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Water Resources Data for North Carolina

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U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NC-78-1

WATER YEAR 1978

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

CALENDAR FOR WATER YEAR 1978

1977

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Water Resources Data for North Carolina

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NC-78-1

WATER YEAR 1978

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

UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, Secretary

GEOLOGICAL SURVEY

H. William Menard, Director

For additional information write to
District Chief, Water Resources Division
U. S. Geological Survey
436 Century Station Post Office Building
300 Fayetteville Street
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 R. J. Dingman, 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 Philip Cohen Assistant Chief Hydrologist for Scientific Publications and Data Management.

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Water resources data for the 1978 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 148 gaging stations; stage and contents for 24 lakes and reservoirs; water quality for 146 gaging stations; and water levels for 59 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-recources data in North Carolina is a part of the National Water-Data System operated by the U.S. Geological Survey in cooperation with State, municipal, and Federal agencies.

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INTRODUCTION

Water resources data for the 1978 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 148 gaging stations; stage and contents for 24 lakes and reservoirs; water quality for 146 gaging stations and 32 miscellaneous sites; and water levels for 59 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-78-1." Water-data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161.

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

COOPERATION

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

State Department of Natural Resources and Community Development,
Howard N. Lee, Secretary through the following:
Division of Environmental Management,
A. F. McRorie, director.
State Board of Transportation, Division of Highways,
Billy Rose, highway adminstratot.
City of Burlington, James D. Mackintosh, Jr., city manager.
City of Charlotte, Kenneth R. Harris, mayor.
City of Durham, Regina K. Brough, interim city manager.
City of Greensboro, Tom Z. Osborne, city manager.
City of Rocky Mount, William H. Batchelor, mayor.
City of Winston-Salem, Wayne A. Corpening, mayor.

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

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

The following organizations aided in collecting records:

Cities of Danville, 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. Stevens Co. Inc.; Olin Mathieson Chemical Corp.; Virginia Electric and Power Co.; and Yadkin, Inc.

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HYDROLOGIC CONDITIONS

Streamflow during the 1978 water year was slightly above normal in North Carolina. Annual runoff at the three index gaging stations, as compared with long-term normals, was as follows: French Broad River at Asheville, 125 percent; South Yadkin River near Mocksville, 147 percent; and Neuse River near Clayton, 128 percent.

During the first several months of the water year, flows were generally well above normal. Widespread rains during late October increased the storage in many municipal water supply reservoirs which had not fully recovered from the near-record drought in the late summer of 1977. Heavy rains on November 5-6 caused severe flooding in the mountains and moderate flooding in several Coastal Plain counties. The most severe flooding occurred in an area of approximately 3,500 mi^2 which includes the French Broad River basin north of Asheville, the Nolichucky and New River basins, and the upper part of the Catawba River basin. (See map on next page.) Floods in this area equalled or exceeded those expected to occur once in 100 years. Thirteen deaths were attributed to the flood and estimates of property damage exceed 50 million dollars. The greatest destruction occurred in the upper part of the Nolichucky basin in Yancey County where damages exceeded 30 million dollars. Damages to highways were considerable. Approximately 90 bridges were destroyed and an equal number was heavily damaged. Sixteen mountain counties were declared a disaster area by President Carter. Flooding in the Coastal Plain region was confined primarily to smaller streams in Pitt and Beaufort counties where damages were minor.

Heavy rains during January caused minor flooding along streams in the Piedmont and western Coastal Plain regions. The most significant flooding occurred in the upper Cape Fear and Dan River basins but was limited primarily to brief inundation of low-lying pasture and barren crop lands. Flows were generally near normal or slightly above from February through late April. Heavy rains on April 25 and again on May 3-4 caused minor flooding along streams in the eastern Piedmont and Coastal Plain regions. Considerable flooding of lake front homes occurred at Kerr Reservoir (Roanoke River) during May when the lake level rose to within 0.1 ft of the record level set in 1975. Streamflow conditions during July through September, the last quarter of the water year, were generally near normal although minor flooding and short periods of low flow occurred in some areas.

Ground-water levels were somewhat variable during the year and, like streamflow, strongly reflected climatic conditions. Because of abundant rainfall throughout most of the water year, levels in the mountain and Piedmont regions were generally above long-term averages. Ground-water levels in the Coastal Plain region, however, did not return to normal levels until late November during a period of heavy rains.

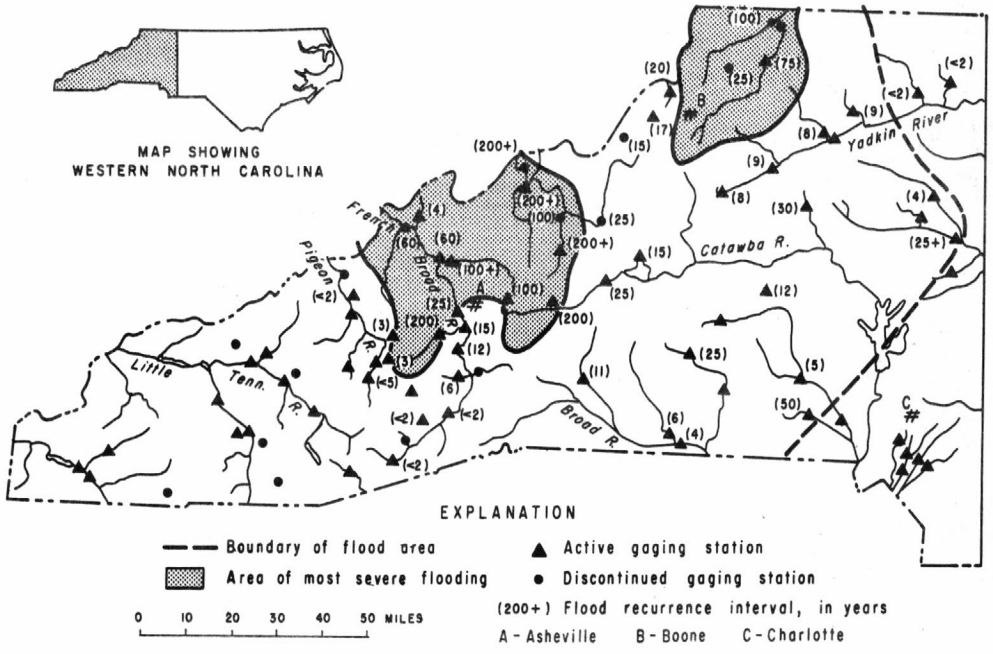

Figure 3.--Map of western North Carolina showing areas of significant flooding on Nov. 6-7, 1977.

NOTICE

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

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

DEFINITION OF TERMS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Bottom material: See Bed material.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Particle-size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter or particles in either 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 - 2.0	Sedimentation or sieve.
Gravel.....	2.0 - 64.0	Sieve.

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

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

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

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

Picocurie (PC, pCi) is one trillionth ($1 \times 10^{}$) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields $3.7 \times 10^{}$ 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 envirohmental factors. Some major factors are steepness of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Water year in the Geological 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, 1978, is called the "1978 water year."

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

cated 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 arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

NUMBERING SYSTEM FOR WELLS

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

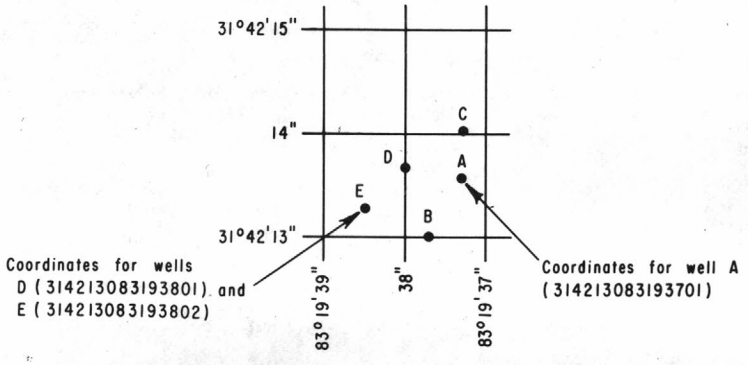

FIGURE 2.--System for numbering wells (latitude and longitude).

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 nation-wide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality.

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

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

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

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and computation of data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams, and stage, surface area, and contents of lake or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from either direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at selected time intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey. These methods are decribed in standard 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 referred to National Geodetic Vertical Datum; and a condensed history of the types, locationa, and datums of previous gages used during the period of record are given under "GAGE". National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS" on page 5. The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for the stations where changes in water development during the period of record cause the figure to have little significance. Average runoff in inches is also shown.

