YR 1977 MEAN 19.68 HIGH 18.72 MAR 14 LOW 21.67 JUL 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.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	32.43	32.12	31.90	31.82	31.52	31.76	31.69	32.04	32.54	32.84
10	---	---	32.40	31.87	32.03	31.85	31.75	31.78	31.77	32.12	32.62	32.82
15	---	32.38	32.18	32.09	31.89	31.71	31.66	31.83	31.81	32.20	32.69	33.04
20	---	32.32	32.08	32.01	31.83	31.68	31.73	31.89	31.81	32.29	32.53	33.11
25	---	32.43	32.19	31.93	31.83	31.72	31.62	31.63	31.85	32.39	32.68	33.03
EOM	---	32.44	32.06	31.99	31.86	31.62	31.79	31.70	31.94	32.49	32.81	32.99
MEAN	---	32.38	32.22	32.06	31.93	31.75	31.69	31.79	31.78	32.22	32.62	32.97

WTR YR 1977 MEAN 32.12 HIGH 31.52 APR 5 LOW 33.15 SEP 18

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-suface 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 2	21.80	DEC 11	21.83	FEB 12	19.25	APR 9	17.61	JUN 4	19.11	JUL 30	21.05
9	22.40	18	20.14	19	19.43	16	17.86	11	19.27	AUG 6	21.31
16	21.41	26	19.54	26	19.60	23	17.73	18	19.54	13	21.36
23	21.40	JAN 8	19.68	MAR 5	19.51	30	17.95	25	19.80	20	20.95
30	21.41	15	18.98	12	19.21	MAY 7	18.06	JUL 5	20.18	29	21.27
NOV 6	21.45	22	18.91	19	19.10	14	18.33	9	20.34	SEP 3	21.42
20	21.66	27	18.87	26	19.10	23	18.74	16	20.55	17	19.41
27	21.92	FEB 8	19.23	APR 2	18.83	28	18.81	23	20.81	24	19.56
DEC 4	21.63										

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 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.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47.66	46.46	46.22	46.46	46.62	46.40	46.31	46.23	47.35	---	47.93	48.19
2	47.02	46.49	46.20	46.51	46.65	46.42	46.14	46.41	47.50	---	48.20	48.17
3	46.73	46.46	46.28	46.50	46.62	46.42	46.04	46.98	47.72	---	48.22	47.64
4	46.66	46.45	46.32	46.48	46.57	46.38	46.16	47.06	47.10	---	48.25	47.35
5	47.14	46.46	46.33	46.48	46.55	46.35	46.41	47.08	46.66	---	48.29	47.26
6	47.11	46.50	46.32	46.48	46.61	46.35	46.30	47.24	47.11	---	47.77	47.77
7	47.37	46.50	46.19	46.42	46.62	46.26	46.12	46.73	46.73	---	47.47	48.09
8	47.60	46.49	46.15	46.44	46.61	46.31	46.35	46.41	46.49	---	47.94	48.11
9	46.97	46.45	46.21	46.38	46.59	46.32	46.80	46.28	46.50	---	48.16	48.00
10	46.72	46.46	46.21	46.22	46.59	46.32	46.71	46.27	46.82	---	48.15	47.46
11	46.67	46.49	46.18	46.50	46.57	46.32	46.77	46.26	46.69	---	48.28	47.17
12	46.79	46.51	46.10	46.32	46.58	46.31	46.69	46.45	46.49	---	48.35	47.65
13	46.77	46.64	46.08	46.37	46.52	46.22	46.75	46.89	46.91	---	47.84	47.66
14	46.62	46.87	46.13	46.43	46.53	46.21	46.79	46.63	47.35	---	47.55	47.87
15	47.10	46.54	46.07	46.24	46.51	46.23	47.03	46.42	47.40	---	47.99	47.96
16	46.95	46.46	45.98	46.26	46.50	46.20	46.59	46.56	47.27	---	48.26	48.03
17	46.71	46.46	45.98	46.23	46.53	46.21	46.28	46.96	---	---	48.34	47.53
18	46.67	46.42	46.01	46.07	46.52	46.16	46.19	47.35	---	---	48.21	47.19
19	46.66	46.41	---	46.17	46.50	46.19	46.57	47.48	---	---	47.91	47.63
20	46.60	46.39	---	46.22	46.46	46.15	46.93	47.65	---	---	47.51	47.96
21	46.59	46.38	---	46.27	46.49	46.15	46.98	47.22	---	---	47.26	48.00
22	46.54	46.41	---	46.31	46.50	46.04	47.14	46.88	---	---	47.72	48.02
23	46.47	46.45	---	46.32	46.49	46.07	46.68	47.38	---	---	48.08	48.05
24	46.46	46.45	---	46.13	46.43	46.08	46.26	47.11	---	---	48.16	47.54
25	46.42	46.45	---	46.17	46.39	46.08	46.13	47.03	---	48.08	48.11	47.23
26	46.83	46.45	---	46.47	46.40	46.08	46.08	47.07	---	48.15	48.12	47.72
27	46.77	46.42	---	46.53	46.40	46.09	46.08	47.24	---	48.25	47.67	47.98
28	46.56	46.37	---	46.58	46.38	46.08	46.38	46.76	---	48.26	47.32	48.06
29	46.49	46.32	---	46.60	---	46.05	46.72	46.48	---	48.27	47.71	48.14
30	46.48	46.29	46.35	46.63	---	46.10	46.47	46.41	---	47.73	48.05	48.11
31	46.43	---	46.35	46.61	---	46.21	---	46.98	---	47.43	48.23	---
MEAN	46.79	46.46	46.18	46.38	46.52	46.21	46.49	46.83	47.00	48.02	47.96	47.78