The maximum discharge (or contents) and the maximum gage height, the minimum instantaneous discharge if there is little or no regulation (or the minimum contents) and the minimum gage height if it is significant are given under "EXTREMES". The minimum daily discharge is given if there is extensive regulation (also the minimum instantaneous discharge and gage height if they are abnormally low). In the first paragraph headed "Current year": the data given are for the complete water year unless otherwise specified. In the second paragraph under "EXTREMES" headed

"Period of record": the data given are for the period of record given in the PERIOD OF RECORD paragraph. Reliable information concerning major floods that occurred outside the period of record is given in the third or last paragraph under "EXTREMES". Unless otherwise qualified, the maximum discharge (or contents) corresponds to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur at the same time as the maximum discharge or contents, it is given separately.

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

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

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

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

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

Footnotes to the table of daily discharges are introduced by the word "Note". Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of 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 than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 cfs; to tenths between 1.0 and 10 cfs; to whole numbers between 10 and 1,000 cfs; and to 3 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 1978 water year by the National Weather Service, NOAA, U.S. Department of Commerce and other Federal agencies. The National Water Data Exchange (NAWDEX), Water Resources Division, U.S. Geological Survey, National Center, Reston, Va. 22092, maintains an index of such sites. Information on records available at specific sites can be obtained upon request.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

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

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

Water analysis

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

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

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

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

Water temperature

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

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

Sediment

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

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

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

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the data

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

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

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

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

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-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, Chapter A7. 1968. 28 pages. $0.45.

3-A8. Discharge measurements at gaging stations, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 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. $2.50

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. $2.50
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.

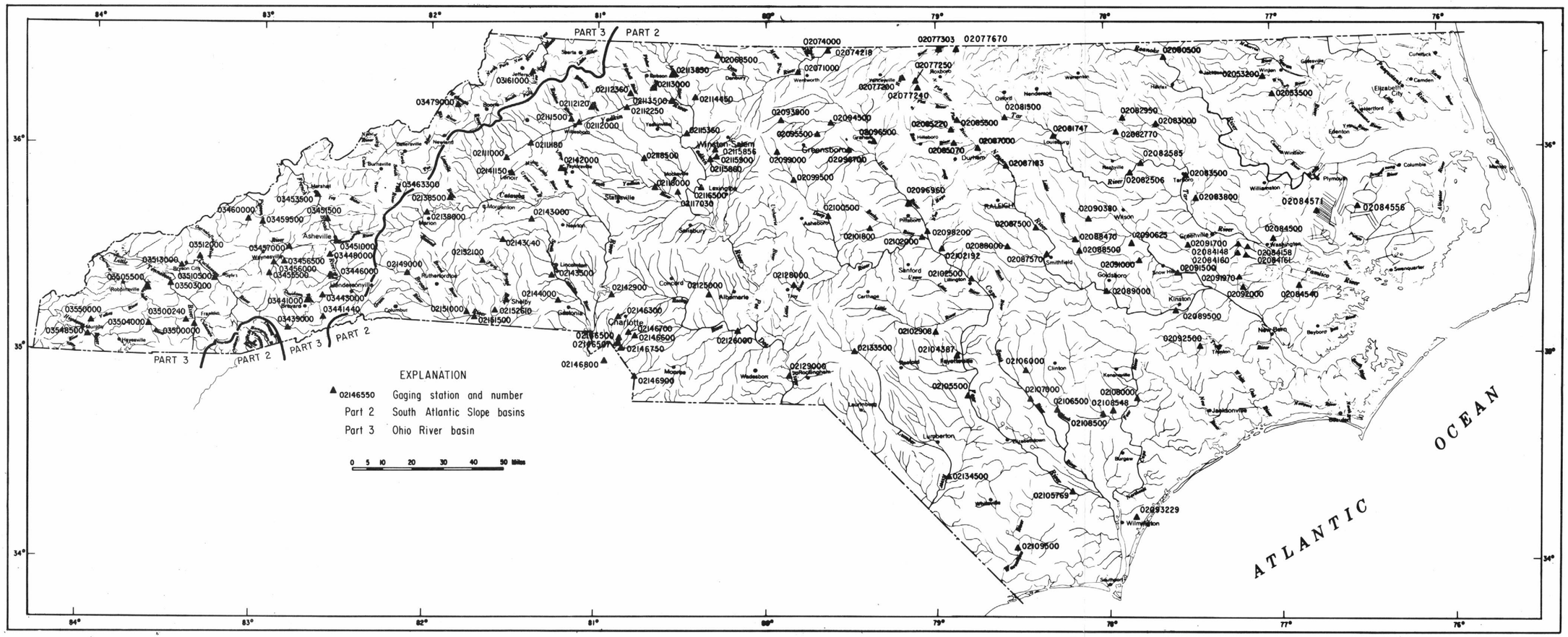

Figure 3. Map of North Carolina showing location of gaging stations.

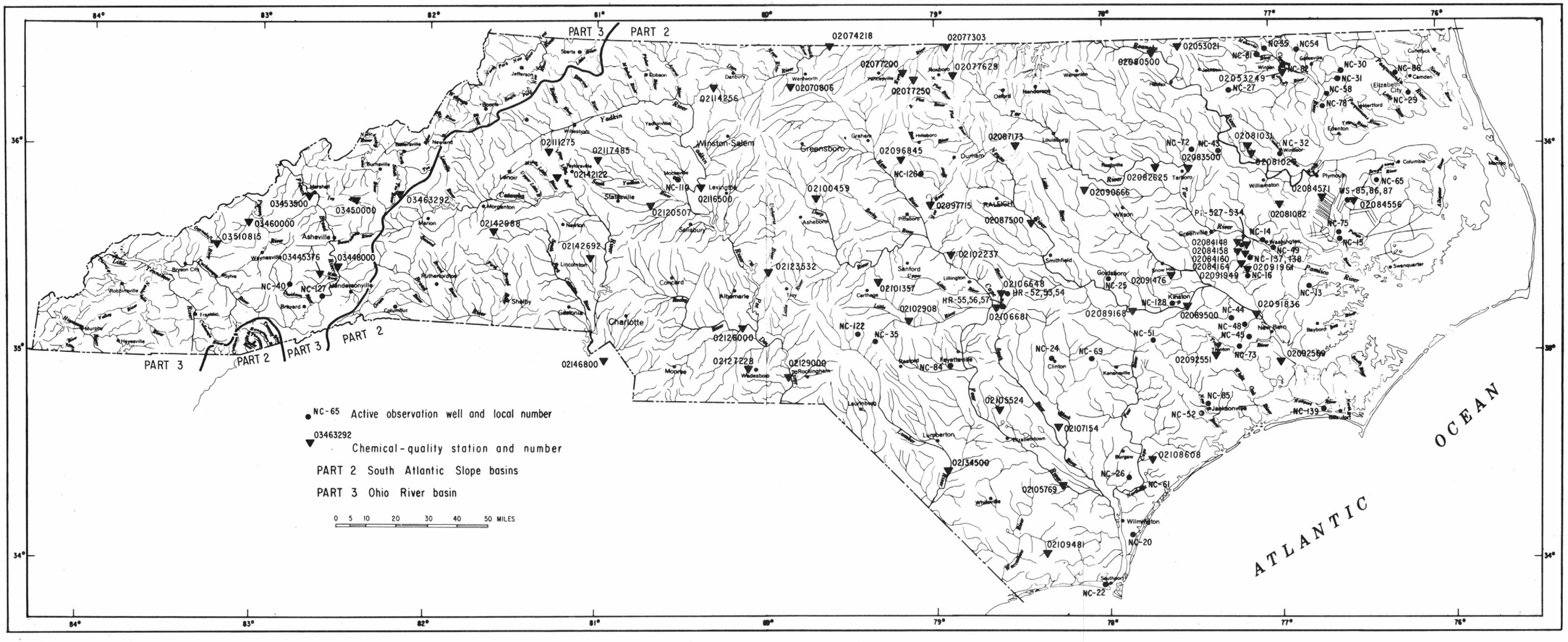

Figure 4. Map of North Carolina showing location of chemical-quality stations and observation well sites.

CHOWAN RIVER BASIN

02053200 POTECASI CREEK NEAR UNION, N. C.

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

DRAINAGE AREA.--191 mi² (495 km²).

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

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

REMARKS.--Records good except those for period of no gage-height record, Feb. 12 to Mar. 22, which are poor. Suspended-sediment records for the current year are published on page 20 of this report.