WTR YR 1977 MEAN 46.82 HIGH 45.98 LOW 48.35

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 (16.61 m) above mean sea level. 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.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.00	8.19	7.99	6.82	6.08	5.74	5.67	6.43	6.40	7.21	7.95	8.77
10	8.07	8.21	7.81	6.50	6.16	5.55	5.83	6.35	6.33	7.63	8.23	8.53
15	8.14	8.24	7.62	6.29	6.17	5.49	5.97	6.66	6.54	7.51	8.46	8.71
20	8.23	8.18	7.32	6.21	6.09	5.48	6.19	6.86	6.53	7.80	8.40	8.52
25	8.21	8.19	7.23	6.08	5.92	5.55	6.31	6.55	6.60	7.75	8.51	8.68
EOM	8.20	8.07	6.97	5.96	5.97	5.60	6.36	6.30	7.04	7.82	8.65	8.84
MEAN	8.11	8.20	7.52	6.36	6.08	5.61	6.01	6.53	6.51	7.55	8.34	8.66

WTR YR 1977 MEAN 7.13 HIGH 5.47 MAR 19 LOW 8.84 SEP 30

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 (11.63 m) above mean sea level. 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, 22.96 ft (7.00 m) below land-surface datum, Aug. 31, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	22.59	JAN 5	22.42	MAR 23	22.32	JUN 15	22.51	JUL 26	22.77	AUG 31	22.96
NOV 24	22.62	FEB 9	22.42	MAY 2	22.49						

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 (11.38 m) above mean sea level. Measuring point: Top of instrument shelf, 1.80 ft (0.55 m) above land-surface datum.
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, 17.33 ft (5.28 m) below land-surface datum, Aug. 28. 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.99	16.11	16.63	16.54	16.30	16.08	15.92	16.19	---	16.44	16.56	16.74
10	15.94	16.12	16.53	16.28	16.33	15.99	16.08	16.06	---	16.25	16.59	16.62
15	16.05	16.20	16.22	16.94	16.17	16.03	16.15	16.08	16.31	16.20	16.72	16.63
20	16.09	16.06	16.12	16.96	16.12	16.01	16.15	16.15	16.35	16.27	16.40	16.64
25	15.95	16.18	16.15	16.78	16.05	15.96	16.13	16.03	16.38	16.35	16.57	16.84
EOM	16.01	16.10	16.11	16.73	16.06	16.32	16.29	---	16.23	16.59	16.86	16.79
MEAN	16.00	16.15	16.25	16.61	16.25	16.05	16.13	16.17	16.34	16.36	16.64	16.71

WTR YR 1977 MEAN 16.30 HIGH 15.89 MAR 23 LOW 17.25 AUG 28

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 (959.59 m) above mean sea level. 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.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.22	5.17	5.36	5.26	5.37	4.38	2.75	3.80	4.22	4.56	4.98	5.28
10	4.27	5.29	5.03	5.22	5.39	4.70	3.15	3.97	4.30	4.61	5.01	4.44
15	4.95	5.33	4.95	5.15	5.21	3.88	3.15	4.09	4.18	4.68	5.02	4.80
20	5.14	5.38	5.08	5.28	5.28	3.79	3.32	4.22	4.33	4.76	5.09	4.53
25	5.13	5.43	5.23	5.34	4.96	3.47	3.34	4.14	4.39	4.80	5.05	4.89
EOM	4.94	5.17	5.19	5.37	4.70	3.28	3.63	3.92	4.47	4.88	5.15	5.03
MEAN	4.93	5.28	5.12	5.26	5.23	3.92	3.26	3.94	4.28	4.69	5.03	4.71

WTR YR 1977 MEAN 4.64 HIGH 2.75 APR 5 LOW 5.44 NOV 26

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 (8.66 m) above mean sea level. 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, 87.32 ft (26.62 m) below land-surface datum, Aug. 31, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	86.24	JAN 5	86.20	MAR 23	86.01	JUN 15	86.70	JUL 27	87.02	AUG 31	87.32
NOV 23	86.22	FEB 9	86.20	MAY 4	86.44						

362642077051501. Local number, NC-81.
LOCATION.--Lat 36°26'42", long 77°05'15", Hydrologic Unit 03010203, 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 (3.99 m) above mean sea level. 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, 1.12 ft (0.34 m) below land-surface datum, Sept. 25, 1971.