AVERAGE DISCHARGE.--20 years, 235 ft³/s (6.655 m³/s), 16.71 in/yr (424 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,050 ft³/s (115 m³/s) May 10, 1958, gage height, 19.12 ft (5.828 m); minimum, 0.2 ft³/s (0.006 m³/s) July 1, 1959.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,260 ft³/s (64.0 m³/s) Jan. 22, gage height, 14.90 ft (4.542 m); minimum, 1.2 ft³/s (0.034 m³/s) Oct. 1, 2, gage height, 1.36 ft (0.415 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	386	143	342	350	230	996	839	28	319	80	44
2	1.5	308	140	313	300	300	750	707	30	293	50	61
3	2.1	234	133	276	270	460	539	545	24	182	34	29
4	2.1	226	121	247	240	660	384	401	20	90	27	30
5	1.9	149	112	220	220	900	284	391	17	48	63	27
6	1.8	166	111	198	200	1050	222	468	16	30	527	19
7	1.9	736	120	212	190	740	182	465	15	21	942	16
8	1.9	1250	109	235	180	380	154	621	27	16	1280	16
9	2.5	1770	97	311	170	390	132	1050	249	14	1240	16
10	3.0	1870	93	515	165	520	115	1310	429	11	1020	13
11	2.7	1610	88	451	160	700	102	1220	277	11	757	10
12	2.6	1220	81	429	155	880	95	1120	103	23	511	8.0
13	6.2	862	78	434	150	1100	91	991	90	18	331	7.5
14	27	573	82	554	145	1000	88	899	92	14	349	6.9
15	150	376	256	678	150	800	78	795	93	13	331	6.9
16	120	259	396	695	155	600	68	626	79	26	317	6.5
17	58	197	347	733	150	500	60	483	52	233	435	6.2
18	40	160	444	989	160	440	63	389	34	201	370	5.9
19	44	132	767	1100	440	380	93	323	23	117	233	5.6
20	60	111	806	1560	430	330	133	245	17	193	125	5.7
21	59	95	843	2150	400	290	148	176	14	234	70	5.8
22	52	83	1160	2200	350	250	127	130	25	183	41	5.8
23	42	136	1150	2100	300	217	125	98	80	130	27	7.1
24	33	265	1050	1800	250	186	125	75	265	107	19	7.1
25	28	212	920	1000	240	163	114	61	142	432	16	6.7
26	44	184	772	700	270	207	235	48	32	569	15	6.1
27	361	210	601	900	360	736	770	38	36	387	13	5.7
28	603	182	465	1300	330	1160	857	35	137	211	12	5.6
29	508	157	365	1000	---	1260	845	37	362	166	11	5.4
30	457	147	292	600	---	1350	883	35	321	155	9.6	5.0
31	436	---	295	400	---	1230	---	31	---	122	8.6	---
TOTAL	3153.4	14266	12437	24642	6880	19409	8858	14652	3129	4569	9264.2	400.5
MEAN	102	476	401	795	246	626	295	473	104	147	299	13.4
MAX	603	1870	1160	2200	440	1350	996	1310	429	569	1280	61
MIN	1.2	83	78	198	145	163	60	31	14	11	8.6	5.0
CFSM	.53	2.49	2.10	4.16	1.29	3.28	1.55	2.48	.55	.77	1.57	.07
IN.	.61	2.78	2.42	4.80	1.34	3.78	1.73	2.85	.61	.89	1.80	.08

CAL YR 1977 TOTAL 83594.5 MEAN 229 MAX 1870 MIN 1.2 CFSM 1.20 IN 16.28
WTR YR 1978 TOTAL 121660.1 MEAN 333 MAX 2200 MIN 1.2 CFSM 1.74 IN 23.69

CHOWAN RIVER BASIN

02053200 POTECASI CREEK NEAR UNION, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
NOV				
14...	1300	555	23	34
DEC				
29...	1630	340	18	17
MAR				
22...	1205	256	33	23
APR				
26...	1204	303	37	30
MAY				
04...	1145	396	30	32
JUN				
21...	0800	13	24	.84
JUL				
25...	1310	449	255	309
SEP				
05...	1300	19	15	.77

02053500 AHOSKIE CREEK AT AHOSKIE, N. C.

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

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

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

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

REMARKS.--Records good. Entire basin above station canalized since July 1964. Excavation began downstream in July 1962 and reached the station in December 1962. Suspended-sediment records for the current year are published on page 22 of this report.

AVERAGE DISCHARGE.--28 years, 64.4 ft³/s (1.824 m³/s), 15.34 in/yr (390 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)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 20	0530	*851	24.1	*9.08	2.768	Mar. 11	0030	731	20.7	7.74	2.359

Minimum discharge, 2.0 ft³/s (0.057 m³/s) Oct. 1; minimum gage height, 0.94 ft (0.287 m) Sept. 16-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	23	21	113	61	54	73	77	13	23	5.2	58
2	3.2	18	23	89	53	88	55	60	12	16	5.7	45
3	2.6	15	20	68	48	278	43	46	11	14	5.6	15
4	2.7	14	18	53	44	577	37	70	17	12	7.9	10
5	2.4	14	21	44	39	312	33	339	13	11	29	8.3
6	2.2	242	38	43	37	191	28	228	16	8.1	134	7.1
7	2.3	592	32	86	36	136	26	141	12	6.9	47	6.4
8	2.1	624	23	78	34	146	24	490	8.0	6.4	22	6.0
9	3.0	429	19	266	33	241	21	659	87	5.9	15	5.6
10	2.6	160	18	186	33	562	20	625	112	5.0	13	5.3
11	2.8	98	16	103	33	719	20	243	31	21	14	5.2
12	2.2	70	14	70	32	499	21	112	20	30	21	5.2
13	14	53	13	84	32	222	20	68	16	11	51	4.9
14	142	42	29	231	36	148	21	238	12	7.5	34	4.9
15	166	34	235	172	38	112	20	136	11	6.2	22	4.8
16	52	29	152	116	36	86	18	84	9.3	34	15	4.8
17	24	25	104	127	93	85	17	54	8.4	93	14	4.6
18	14	21	175	436	90	72	20	38	7.8	25	11	4.7
19	10	18	307	318	85	59	35	28	7.5	12	10	4.9
20	7.5	15	180	822	71	51	56	23	7.2	8.1	9.4	4.9
21	6.2	14	362	810	58	44	46	19	16	6.4	8.6	4.9
22	5.7	13	450	715	53	39	35	16	275	5.5	8.4	4.7
23	4.8	24	214	279	48	33	27	15	53	4.3	7.7	4.9
24	4.1	41	135	157	52	30	24	15	162	29	7.4	5.0
25	3.8	34	106	187	68	27	20	14	52	145	6.6	4.9
26	96	38	90	518	59	120	242	12	24	36	6.4	4.5
27	342	35	69	337	47	665	573	12	39	16	7.6	4.3
28	118	27	57	188	41	576	373	11	142	9.9	10	4.4
29	67	22	49	124	---	251	188	11	153	7.7	6.3	4.5
30	49	19	44	89	---	149	109	11	43	6.5	5.8	4.3
31	32	---	119	70	---	96	---	10	---	5.6	5.4	---
TOTAL	1188.2	2803	3153	6979	1390	6668	2245	3905	1390.2	628.0	566.0	262.0
MEAN	38.3	93.4	102	225	49.6	215	74.8	126	46.3	20.3	18.3	8.73
MAX	342	624	450	822	93	719	573	659	275	145	134	58
MIN	2.0	13	13	43	32	27	17	10	7.2	4.3	5.2	4.3
CFSM	.67	1.64	1.79	3.95	.87	3.77	1.31	2.21	.81	.36	.32	.15
IN.	.78	1.83	2.06	4.55	.91	4.35	1.47	2.55	.91	.41	.37	.17

CAL YR 1977 TOTAL 22458.8 MEAN 61.5 MAX 738 MIN 2.0 CFSM 1.08 IN 14.66
WTR YR 1978 TOTAL 31177.4 MEAN 85.4 MAX 822 MIN 2.0 CFSM 1.50 IN 20.35

CHOWAN RIVER BASIN

02053500 AHOSKIE CREEK AT AHOSKIE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
APR				
26...	1740	416	404	454
JUN				
26...	1810	8.3	31	.69
JUL				
25...	1600	118	379	121
SEP				
06...	1030	7.2	47	.91

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. 352). Suspended-sediment records for the current year are published on page 24 of this report.