WATER LEVEL, IN FEET ABOVE LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	0.38	JAN 5	1.32	MAR 23	1.19	JUN 15	0.94	JUL 27	0.43	AUG 31	-0.27
NOV 23	1.25	FEB 9	.99	MAY 3	1.02						

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 (12.71 m) above mean sea level. 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	29.48	JAN 5	29.53	MAR 23	29.44	JUN 15	29.50	JUL 26	29.60	AUG 31	29.74
NOV 25	29.65	FEB 9	29.52	MAY 3	29.45						

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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 4	6.52	JAN 19	5.33	APR 13	5.30	MAY 19	5.62	JUL 12	6.24	SEP 1	6.44
Dec. 9	6.37										

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 (3.45 m) above mean sea level. Measuring point: Top of instrument shelf, 3.40 ft (1.04 m) above land-surface datum.
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.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.96	9.15	---	---	8.53	9.02	7.72	8.56	7.17	7.78	8.71	9.19
10	8.94	9.27	---	---	8.69	8.79	7.91	8.67	7.14	7.97	8.87	9.14
15	8.99	9.31	---	8.31	8.81	8.54	8.09	8.77	7.31	8.14	9.03	9.12
20	9.05	9.31	---	8.14	8.87	8.35	8.21	8.87	7.46	8.33	9.03	9.20
25	9.07	9.32	---	8.18	8.96	7.97	8.34	8.39	7.63	8.49	9.02	9.21
EOM	9.09	---	---	8.36	9.00	7.63	8.46	7.64	7.82	8.59	9.08	9.24
MEAN	9.01	9.27	---	8.25	8.75	8.45	8.06	8.53	7.40	8.17	8.92	9.17

WTR YR 1977 MEAN 8.55 HIGH 7.11 JUN 7 AND OTHERS LOW 9.40 NOV 28

LENOIR COUNTY

350306077444201. Local number, NC-51.
LOCATION.--Lat 35°03'06", long 77°44'42", Hydrologic Unit 03020202, 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	54.57	FEB 8	53.91	MAY 4	53.87	JUN 15	54.08	AUG 8	54.79	AUG 30	54.89
NOV 17	54.75	MAR 24	53.52								

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 upper 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 (10.2 m) above mean sea level. 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, 68.14 ft (20.77 m) below land-surface datum, July 29, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	62.11	62.76	63.32	63.50	64.19	62.44	63.09	64.11	65.31	65.20	67.94	67.36
10	61.93	63.48	63.61	63.20	64.09	62.43	63.59	64.37	65.86	66.22	67.91	67.31
15	62.38	63.47	63.29	63.10	63.78	62.33	63.91	64.69	65.77	66.56	67.70	67.20
20	62.26	63.77	62.82	63.62	63.03	62.06	64.27	65.53	65.44	67.04	67.40	67.60
25	62.01	64.00	63.42	64.22	63.04	62.62	63.89	65.80	65.44	67.50	67.44	67.60
EOM	62.16	63.53	63.51	64.39	62.69	63.04	64.05	64.80	65.46	67.86	67.55	67.98
MEAN	62.23	63.38	63.33	63.62	63.64	62.43	63.77	64.84	65.51	66.66	67.62	67.49

WTR YR 1977 MEAN 64.54 HIGH 61.87 OCT 4 LOW 68.12 JUL 29

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 (24.92 m) above mean sea level. Measuring point: Top of instrument shelf, 1.73 ft (0.53 m) above land-surface datum.
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.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.95	16.05	15.46	13.07	12.88	13.12	12.77	13.84	---	15.00	16.09	16.33
10	15.94	16.01	15.31	12.94	13.18	12.86	13.03	13.89	---	15.27	16.44	16.34
15	15.98	15.96	14.43	12.71	13.24	12.69	13.21	14.10	14.12	15.30	16.64	15.80
20	16.12	15.75	13.59	12.68	13.24	12.67	13.46	14.37	14.25	15.37	16.64	15.62
25	16.12	15.73	13.29	12.70	13.25	12.57	13.56	14.48	14.43	15.76	16.42	15.64
EOM	16.08	15.59	13.04	12.85	13.24	12.69	13.68	---	14.51	15.91	16.28	15.68
MEAN	16.03	15.87	14.29	12.83	13.14	12.78	13.21	14.11	14.33	15.34	16.40	15.93