AVERAGE DISCHARGE.--54 years, 189 ft³/s (5.352 m³/s), 20.70 in/yr (526 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. 26	0800	2820	79.9	5.37	1.637	May 4	1630	2580	73.1	5.13	1.564
Jan. 26	0330	*6320	179	*8.40	2.560	July 3	0300	2190	62.0	4.74	1.445

Minimum discharge, 62 ft³/s (1.76 m³/s) Oct. 1, gage height, 1.19 ft (0.363 m); minimum daily, 69 ft³/s (1.95 m³/s) Oct. 1, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	146	273	139	362	203	301	288	165	122	140	181
2	182	74	161	138	356	204	291	289	158	175	143	112
3	102	74	150	202	324	210	271	279	161	882	146	110
4	77	158	159	228	323	190	189	1040	135	329	144	104
5	70	441	318	183	323	184	290	726	159	305	207	131
6	71	663	283	145	320	157	161	470	147	204	205	122
7	77	1250	262	150	200	203	167	418	194	149	274	131
8	80	719	317	305	170	281	161	512	287	154	374	152
9	109	438	313	1050	160	249	169	538	378	158	425	153
10	111	364	300	455	155	958	161	470	296	197	238	168
11	107	332	289	430	158	525	180	419	242	342	215	107
12	86	303	238	317	165	322	169	397	196	166	370	102
13	128	297	148	253	166	292	161	431	184	169	479	142
14	184	292	170	226	175	424	153	478	121	151	323	131
15	179	289	263	168	184	389	141	431	119	137	292	105
16	157	285	192	193	176	341	133	418	162	377	261	102
17	131	387	173	234	197	357	150	393	157	300	268	97
18	132	324	232	252	177	341	202	316	146	194	213	94
19	97	309	228	378	144	335	220	309	147	146	176	147
20	98	299	209	395	160	330	193	260	180	149	174	150
21	91	284	231	352	187	257	199	239	144	156	121	91
22	79	164	210	335	195	185	168	225	132	154	114	91
23	71	239	215	316	207	194	132	243	128	162	120	116
24	70	173	206	224	156	251	138	252	134	167	126	85
25	69	140	240	727	147	259	198	253	111	183	144	87
26	958	202	218	2970	156	667	960	243	120	130	140	83
27	357	183	211	681	130	459	840	228	160	147	164	81
28	308	170	204	502	168	381	390	189	187	185	108	79
29	291	187	189	428	---	374	302	207	163	138	164	78
30	281	191	183	400	---	361	270	242	125	112	193	84
31	266	---	180	376	---	335	---	204	---	111	156	---
TOTAL	5088	9377	6965	13152	5741	10218	7460	11407	5138	6451	6617	3416
MEAN	164	313	225	424	205	330	249	368	171	208	213	114
MAX	958	1250	318	2970	362	958	960	1040	378	882	479	181
MIN	69	74	148	138	130	157	132	189	111	111	108	78
(+)	+2	+5	-4	+13	-12	-11	+18	-8	+3	-3	-6	-2

CAL YR 1977 TOTAL 60630 MEAN 166 MAX 1320 MIN 54 MEAN‡ 166 CFSM‡ 1.34 IN‡ 18.18
WTR YR 1978 TOTAL 91030 MEAN 249 MAX 2970 MIN 69 MEAN‡ 249 CFSM‡ 2.01 IN‡ 27.30

+ 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.

02068500 DAN RIVER NEAR FRANCISCO, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
NOV 07...	1300	1320	373	1330
JAN 27...	1225	670	120	217
MAR 10...	1335	1630	1040	4580
APR 17...	1345	130	2	.70
MAY 22...	1032	202	14	7.6
JUN 29...	1335	119	9	2.9
AUG 30...	0840	213	87	50

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

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

REMARKS.--Records good. Diurnal fluctuation and regulation at low flow caused by mills and Talbott and Townes reservoirs. (See p. 352). Suspended-sediment records for the current year are published on page 26 of this report.

AVERAGE DISCHARGE.--39 years, 1,212 ft³/s (34.32 m³/s), 15.68 in/yr (398 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. 26	2230	14700	416	18.15	5.532	Apr. 27	0500	17400	493	19.87	6.056
Jan. 26	2100	*23700	671	*23.07	7.032	May 5	0930	15500	439	18.66	5.688
Mar. 11	0330	17800	504	20.18	6.151	July 3	1930	12500	354	16.63	5.069

Minimum discharge, 267 ft³/s (7.56 m³/s) Oct. 1, gage height, 1.04 ft (0.317 m); minimum daily, 280 ft³/s (7.93 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	280	777	1360	880	1820	972	1500	1940	1000	634	943	2690
2	464	648	1380	800	1680	1000	1400	1740	875	658	990	1080
3	698	563	983	740	1560	1080	1240	1480	846	7030	862	747
4	419	620	847	720	1400	1180	1180	3430	864	3570	1990	747
5	333	1040	1390	770	1400	1070	1080	12500	798	1680	1730	653
6	312	2150	4180	810	1360	1060	1140	3810	806	1310	1960	644
7	302	2540	1790	860	1130	1080	992	2480	1340	1100	4040	617
8	304	3010	1290	2890	1180	1190	964	4790	1800	891	2640	605
9	342	1740	1180	8420	1180	1440	938	5310	2790	821	1910	603
10	450	1290	1080	3240	1060	9100	931	3730	1650	786	1360	585
11	417	1090	952	1770	984	12300	920	2400	1190	2050	1040	614
12	365	968	866	1550	990	3490	966	2030	1040	1330	984	556
13	359	878	956	1450	1010	2440	910	1930	959	874	2410	592
14	499	832	784	1950	1010	2240	872	2600	899	848	1750	595
15	857	808	1070	1850	1030	3080	836	2180	774	1170	1200	606
16	652	786	1100	1280	1020	2250	812	1970	757	3340	1030	565
17	644	805	927	1980	995	1890	799	1810	790	4000	944	550
18	505	1010	1740	3410	1020	1680	838	1650	771	1700	880	523
19	455	844	1940	2730	1020	1510	954	1470	740	1160	793	510
20	427	791	1400	2720	967	1420	1060	1430	753	971	736	552
21	390	765	1280	2780	945	1310	936	1510	1100	897	716	551
22	371	761	1130	2070	1010	1190	877	1180	846	849	629	515
23	361	738	1000	1740	930	1080	824	1140	1040	810	613	509
24	342	836	950	1520	992	1070	775	1160	827	751	605	544
25	334	745	1030	5720	920	1120	889	1170	792	1190	616	536
26	8310	837	1130	20400	927	5090	10200	1110	781	1070	698	521
27	5410	864	950	14800	908	4850	15400	1050	950	757	666	496
28	1740	761	870	3930	876	2560	4750	1010	795	865	663	486
29	1200	739	750	3030	---	2000	2750	967	745	1030	607	478
30	980	757	890	2460	---	1780	2170	1050	690	726	726	467
31	853	---	920	2220	---	1610	---	1080	---	665	793	---
TOTAL	29375	30993	38015	101490	31324	75132	59903	73107	30008	45533	37524	19737
MEAN	948	1033	1226	3274	1119	2424	1997	2358	1000	1469	1210	658
MAX	8310	3010	4180	20400	1820	12300	15400	12500	2790	7030	4040	2690
MIN	280	563	750	720	876	972	775	967	690	634	605	467
CFSM	.90	.98	1.17	3.12	1.07	2.31	1.90	2.25	.95	1.40	1.15	.63
IN.	1.04	1.10	1.35	3.60	1.11	2.66	2.12	2.59	1.06	1.61	1.33	.70

CAL YR 1977 TOTAL 287756 MEAN 788 MAX 8590 MIN 185 CFSM .75 IN 10.19
WTR YR 1978 TOTAL 572141 MEAN 1568 MAX 20400 MIN 280 CFSM 1.49 IN 20.27

ROANOKE RIVER BASIN

02071000 DAN RIVER NEAR WENTWORTH, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
JAN				
27...	1335	14100	420	16000
MAR				
22...	0945	1190	59	190
MAY				
11...	1035	2460	137	910
JUN				
20...	1040	769	37	77
JUL				
26...	0745	1110	562	1680
AUG				
08...	1145	3010	459	3730
09...	1048	1940	308	1610
30...	1000	716	77	149

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 mi² (1,393 km²).

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

REVISED RECORDS.--WSP 1433: 1946.

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

REMARKS.--Records good. Flow regulated since August 1950 by Philpott Lake 40 mi (64 km) upstream (usable capacity, 6,325,000,000 ft³ (179.1 hm³). 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 28 of this report.

AVERAGE DISCHARGE.--39 years, 616 ft³/s (17.45 m³/s), 15.55 in/yr (395 mm/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,600 ft³/s (1,290 m³/s) Aug. 15, 1940, gage height, 19.28 ft (5.877 m), from rating curve extended above 12,000 ft³/s (340 m³/s) on basis of computation of peak flow over dam 1.5 mi (2.4 km) downstream; minimum, 38 ft³/s (1.08 m³/s) Aug. 7, 1967; minimum daily, 46 ft³/s (1.30 m³/s) Aug. 14, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,500 ft³/s (439 m³/s) Apr. 27, gage height, 12.58 ft (3.834 m); minimum, 95 ft³/s (2.69 m³/s) Oct. 2, 23; minimum daily, 109 ft³/s (3.09 m³/s) Oct. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	408	300	783	304	1200	676	1070	2130	930	632	1180	1120
2	127	288	635	289	1200	661	299	2030	906	289	1300	646
3	208	367	445	513	1110	696	506	1950	863	1230	636	203
4	583	386	315	408	1070	659	1080	4090	286	921	748	306
5	579	487	787	426	1050	238	1070	4740	383	1000	679	699
6	575	671	1630	450	369	492	1130	2410	676	900	333	712
7	585	940	862	510	900	699	990	2080	896	975	601	696
8	629	1290	694	910	970	748	990	2810	1250	852	742	688
9	109	586	634	2740	920	867	260	2770	1260	280	704	704
10	187	424	626	1200	917	6890	423	2230	884	288	664	145
11	315	397	199	1340	907	3190	734	1990	293	571	598	260
12	305	366	342	1280	244	1260	747	1380	409	559	628	415
13	323	226	854	1280	412	1170	726	1260	813	523	507	409
14	560	248	928	1220	968	1590	719	676	789	571	471	407
15	714	381	1000	390	979	1730	705	782	783	873	944	421
16	164	322	943	510	973	1440	207	1130	780	480	1020	461
17	303	388	899	900	964	1310	399	1300	793	504	1030	154
18	366	413	860	1450	881	1230	775	1220	239	565	958	211
19	346	268	984	1280	258	1090	822	1200	358	546	977	403
20	338	224	966	1110	479	554	861	1180	587	543	890	397
21	346	290	904	950	652	1150	795	1100	609	529	286	404
22	309	373	829	400	658	1140	701	492	768	559	586	386
23	119	456	796	530	628	1110	227	1020	907	165	585	474
24	201	348	635	930	665	1100	346	1030	690	386	576	181
25	314	497	379	2500	499	1100	516	1020	208	722	581	229
26	4210	402	422	10700	362	2650	8900	1000	335	617	680	468
27	1380	290	898	2480	492	1590	10200	894	710	605	274	673
28	667	338	845	1780	666	1430	4700	305	697	669	295	397
29	622	409	824	1390	---	1270	3770	483	673	599	534	395
30	355	426	854	850	---	1200	2450	914	658	203	563	424
31	267	---	728	1340	---	1160	---	949	---	312	573	---
TOTAL	16514	12801	23500	42360	21393	42090	47118	48565	20433	18468	21143	13488
MEAN	533	427	758	1366	764	1358	1571	1567	681	596	682	450
MAX	4210	1290	1630	10700	1200	6890	10200	4740	1260	1230	1300	1120
MIN	109	224	199	289	244	238	207	305	208	165	274	145
(†)	+40	+386	-22	+203	-133	+91	+99	-127	-19	+8	-54	-97

CAL YR 1977 TOTAL 167601 MEAN 459 MAX 4210 MIN 80 MEAN‡ 458 CFSM‡ 0.85 IN‡ 11.54
WTR YR 1978 TOTAL 327873 MEAN 898 MAX 10700 MIN 109 MEAN‡ 930 CFSM‡ 1.73 IN‡ 23.48

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

02074000 SMITH RIVER AT EDEN, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
NOV				
16...	1402	280	8	6.0
APR				
19...	1325	570	8	12
MAY				
11...	1252	1980	86	460
JUN				
20...	1325	463	20	25
JUL				
25...	1535	680	84	154
AUG				
08...	1235	663	56	100
30...	1452	438	24	28

02074218 DAN RIVER NEAR MAYFIELD, N. C.

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

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

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Water-discharge record good. Diurnal fluctuation and regulation at low flow caused by mills and Talbott and Townes reservoirs on the Dan River (see p. 352) and Philpott Lake on Smith River (see sta 02074000). Duke Power Company gage-height and temperature telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,200 ft³/s (884 m³/s) Apr. 27, 1978, gage height, 25.08 ft (7.664 m); minimum, 345 ft³/s (9.77 m³/s) Aug. 2, 1977, gage height 1.95 ft (0.594 m); minimum daily, 395 ft³/s (11.2 m³/s) July 18, 1977.

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

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

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 26	2230	19000	538	19.54	5.956	Mar. 11	0230	25700	728	22.73	6.928
Jan. 9	1600	14600	413	17.00	5.182	Apr. 27	1030	*31200	884	*25.08	7.644
Jan. 26	2030	30600	867	24.83	7.568	May 5	0830	20500	581	20.29	6.184

Minimum daily discharge, 583 ft³/s (16.5 m³/s) Oct. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	665	1280	2170	1450	3610	1720	2890	4590	2170	1480	2200	5910
2	732	1200	2430	1280	3210	1720	1990	4220	2130	1090	3340	2570
3	880	1060	1820	1350	3130	1890	1850	3830	2070	5030	1690	1310
4	1060	1180	1410	1280	2890	2090	2430	6630	1510	7640	3400	1150
5	933	1820	1940	1300	2800	1610	2340	19500	1470	3250	3380	1920
6	879	2750	6300	1420	2040	1530	2330	8950	1630	2620	2430	1480
7	864	3660	3340	1590	2390	1850	2270	5320	2360	2390	5320	1450
8	906	4780	2320	3900	2360	2030	2180	8200	3240	2100	3810	1410
9	590	2940	2040	12900	2450	2430	1340	9770	4410	1330	3180	1450
10	583	2120	1910	6220	2180	14100	1390	7330	3380	1290	2580	894
11	735	1790	1460	3630	2120	22900	1750	5100	1960	1860	2010	883
12	714	1560	1300	3040	1390	6620	1830	4040	1730	3000	1860	1050
13	700	1350	1840	2980	1450	4160	1780	3700	2050	1700	2020	1040
14	1090	1240	1870	3760	2050	4010	1700	3540	1980	1610	3250	1110
15	1780	1290	2060	2970	2090	5360	1670	3470	1810	2220	2410	1120
16	1280	1280	2280	2210	2110	4320	1200	3480	1770	3350	2250	1100
17	1080	1290	2140	2740	2060	3570	1170	3500	1830	5990	2140	920
18	1060	1550	3310	5810	2080	3190	1650	3210	1280	3250	2080	760
19	954	1390	3520	4860	1470	2980	1820	2980	1270	2110	1930	920
20	912	1190	2830	4570	1430	2060	2010	2850	1550	1780	1820	995
21	863	1130	2520	4590	1660	2640	1910	2970	1870	1660	1130	1010
22	876	1270	2290	3070	1760	2530	1790	1900	2000	1590	1260	1020
23	655	1400	2030	2570	1680	2350	1180	2370	2100	1290	1280	1060
24	604	1390	1900	2760	1670	2280	1150	2400	1880	1180	1260	827
25	703	1410	1620	8100	1720	2310	1390	2390	1340	3070	1260	837
26	9740	1500	1720	27800	1370	5910	16700	2340	1260	2460	1520	971
27	11400	1410	2010	28000	1390	8940	29700	2260	1820	1720	1090	1280
28	3100	1240	1890	8750	1610	4870	15300	1530	1810	1740	1040	936
29	2220	1300	1730	5430	---	3740	7480	1540	1650	2010	1200	920
30	1670	1360	1800	3770	---	3300	5500	2060	1580	1220	1340	896
31	1390	---	1960	4060	---	3050	---	2230	---	1130	1510	---
TOTAL	51618	50130	69760	168160	58170	132060	119690	138200	58910	74160	66990	38789
MEAN	1665	1671	2250	5425	2078	4260	3990	4458	1964	2392	2161	1293
MAX	11400	4780	6300	28000	3610	22900	29700	19500	4410	7640	5320	5910
MIN	583	1060	1300	1280	1370	1530	1150	1530	1260	1090	1040	760
(†)	+40	+386	-22	+203	-133	+91	+99	-127	-19	+8	-54	-97

CAL YR 1977 TOTAL 509711 MEAN 1396 MAX 11400 MIN 395 MEAN# 1395 CFSM# 0.78 IN# 10.59
WTR YR 1978 TOTAL 1026637 MEAN 2813 MAX 29700 MIN 583 MEAN# 2845 CFSM# 1.60 IN# 21.72

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

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

WATER-QUALITY RECORDS

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

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

INSTRUMENTATION.--Temperature recorder since October 1977.