WTR YR 1977 MEAN 14.54 HIGH 12.55 MAR 22 AND OTHERS LOW 16.65 AUG 16 AND OTHERS

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, dry several times 1951-52, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 4	44.97	JAN 19	32.25	APR 13	32.89	May 19	35.60	JUL 12	42.90	SEP 1	44.73
DEC 9	DRY	FEB 16	33.62								

NEW HANOVER COUNTY

341000077524201. Local number, NC-20.
LOCATION.--Lat 34°10'00", long 77°52'42", Hydrologic Unit 03030005, 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 (6.49 m) above mean sea level. 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, 19.94 ft (6.08 m) below land-surface datum, June 10, 1973.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.53	14.79	14.94	14.27	14.52	14.44	14.60	16.28	16.55	17.48	16.78	17.43
10	14.73	14.93	14.87	14.08	14.70	14.00	15.60	16.31	16.09	19.09	17.34	---
15	14.87	15.01	14.54	14.11	14.67	14.06	16.46	17.84	16.85	18.62	17.51	---
20	14.67	14.87	14.44	14.26	14.72	14.21	16.72	17.76	16.07	19.64	16.74	---
25	14.67	15.01	14.79	14.37	14.68	13.85	16.39	16.68	16.12	18.89	16.70	---
EOM	14.66	15.05	14.29	14.71	14.83	14.14	15.88	16.12	16.61	17.08	16.97	---
MEAN	14.72	14.94	14.62	14.33	14.72	14.14	15.84	16.87	16.33	18.43	17.04	17.17

WTR YR 1977 MEAN 15.69 HIGH 13.71 MAR 22 LOW 19.69 JUL 21

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.--Limestone of Castle Hayne Formation of Tertiary 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 (4.86 m) above mean sea level. 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, 15.78 ft (4.81 m) below land-surface datum, Sept. 29, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.44	11.06	11.24	10.43	11.01	---	11.49	12.80	13.18	14.21	14.88	15.66
10	10.54	11.24	11.05	10.35	11.26	---	11.79	13.03	13.51	14.47	15.07	14.90
15	10.76	11.26	10.61	10.32	11.42	---	11.99	13.34	13.78	14.72	15.31	15.18
20	10.72	11.00	10.56	10.63	---	---	12.28	13.59	13.87	14.91	15.25	15.37
25	10.67	11.22	10.69	10.68	---	11.18	12.37	13.22	14.01	15.11	15.38	15.61
EOM	10.87	11.10	10.49	10.80	---	11.30	12.62	12.94	13.99	15.14	15.55	---
MEAN	10.62	11.14	10.77	10.55	11.17	11.19	12.01	13.15	13.63	14.70	15.23	15.41

WTR YR 1977 MEAN 12.59 HIGH 10.19 OCT 1 LOW 15.75 SEP 29

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 (22.69 m) above mean sea level. 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.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.77	13.99	14.13	13.60	12.93	12.37	10.87	11.39	11.31	11.65	12.37	14.13
10	13.84	14.03	14.10	13.22	13.21	11.81	10.81	10.90	11.36	11.87	12.45	14.18
15	13.86	14.04	13.92	13.09	13.17	11.36	10.93	11.15	11.58	11.81	12.63	14.21
20	13.88	14.06	13.73	13.03	13.07	11.38	11.23	11.50	11.69	11.95	12.63	14.22
25	13.92	14.10	13.69	12.96	12.84	11.14	11.20	11.28	11.78	12.00	12.71	14.69
EOM	13.94	14.13	13.61	12.98	12.68	11.10	11.42	11.12	11.73	12.18	12.83	14.99
MEAN	13.86	14.04	13.89	13.22	13.04	11.61	11.07	11.22	11.53	11.87	12.56	14.24

WTR YR 1977 MEAN 12.68 HIGH 10.74 APR 8 LOW 14.99 SEP 30

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 (7.45 m) above mean sea level. 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, 2.28 ft (0.69 m) below land-surface datum, Aug. 25, 1974; lowest, 10.44 ft (3.18 m) below land-surface surface datum, Jan. 3, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.85	6.23	6.08	4.54	5.22	5.56	4.79	6.37	5.05	5.02	4.83	5.99
10	6.12	6.43	5.38	4.10	5.58	4.29	5.25	6.68	5.29	5.53	5.30	4.48
15	6.35	6.41	4.02	3.73	5.77	4.23	5.53	6.83	5.52	5.89	5.61	5.07
20	6.10	5.81	3.84	4.45	5.77	4.69	5.86	6.96	5.61	6.15	5.14	5.39
25	5.39	6.18	4.52	4.65	5.92	3.99	---	5.34	5.48	6.42	5.40	5.53
EOM	5.86	5.95	4.14	4.98	5.83	4.55	---	4.89	5.20	5.59	5.73	5.86
MEAN	5.90	6.17	4.67	4.46	5.62	4.57	5.34	6.22	5.34	5.69	5.33	5.41