REMARKS.--Water temperatures near left bank sometimes affected by heated releases from power plant located 8.4 mi (13.5 km) upstream. Releases from town of Eden's sewage treatment plant enter river on left bank approximately 10.2 mi (16.4 km) upstream. Temperature recorder located at gaging station.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 199 micromhos July 29, 1977; minimum daily, 37 micromhos Oct. 10, 1976.
WATER TEMPERATURES: Maximum daily, 33.0°C July 20, 1977; minimum, 1.0°C Jan. 3, Dec. 29, 1977, Jan. 11, 12, Feb. 7, 8, 1978.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 177 micromhos Oct. 25; minimum daily, 44 micromhos Jan. 27.
WATER TEMPERATURES: Maximum, 25.5°C July 10, 11, 24, 25, Aug. 29, Sept. 19, 20, 21; minimum, 1.0°C Dec. 29, Jan. 11, 12, Feb. 7, 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT										
26...	1230	9550	90	6.8	14.0	650	8.7	18	0	4.5
26...	1445	14600	79	6.8	13.5	--	7.0	--	--	--
26...	1600	16000	86	6.0	13.5	240	7.4	14	0	3.8
28...	1200	2880	71	6.8	--	250	--	14	3	3.2
DEC										
29...	1400	1900	85	6.8	1.0	19	13.2	20	0	5.0
JAN										
26...	1400	29500	31	6.6	1.0	300	13.4	11	1	2.6
APR										
05...	1300	2660	90	7.4	14.0	20	10.3	18	0	4.6
JUN										
08...	1310	3630	95	7.2	20.0	750	8.9	16	0	4.0
21...	1335	1970	110	6.7	25.0	15	8.1	19	0	5.0
AUG										
29...	1115	1290	88	6.7	26.0	15	7.2	23	0	6.0

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
OCT										
26...	1.6	10	51	1.0	2.7	23	0	19	5.8	9.4
26...	--	--	--	--	--	--	0	--	--	--
26...	1.0	9.0	53	1.1	2.7	18	0	15	29	6.8
28...	1.4	5.8	42	.7	2.8	13	0	11	3.3	7.4
DEC										
29...	1.9	7.8	43	.8	1.5	28	0	23	7.1	6.0
JAN										
26...	1.1	2.2	26	.3	2.0	12	0	10	4.8	6.8
APR										
05...	1.7	10	52	1.0	1.4	25	0	21	1.6	6.9
JUN										
08...	1.5	9.5	53	1.0	1.9	23	0	19	2.3	6.4
21...	1.7	12	54	1.2	1.9	27	0	22	8.6	7.2
AUG										
29...	2.0	8.3	41	.8	1.8	28	0	23	8.9	6.7

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)
OCT										
26...	10	.1	8.1	68	58	.09	1750	.26	.02	.28
26...	--	--	--	--	--	--	--	--	--	--
26...	9.5	.1	8.1	58	51	.08	2510	.28	.05	.33
28...	6.4	.0	11	58	45	.08	451	.39	.02	.41
DEC										
29...	8.4	.0	15	74	61	.10	380	.27	.01	.28
JAN										
26...	3.0	.1	5.0	46	30	.06	3660	.22	.06	.28
APR										
05...	10	.1	13	56	61	.08	402	.22	.01	.23
JUN										
08...	11	.1	12	68	58	.09	666	--	--	--
21...	15	.1	15	79	74	.11	420	.34	.01	.35
AUG										
29...	7.5	.1	14	66	62	.09	230	.29	.01	.30

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT										
26...	.34	--	.08	.01	.01	2.5	.45	2.6	2.1	.46
26...	--	--	--	--	--	--	--	--	--	--
26...	.27	--	.21	.17	.22	5.6	.32	5.8	5.3	.49
28...	.42	--	.08	.01	.01	1.5	.32	1.6	1.3	.33
DEC										
29...	.28	5.0	.04	.03	.04	.29	.25	.33	.05	.28
JAN										
26...	.27	--	.19	.15	.19	1.9	.31	2.1	1.6	.46
APR										
05...	.24	2.0	.03	.03	.04	.40	.19	.43	.21	.22
JUN										
08...	--	--	--	--	--	--	--	--	--	--
21...	.38	--	.04	.03	.04	.81	.19	.85	.63	.22
AUG										
29...	.30	--	.00	.02	.03	.41	.27	.41	.12	.29

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, NH4 + ORG, TOT IN BOT MAT (MG/KG AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)
OCT									
26...	--	2.9	13	.78	--	.04	.06	.01	.03
26...	--	--	--	--	--	--	--	--	--
26...	--	6.1	27	2.1	--	.01	.11	.00	.00
28...	--	2.0	8.9	.27	--	.02	.05	.00	.00
DEC									
29...	1500	.61	2.7	.10	.31	.15	.06	.12	.37
JAN									
26...	--	2.4	11	.65	2.0	.01	.09	.00	.00
APR									
05...	1000	.66	2.9	.14	.43	.09	.07	.07	.21
JUN									
08...	--	--	--	--	--	--	--	--	--
21...	--	1.2	5.3	.17	.52	.22	.09	.12	.37
AUG									
29...	--	.71	3.1	.12	.37	--	.04	--	--

DATE	PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUSPENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)
OCT										
26...	--	1	0	1	--	1	0	3	--	30
26...	--	--	--	--	--	--	--	--	--	90
26...	--	--	--	--	--	--	--	--	--	60
28...	--	--	--	--	--	--	--	--	--	20
DEC										
29...	290	--	--	--	1	--	--	--	<10	10
JAN										
26...	--	0	0	0	--	1	0	1	--	40
APR										
05...	270	--	--	--	--	--	--	--	--	<10
JUN										
08...	--	--	--	--	--	--	--	--	--	20
21...	--	--	--	--	--	--	--	--	--	10
AUG										
29...	--	--	--	--	--	--	--	--	--	<10

DATE	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)
OCT										
26...	30	0	--	10	10	0	--	57	50	7
26...	90	0	--	--	--	--	--	290	280	8
26...	60	0	--	--	--	--	--	200	200	4
28...	20	0	--	--	--	--	--	10	7	3
DEC										
29...	9	1	20	--	--	--	10	15	10	5
JAN										
26...	38	2	--	9	1	8	--	67	64	3
APR										
05...	<10	0	<10	--	--	--	--	27	16	11
JUN										
08...	19	1	--	--	--	--	--	36	30	6
21...	--	--	--	--	--	--	--	25	16	9
AUG										
29...	<9	1	--	--	--	--	--	7	3	4

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)
OCT										
26...	--	40000	--	220	--	54	17	37	--	960
26...	--	20000	--	150	--	100	100	0	--	--
26...	--	21000	--	140	--	50	50	0	--	--
28...	--	11000	--	150	--	13	8	5	--	--
DEC										
29...	10	1000	--	140	2000	1	1	0	10	--
JAN										
26...	--	40000	--	120	--	18	16	2	--	860
APR										
05...	<10	1700	--	130	1700	7	0	7	130	--
JUN										
08...	--	18000	--	50	--	18	14	4	--	--
21...	--	6400	--	210	--	44	0	47	--	--
AUG										
29...	--	2500	2400	120	--	3	0	7	--	--

DATE	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/L AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)
OCT										
26...	840	120	--	<.5	.0	<.5	--	0	0	0
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
DEC										
29...	--	--	180	--	--	--	.0	--	--	--
JAN										
26...	740	120	--	<.5	.0	<.5	--	1	1	0
APR										
05...	--	--	--	--	--	--	--	--	--	--
JUN										
08...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
AUG										
29...	--	--	--	--	--	--	--	--	--	--

DATE	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT									
26...	--	110	110	0	--	19	1.7	--	.00
26...	--	240	240	0	--	--	--	--	--
26...	--	190	190	0	--	11	--	--	.10
28...	--	20	20	0	--	8.6	3.5	--	.00
DEC									
29...	0	10	10	0	30	6.9	--	5.2	.00
JAN									
26...	--	110	100	10	--	4.8	7.8	--	--
APR									
05...	--	20	10	10	10	6.0	.7	2.9	.00
JUN									
08...	--	110	110	0	--	--	--	--	--
21...	--	20	10	10	--	5.6	1.2	--	.00
AUG									
29...	--	10	0	10	--	6.6	1.0	--	.00

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	DEC 29,77	APR 5,78
TIME	1400	1300
TOTAL CELLS/ML	160	350
DIVERSITY: DIVISION	0.5	1.2
.CLASS	0.5	1.4
..ORDER	1.3	1.6
...FAMILY	2.8	2.2
....GENUS	2.8	2.2