WTR YR 1977 MEAN 5.39 HIGH 3.45 DEC 16 LOW 7.00 MAY 23

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.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.26	9.79	10.33	10.02	11.82	11.24	---	11.48	13.21	13.73	13.31	14.50
10	10.21	10.28	10.76	10.06	---	---	---	12.43	13.37	13.75	13.39	15.04
15	10.27	10.16	10.63	10.49	---	---	---	13.39	13.43	14.06	14.00	14.82
20	9.85	10.17	10.17	11.14	10.84	---	---	13.61	13.77	14.61	13.77	14.74
25	9.69	10.33	10.08	11.81	10.90	---	---	13.72	13.77	14.59	13.80	14.65
EOM	9.45	10.16	9.66	11.94	10.85	---	---	13.33	13.75	13.97	13.85	14.85
MEAN	10.02	10.10	10.25	10.85	11.27	11.11	---	12.98	13.48	14.12	13.68	14.71

WTR YR 1977 MEAN 12.14 HIGH 9.45 OCT 31 AND OTHERS LOW 15.07 SEP 11

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 (155.91 m) above mean sea level. 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	44.06	DEC 6	45.13	FEB 7	45.27	APR 12	44.20	JUN 13	43.77	AUG 15	45.20
11	44.22	13	45.06	14	45.28	18	44.06	20	43.84	22	45.35
18	44.36	20	45.16	21	45.13	25	43.92	27	43.93	29	45.52
25	44.44	27	45.21	28	45.24	MAY 2	43.85	JUL 5	44.05	SEP 5	45.69
NOV 1	44.55	JAN 3	45.35	MAR 7	45.06	9	43.75	11	44.21	12	45.73
8	44.68	10	45.22	14	44.87	16	43.75	18	44.37	19	45.75
15	44.81	17	45.21	21	44.80	23	43.73	25	44.52	26	45.95
22	44.92	24	45.21	28	44.59	30	43.70	AUG 1	44.71		
29	44.99	31	45.20	APR 4	44.41	JUN 6	43.66	8	44.93		

PASQUOTANK COUNTY

361556076102401. Local number, NC-29.
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 2 in (0.05 m), depth 120 ft (36.6 m), cased to 120 ft (36.6 m).
DATUM.--Land-surface datum is 7.50 ft (2.29 m) above mean sea level. Measuring point: Top of casing, 0.70 ft (0.21 m) above land-surface datum.
PERIOD OF RECORD.--November 1961 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.18 ft (1.88 m) below land-surface datum, Apr. 4, 1973; lowest, 9.95 ft (3.03 m) below land-surface datum, May 24-25, 1967.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.60	8.95	9.17	8.78	8.45	7.76	7.28	7.98	---	8.16	8.62	8.62
10	8.35	9.03	8.98	8.22	8.61	7.71	8.04	8.20	---	8.27	8.65	8.44
15	8.87	9.33	8.89	8.00	8.35	7.43	8.10	8.00	7.96	8.46	8.66	8.57
20	9.01	8.82	8.26	8.05	8.29	7.47	8.04	8.30	7.79	8.47	8.66	8.42
25	8.85	8.93	8.53	8.00	8.12	7.97	7.79	7.98	8.18	8.46	8.46	8.47
EOM	8.97	9.02	8.29	8.20	8.05	7.71	8.07	---	8.13	8.58	8.64	8.68
MEAN	8.84	9.02	8.74	8.23	8.40	7.71	7.93	8.07	8.02	8.43	8.58	8.57

WTR YR 1977 MEAN 8.39 HIGH 7.26 MAR 19 LOW 9.45 OCT 29

PASQUOTANK COUNTY--Continued

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 obeservation 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 (3.82 m) above mean sea level. Measuring point: Top of instrument shelf, 2.13 ft (0.65 m) above land-surface datum.
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 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	-3.37	-3.56	-2.80	-0.88	-1.20	-0.26	-1.14	-1.97	-2.75	-4.25	-5.20	-5.60
10	-3.04	-3.77	-1.82	0.20	-1.59	-0.43	-1.71	-1.71	-2.91	-4.51	-5.29	-5.64
15	-3.50	-3.30	-0.94	0.09	-1.31	-0.19	-1.92	-2.27	-3.35	-4.57	-5.40	-5.73
20	-3.66	-2.27	-0.53	-1.21	-1.42	-0.87	-2.18	-2.72	-3.55	-4.77	-5.20	-5.78
25	-2.99	-2.83	-1.12	-1.21	-1.13	-1.10	-1.28	-1.98	-3.81	-4.91	-5.39	-5.84
EOM	-3.35	-2.70	-0.57	-1.18	-0.48	-1.23	-1.75	-2.36	-4.15	-5.09	-5.52	-5.87
MEAN	-3.29	-3.12	-1.27	-0.77	-1.36	-0.73	-1.74	-2.17	-3.32	-4.61	-5.31	-5.71

WTR YR 1977 MEAN -2.79 MAX 0.20 JAN 10 MIN -5.87 SEP 30

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.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.28	2.28	2.04	1.66	1.84	1.91	1.66	2.30	2.20	2.95	3.88	2.88
10	2.37	2.36	1.84	1.61	1.97	1.51	1.86	2.38	2.30	3.19	3.05	2.68
15	2.43	2.43	1.50	1.64	2.05	1.55	2.05	2.52	2.44	3.48	2.94	2.60
20	2.45	2.15	1.36	1.63	2.12	1.71	2.20	2.64	2.64	3.72	2.91	2.59
25	2.28	2.16	1.57	1.80	2.14	1.58	2.30	2.61	2.75	3.87	2.75	2.59
EOM	2.24	2.07	1.52	1.79	2.02	1.68	2.27	2.24	2.81	4.06	2.76	2.60
MEAN	2.33	2.25	1.66	1.67	2.00	1.67	2.01	2.44	2.48	3.47	3.11	2.67

WTR YR 1977 MEAN 2.31 HIGH 1.34 DEC 18 LOW 4.12 AUG 3 AND OTHERS

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 Pliestocene 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 (8.67 m) above mean sea level.
PERIOD OF RECORD.--December 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.11 ft (7.35 m) above mean sea level, May 26-27, 1977; lowest, 21.09 ft (6.43 m) above mean sea level, July 25, 1977.

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	23.18	23.07	23.11	23.09	22.50	22.97	22.17	21.91	22.11
10	---	---	---	23.87	22.97	23.38	22.91	22.50	22.80	21.90	21.43	22.88
15	---	---	---	23.83	22.93	23.31	22.78	22.31	22.65	21.97	21.36	22.42
20	---	---	---	23.38	22.93	23.38	22.96	22.49	22.45	21.46	22.31	22.33
25	---	---	---	23.30	23.07	23.45	22.86	23.95	22.64	21.24	22.90	22.22
EOM	---	---	23.28	23.12	23.30	23.21	22.61	23.29	22.36	21.34	22.32	22.07
MEAN	---	---	23.40	23.37	22.98	23.32	22.87	22.74	22.72	21.73	21.98	22.34

WTR YR 1977 MEAN 22.68 MAX 24.04 MAY 27 MIN 21.21 JUL 29

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 Pliestocene 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 (10.96 m) above mean sea level.
PERIOD OF RECORD.--December 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 30.40 ft (9.27 m) above mean sea level, May 26, 1977; lowest, 25.91 ft (7.90 m) above mean sea level, Aug. 15-17, 1977.

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	28.33	28.02	28.05	28.25	27.68	28.43	27.58	26.13	---
10	---	---	27.87	29.72	27.89	28.76	27.99	27.59	28.13	27.41	26.01	---
15	---	---	28.66	29.70	27.83	28.63	27.94	27.53	27.99	27.28	25.91	---
20	---	---	28.97	---	27.82	28.66	27.93	27.56	27.88	26.90	26.54	---
25	---	---	28.50	28.39	27.96	28.89	27.97	29.82	27.83	26.53	---	---
EOM	---	---	28.66	28.13	28.24	28.43	27.70	28.85	27.70	26.18	---	---
MEAN	---	---	28.73	28.71	27.90	28.62	27.98	28.03	28.07	27.05	26.18	---

WTR YR 1977 MEAN 27.93 MAX 30.09 MAY 27 MIN 25.22 AUG 16

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 Pliestocene 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 (15.22 m) above mean sea level.
PERIOD OF RECORD.--December 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 47.05 ft (14.34 m) above mean sea level, May 27, 1977; lowest, 42.12 ft (12.84 m) above mean sea level, Aug. 17, 1977.