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)				
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...OOCYSTACEAE				
....ANKISTRODESMUS	8	5	--	-
..VOLVOCALES				
...CHLAMYDOMONADACEAE				
....CHLAMYDOMONAS	8	5	--	-
CHRYSOPHYTA				
.BACILLARIOPHYCEAE				
..CENTRALES				
...COSCINODISCACEAE				
....CYCLOTELLA	33#	21	--	-
....STEPHANODISCUS	--	-	14	4
..PENNALES				
...DIATOMACEAE				
....DIATOMA	17	11	14	4
...FRAGILARIACEAE				
....SYNEDRA	25#	16	27	8
...GOMPHONEMATACEAE				
....GOMPHONEMA	17	11	--	-
...NAVICULACEAE				
....NAVICULA	17	11	120#	35
...NITZSCHIACEAE				
....NITZSCHIA	33#	21	--	-
...SURIRELLACEAE				
....SURIRELLA	--	-	14	4
.CHRYSOPHYCEAE				
..CHRYSOMONADALES				
...OCHROMONADACEAE				
....DINOBRYON	--	-	14	4
CYANOPHYTA (BLUE-GREEN ALGAE)				
.CYANOPHYCEAE				
..CHROCOCCALES				
...CHROCOCCACEAE				
....ANACYSTIS	--	-	140#	38
EUGLENOPHYTA (EUGLENOIDS)				
.CRYPTOPHYCEAE				
..CRYPTOMONIDALES				
...CRYPTOMONODACEAE				
....CRYPTOMONAS	--	-	14	4

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

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	77	101	70	87	106	93	63	85	86	100	72
2	122	90	78	71	86	98	69	72	83	72	67	88
3	98	113	84	69	86	100	70	76	110	73	81	73
4	124	125	83	84	91	101	102	67	78	45	68	72
5	128	113	76	116	79	86	98	51	87	50	70	108
6	125	80	69	97	64	76	103	60	133	59	70	83
7	109	69	70	108	102	98	93	54	88	57	58	144
8	121	68	69	73	108	98	108	55	82	53	85	144
9	106	62	79	58	99	104	69	57	75	56	86	144
10	89	72	75	55	122	60	66	65	84	59	76	84
11	136	101	70	70	110	47	96	68	66	64	89	82
12	148	97	65	86	69	57	102	71	67	64	98	112
13	153	101	112	82	70	58	101	67	110	71	72	124
14	135	80	98	86	98	72	108	61	111	93	59	126
15	91	82	113	71	105	66	104	59	130	127	98	122
16	80	110	100	73	115	72	78	72	122	51	92	119
17	80	95	80	90	112	84	76	78	124	71	81	122
18	91	123	62	72	86	79	81	91	71	80	85	118
19	135	101	63	71	70	72	89	83	74	88	91	100
20	132	88	75	76	71	61	84	93	81	94	79	133
21	128	82	79	71	92	103	96	74	111	95	69	134
22	136	71	83	66	99	86	98	70	112	104	73	126
23	116	123	67	71	97	102	80	93	137	91	103	137
24	117	130	65	94	116	104	78	89	115	81	91	111
25	177	86	64	71	101	95	80	91	79	62	92	88
26	99	79	62	46	94	68	61	91	73	71	130	100
27	53	80	68	44	87	50	46	95	126	81	90	158
28	62	73	70	59	107	57	55	73	81	96	86	107
29	73	71	89	62	---	79	62	79	95	88	126	144
30	70	100	85	63	---	72	61	116	87	77	104	134
31	77	---	80	86	---	85	---	97	---	71	110	---
MEAN	111	91	79	75	94	81	84	75	96	75	86	114

WTR YR 1978 MEAN 88 MAX 177 MIN 44

ROANOKE RIVER BASIN

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.5	20.5	14.0	14.0	8.5	7.5	3.0	3.0	3.0	2.0	5.0	4.5
2	22.5	21.0	14.5	14.0	9.5	8.5	4.0	3.0	4.0	2.5	4.5	4.0
3	21.0	19.0	16.5	14.5	9.5	8.5	4.0	2.5	3.5	3.0	4.0	3.5
4	19.0	17.0	19.5	16.5	9.0	8.5	3.5	2.5	3.5	2.5	3.5	3.0
5	18.5	17.5	19.5	19.0	10.0	9.0	3.5	2.0	4.0	2.5	4.0	2.5
6	18.0	17.0	19.0	18.0	9.5	8.5	4.0	3.0	3.0	2.5	4.5	3.5
7	18.0	16.5	18.0	17.5	8.5	6.5	4.5	4.0	2.0	1.0	5.5	4.5
8	17.5	15.5	18.0	16.5	6.5	5.0	5.0	4.5	2.5	1.0	5.5	4.5
9	18.0	15.5	16.5	15.5	5.0	4.5	6.0	5.0	3.5	2.0	4.5	4.0
10	18.0	16.0	16.0	15.5	5.0	4.0	5.5	2.0	3.0	2.5	4.5	3.5
11	17.0	15.0	15.5	13.5	4.0	3.0	2.0	1.0	3.5	2.5	5.5	3.5
12	16.5	15.5	13.5	10.0	3.5	1.5	2.0	1.0	3.5	2.0	7.0	5.0
13	16.5	14.5	10.0	8.0	4.0	2.5	2.5	2.0	4.0	3.0	8.0	7.0
14	15.0	13.5	9.0	7.0	6.0	4.0	3.0	2.0	4.5	3.5	9.0	8.0
15	13.5	12.0	9.5	8.5	7.5	5.5	3.0	2.0	6.0	4.0	9.5	9.0
16	13.0	11.5	9.5	8.0	7.5	6.5	2.5	2.0	6.0	4.5	9.5	9.5
17	11.5	11.0	12.5	9.5	7.0	6.5	2.5	2.0	5.0	4.0	9.0	8.5
18	11.5	10.5	12.5	11.5	7.5	7.0	3.5	2.0	4.5	4.0	9.0	8.0
19	11.5	10.5	12.0	10.0	7.5	7.0	4.0	2.5	4.5	4.5	8.0	7.5
20	12.0	10.5	10.0	9.0	7.5	7.0	3.0	2.5	4.5	4.0	9.5	8.0
21	11.5	10.5	9.5	9.0	7.0	7.0	4.0	2.0	4.5	3.5	10.5	9.5
22	13.5	10.5	11.0	9.5	7.0	5.5	3.0	2.5	4.5	3.5	11.0	10.5
23	15.0	13.0	10.5	10.5	5.5	4.0	3.0	2.0	4.5	3.0	11.0	11.0
24	15.0	14.0	10.5	9.5	5.0	4.0	3.5	2.0	5.0	3.5	11.5	11.0
25	16.0	14.5	10.5	10.0	6.0	5.0	3.5	3.0	5.5	4.0	12.0	11.0
26	16.0	14.5	10.5	8.5	6.0	4.5	3.5	2.0	6.5	5.5	11.0	8.0
27	15.0	14.5	8.5	6.5	4.5	3.0	3.0	2.0	6.5	5.5	8.0	7.5
28	16.0	15.0	6.5	6.0	3.0	2.0	3.0	2.5	6.0	5.0	9.0	8.0
29	16.0	15.5	7.0	6.5	2.5	1.0	2.5	2.0	---	---	10.0	9.0
30	15.5	14.5	7.5	7.0	2.5	2.0	2.5	1.5	---	---	11.0	10.0
31	14.5	13.0	---	---	3.0	2.5	2.5	2.0	---	---	11.0	10.5
MONTH	22.5	10.5	19.5	6.0	10.0	1.0	6.0	1.0	6.5	1.0	12.0	2.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.0	11.0	12.5	11.5	22.0	20.5	24.5	24.5	24.0	23.5	24.5	22.5
2	13.5	12.0	14.0	12.0	---	---	24.5	24.0	23.5	23.0	22.5	22.5
3	13.5	13.5	13.0	12.5	---	---	24.5	23.0	23.5	23.0	22.5	22.0
4	14.0	13.5	13.0	11.5	---	---	23.0	22.0	23.5	22.0	23.0	22.5
5	14.0	14.0	12.5	11.5	21.0	20.0	23.0	22.0	22.0	22.0	23.0	22.5
6	14.0	14.0	13.0	12.5	21.0	21.0	22.0	21.0	22.0	22.0	23.0	22.5
7	14.0	14.0	13.5	13.0	21.0	21.0	21.5	20.5	22.0	21.5	22.5	22.0
8	14.5	14.0	14.0	12.0	21.0	20.5	21.0	20.5	23.0	22.0	23.0	22.5
9	15.0	14.0	13.0	12.0	21.0	20.5	23.0	21.0	23.0	22.5	22.5	22.5
10	16.0	15.0	14.5	13.0	21.0	20.5	25.5	23.0	23.0	23.0	23.0	22.5
11	16.5	16.0	14.5	14.0	21.0	20.5	25.5	24.0	23.5	22.5	23.5	22.5
12	16.5	16.0	15.0	14.0	22.5	21.0	25.0	23.0	23.0	23.0	24.0	23.5
13	16.0	15.5	15.0	15.0	23.5	22.5	23.0	22.5	23.5	23.0	24.0	24.0
14	15.5	15.5	16.0	15.0	23.5	22.0	22.5	22.0	23.5	22.5	24.0	22.5
15	15.5	15.0	15.0	14.5	22.5	21.5	22.0	21.5	23.5	23.0	22.5	21.5
16	16.0	15.0	14.5	14.0	22.5	21.0	21.0	20.5	24.0	22.5	23.5	21.5
17	15.5	15.0	14.0	13.5	21.0	21.0	22.0	20.5	23.0	22.5	---	---
18	15.0	14.0	15.0	14.0	22.5	21.0	22.5	22.0	23.0	22.0	---	---
19	14.0	13.5	15.5	15.0	24.0	22.5	23.0	22.5	22.5	22.0	25.5	25.0
20	13.5	13.0	16.5	15.5	24.5	24.0	23.5	22.5	22.5	22.0	25.5	25.5
21	14.0	13.0	17.5	16.5	24.5	24.5	23.5	23.0	23.5	22.5	25.5	25.0
22	13.0	12.5	18.5	17.0	24.5	24.0	24.0	23.5	23.5	23.0	25.0	24.5
23	13.5	13.0	19.0	18.5	24.0	23.0	24.5	23.5	23.5	22.5	24.5	23.0
24	14.5	13.5	19.0	18.5	23.0	23.0	25.5	24.5	23.0	22.5	23.5	22.0
25	14.5	14.5	18.5	18.5	24.0	23.0	25.5	23.5	23.0	23.0	22.0	21.0
26	14.5	9.5	19.0	18.5	24.5	24.0	24.0	23.0	23.0	23.0	22.0	22.0
27	9.5	9.0	19.5	19.0	25.0	24.5	23.5	23.5	23.5	23.0	21.5	21.0
28	10.5	9.5	20.0	19.0	25.0	24.5	23.5	23.0	24.5	23.5	21.0	20.5
29	11.0	10.5	20.0	19.5	25.0	25.0	23.0	23.0	25.5	24.5	20.5	20.0
30	12.0	11.0	21.0	20.0	25.0	25.0	23.0	23.0	25.0	24.5	20.0	19.5
31	---	---	21.0	20.0	---	---	24.0	23.0	24.5	24.0	---	---
MONTH	16.5	9.0	21.0	11.5	25.0	20.0	25.5	20.5	25.5	21.5	25.5	19.5
YEAR	25.5	1.0										