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	45.78	45.90	46.15	46.05	45.20	46.09	44.76	42.78	44.53
10	---	---	44.56	46.46	45.67	46.53	45.66	45.10	45.78	44.38	42.43	45.29
15	---	---	45.42	46.75	45.63	46.47	45.58	44.88	45.50	43.92	42.23	45.01
20	---	---	45.95	46.17	45.63	---	45.48	44.71	45.23	43.19	43.55	44.82
25	---	---	45.63	46.13	45.78	46.58	45.54	46.36	45.09	42.77	45.03	44.51
EOM	---	---	45.92	45.93	46.04	46.26	45.28	46.49	45.08	42.51	44.83	44.19
MEAN	---	---	45.55	46.12	45.69	46.35	45.63	45.37	45.58	43.70	43.33	44.73

WTR YR 1977 MEAN 45.18 MAX 47.01 MAY 27 MIN 42.15 AUG 17

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 Pliestocene 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, 51.12 ft (15.58 m) above mean sea level.
PERIOD OF RECORD.--December 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 50.75 ft (15.47 m) above mean sea level, Mar. 24, 1977; lowest measured, 43.80 ft (13.35 m) above mean sea level, July 29, 1977.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 5	48.24	MAR 24	50.75	MAY 6	47.21	JUN 16	47.61	JUL 29	43.80	AUG 26	46.70
FEB 7	49.12										

PITT COUNTY--Continued

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 Pliestocene 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 (17.58 m) above mean sea level.
PERIOD OF RECORD.--December 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 54.54 ft (16.62 m) above mean sea level, May 6, 1977; lowest measured, 49.93 ft (15.22 m) above mean sea level, Feb. 7, 1977.

WATER LEVEL, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 7	49.93	MAR 24	53.97	MAY 6	54.54	JUN 16	54.38	JUL 29	52.60	AUG 26	51.53

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 Pliestocene 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 (17.47 m) above mean sea level.
PERIOD OF RECORD.--December 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 54.81 ft (16.71 m) above mean sea level, Jan. 10, 1977; lowest, 48.44 ft (14.76 m) above mean sea level, July 31, 1977.

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	53.19	52.97	53.06	52.78	51.21	52.58	50.66	50.00	51.37
10	---	---	51.90	54.45	52.73	53.50	52.35	51.13	52.13	50.10	49.27	52.86
15	---	---	53.29	54.20	52.60	53.44	52.03	50.78	51.69	49.61	48.75	52.08
20	---	---	53.57	53.27	52.51	53.68	51.98	50.58	51.33	49.12	51.30	51.55
25	---	---	53.18	53.26	52.84	53.46	51.96	53.93	51.13	48.75	53.36	51.07
EOM	---	---	53.42	53.11	53.36	53.07	51.58	53.09	51.08	48.73	52.11	50.61
MEAN	---	---	53.20	53.43	52.73	53.39	52.17	51.56	51.82	49.60	50.59	51.64

WTR YR 1977 MEAN 51.98 MAX 54.45 JAN 10 MIN 48.49 JUL 30

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 Pliestocene 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 (16.34 m) above mean sea level.
PERIOD OF RECORD.--December 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 51.46 ft (15.68 m) above mean sea level, May 25, 1977; lowest, 46.47 ft (14.16 m) above mean sea level, July 31, 1977.

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	49.94	49.64	49.71	49.61	48.69	49.67	48.31	47.57	48.92
10	---	---	49.37	51.40	49.45	50.38	49.29	48.60	49.37	47.86	47.28	50.21
15	---	---	50.53	51.21	49.35	50.29	49.16	48.40	49.01	47.44	46.82	49.45
20	---	---	50.53	50.13	49.29	50.58	49.10	48.20	48.84	47.05	48.63	49.07
25	---	---	50.02	49.97	49.45	50.43	49.07	51.20	48.68	46.72	50.52	48.70
EOM	---	---	50.18	49.78	50.00	49.88	48.82	50.19	48.58	47.00	49.44	48.39
MEAN	---	---	50.30	50.24	49.44	50.22	49.22	49.01	49.15	47.44	48.24	49.15

WTR YR 1977 MEAN 49.21 MAX 51.40 JAN 10 MIN 46.52 JUL 30

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 Pliestocene 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, 34.01 ft (10.37 m) above mean sea level.
PERIOD OF RECORD.--January 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 32.57 ft (9.93 m) above mean sea level, May 26, 1977; lowest, 28.34 ft (8.64 m) above mean sea level, July 31, 1977.

ELEVATION, IN FEET ABOVE MEAN SEA LEVEL, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	32.13	31.35	32.04	30.77	29.76	30.44	29.91	30.12	29.94
10	---	---	---	32.52	31.08	31.92	30.22	29.80	30.56	29.36	29.46	---
15	---	---	---	32.36	31.10	31.93	30.06	29.41	29.98	29.11	29.16	---
20	---	---	---	31.09	31.58	31.86	30.47	29.23	30.22	28.87	31.54	30.05
25	---	---	---	32.18	32.12	31.40	30.74	32.35	30.43	28.60	---	29.73
EOM	---	---	---	31.43	32.22	31.31	30.14	31.57	30.01	28.50	30.40	29.46
MEAN	---	---	---	31.83	31.27	31.68	30.37	30.14	30.34	29.13	30.17	29.89

WTR YR 1977 MEAN 30.53 MAX 32.52 JAN 10 MIN 28.41 JUL 30

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 (48.0 m) above mean sea level. 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.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	26.85	27.02	26.82	26.05	25.37	25.01	23.92	24.35	24.41	24.99	25.28	25.52
10	26.85	27.05	26.79	25.68	25.34	24.81	23.91	24.61	24.55	25.03	25.51	25.37
15	27.02	26.91	26.54	25.44	25.19	24.66	23.91	24.62	24.70	24.93	25.64	25.51
20	26.90	26.83	26.27	25.56	25.18	24.56	24.11	24.84	24.79	25.25	25.20	25.72
25	26.90	26.88	26.22	25.43	25.07	24.23	23.96	24.41	24.48	25.36	25.22	25.73
EOM	27.01	26.82	26.07	25.39	25.08	24.00	24.07	24.38	24.70	25.57	25.40	25.95
MEAN	26.93	26.94	26.46	25.65	25.24	24.60	23.98	24.52	24.57	25.17	25.39	25.60

WTR YR 1977 MEAN 25.42 HIGH 23.89 APR 14 LOW 27.15 OCT 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 (654.22 m) above mean sea level. 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, 25.84 ft (7.88 m) below land-surface datum, May 21, 1973, May 13, 1974; 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	31.59	DEC 20	31.51	FEB 8	30.32	APR 11	29.52	JUN 6	28.52	AUG 1	31.06
5	31.69	27	31.12	14	30.20	18	29.25	7	28.74	8	31.49
11	31.47	JAN 3	31.04	21	30.23	25	28.86	13	29.00	15	31.81
18	31.83	10	30.82	28	30.31	MAY 2	28.65	20	29.31	22	32.18
25	31.88	13	30.76	MAR 7	30.40	4	28.52	27	29.62	29	32.45
31	31.80	17	30.64	14	29.95	9	28.67	JUL 4	29.92	SEP 5	32.72
NOV 8	31.66	24	30.53	21	30.25	16	28.30	11	30.17	12	32.62
15	31.54	31	30.38	28	30.17	23	28.36	18	30.46	19	32.48
DEC 6	31.48	FEB 7	30.20	APR 4	29.59	30	28.44	25	30.75	26	33.01
13	31.34										

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, 2.51 ft (0.77 m) below land-surface datum, Aug. 31, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	2.13	DEC 28	1.82	MAR 23	2.02	JUN 15	2.22	JUL 28	2.42	AUG 31	2.51
NOV 12	2.21	FEB 8	2.29	MAY 4	2.16						

WAYNE COUNTY

352006077581001. Local number, NC-25.
LOCATION.--Lat 35°20'06", long 77°58'10", Hydrologic Unit 03020201, Seymour Johnson AFB, Goldsboro. Owner: U.S. Air Force.
AQUIFER.--Tuscaloosa Formation of 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, 0.51 ft (0.16 m) above land-surface datum, Feb. 17, 1973; lowest measured, 22.57 ft (6.88 m) below land-surface datum, Nov. 21, 1973.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.35	13.57	13.39	12.24	15.45	---	8.96	17.29	---	11.31	12.13	12.02
10	13.24	13.50	13.63	11.90	16.44	---	13.18	18.13	---	11.93	12.13	11.03
15	13.46	13.03	13.01	10.94	17.11	---	15.03	17.72	11.21	11.88	12.16	9.87
20	13.45	13.32	12.25	10.50	---	---	16.43	18.00	11.00	12.00	11.88	9.64
25	13.10	13.42	12.38	15.31	---	7.40	15.37	---	11.05	12.28	11.90	10.02
EOM	13.27	13.60	11.90	16.00	---	7.79	15.27	---	11.06	12.16	12.05	10.63
MEAN	13.38	13.41	12.83	12.79	16.15	7.40	13.67	17.62	10.99	11.92	12.03	10.58

WTR YR 1977 MEAN 12.86 HIGH 7.16 MAR 28 LOW 18.65 MAY 11

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October 13, 1977

FACTORS FOR CONVERTING U.S. CUSTOMARY UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the U.S. customary units published herein to the International System of Units (SI). Subsequent reports will contain both the U.S. customary and SI unit equivalents in the station manuscript descriptions until such time that all data will be published in SI units.

Multiply U.S. customary 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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