ROANOKE RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
OCT							
26...	1230	9550	1060	27300	--	--	--
26...	1445	14600	2290	90300	--	--	--
26...	1600	16000	1950	84200	--	--	--
28...	1200	2880	293	2280	--	--	--
DEC							
29...	1400	1900	40	205	--	--	--
JAN							
26...	1400	29500	1160	92400	25	32	38
APR							
05...	1300	2660	30	215	--	--	--
JUN							
08...	1310	3630	322	3160	--	--	--
21...	1335	1970	95	505	--	--	--
AUG							
29...	1115	1290	46	160	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT						
26...	--	--	--	--	--	64
26...	--	--	--	--	--	74
26...	--	--	--	--	--	65
28...	--	--	--	--	--	77
DEC						
29...	--	--	--	--	--	50
JAN						
26...	49	54	62	68	80	--
APR						
05...	--	--	--	--	--	100
JUN						
08...	--	--	--	--	--	79
21...	--	--	--	--	--	80
AUG						
29...	--	--	--	--	--	75

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER YEAR OCTOBER 1977 to SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT									
03...	1345	1050	80	6.4	20.0	8.3	40	1.5	1300
20...	1435	847	90	6.8	12.0	9.8	10	.9	360
NOV									
21...	1155	1140	50	6.5	10.0	11.2	<10	.6	160
DEC									
28...	1315	2030	40	7.1	1.0	14.8	11	1.1	80
JAN									
24...	1215	2900	50	6.7	2.0	12.4	<10	1.9	180
MAR									
02...	1215	1670	60	--	3.0	12.2	<10	--	--
21...	1415	2950	65	7.0	13.0	9.8	12	1.6	110
APR									
11...	1430	1800	80	7.1	18.0	8.4	<10	--	370
MAY									
22...	1150	1700	40	7.6	18.0	8.4	<10	1.4	730

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 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) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge record good.

AVERAGE DISCHARGE.--14 years, 44.5 ft³/s (1.260 m³/S), 13.73 in/yr (349 mm/yr).

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

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

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 9	0930	3250	92.0	36.87	11.238	May 5	0530	3150	89.2	37.76	11.204
Jan. 26	0230	2220	62.9	35.56	10.839	May 9	1300	1840	52.1	34.99	10.665
Mar. 10	2130	1690	47.9	34.79	10.604	May 14	0830	988	28.0	33.58	10.235
Apr. 26	1830	*5530	157	*38.97	11.878						

No flow Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	15	74	32	49	20	31	65	18	4.6	20	84
2	.44	14	59	30	45	20	29	51	17	3.9	18	78
3	.56	14	39	27	41	26	26	41	16	3.8	60	20
4	.44	70	30	24	36	50	24	207	15	7.1	250	15
5	.27	104	86	24	32	57	24	1580	15	6.6	150	11
6	.20	199	218	29	30	49	22	240	20	4.6	220	9.1
7	.13	223	86	65	28	46	21	97	32	3.0	162	8.0
8	.13	70	55	189	26	54	20	453	26	2.7	74	6.6
9	.31	43	46	1770	24	94	19	1050	70	2.5	37	6.1
10	.44	31	39	292	23	801	19	318	50	2.7	41	5.2
11	.51	24	33	98	22	811	18	109	30	2.8	36	4.8
12	.44	20	30	66	21	207	18	70	18	7.6	21	4.9
13	.66	17	28	104	23	110	17	142	8.5	5.5	17	4.4
14	32	15	40	496	25	85	16	609	7.3	3.5	14	4.0
15	47	14	126	309	23	87	15	170	6.2	4.8	12	4.1
16	17	13	72	115	22	66	14	91	5.7	170	10	4.1
17	12	13	53	138	22	56	14	65	5.1	181	9.5	3.9
18	8.5	12	82	461	22	47	14	50	5.1	31	8.2	3.3
19	6.8	9.8	73	194	22	43	16	40	4.5	19	7.2	3.2
20	5.3	9.0	55	393	21	38	18	34	4.3	15	6.6	3.1
21	4.6	8.8	57	383	20	36	15	29	4.1	12	5.9	3.2
22	3.9	9.8	48	146	21	34	13	25	8.2	10	4.8	3.3
23	4.1	14	40	89	20	32	13	22	8.1	8.9	4.3	3.2
24	5.3	14	37	72	21	32	12	21	5.9	8.0	3.8	3.3
25	5.3	13	40	630	20	32	17	19	5.4	7.2	3.5	4.2
26	203	24	41	1760	19	55	2580	18	20	168	3.5	3.8
27	194	21	33	355	18	81	1420	17	23	37	5.2	3.5
28	50	18	31	129	17	56	448	16	11	28	6.1	3.5
29	31	32	30	86	---	44	148	15	8.1	34	4.0	3.8
30	22	34	29	68	---	38	85	18	5.9	17	6.1	3.6
31	18	---	33	59	---	34	---	32	---	13	6.8	---
TOTAL	674.33	1118.4	1743	8633	713	3241	5146	5714	473.4	824.8	1227.5	318.2
MEAN	21.8	37.3	56.2	278	25.5	105	172	184	15.8	26.6	39.6	10.6
MAX	203	223	218	1770	49	811	2580	1580	70	181	250	84
MIN	.00	8.8	28	24	17	20	12	15	4.1	2.5	3.5	3.1
CFSM	.50	.85	1.28	6.32	.58	2.39	3.91	4.18	.36	.61	.90	.24
IN.	.57	.95	1.47	7.30	.60	2.74	4.35	4.83	.40	.70	1.04	.27

CAL YR 1977 TOTAL 9115.10 MEAN 25.0 MAX 340 MIN .00 CFSM .57 IN 7.71
WTR YR 1978 TOTAL 29826.63 MEAN 81.7 MAX 2580 MIN .00 CFSM 1.86 IN 25.22

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

WATER-QUALITY RECORDS

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

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

INSTRUMENTATION.--Temperature recorder since May 1964.

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

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, 27.0°C June 28, 29, July 24, 25; minimum, 0.5°C Jan. 4, 5, 11, 12, 13, 30, 31, Feb. 1, 2, 4-9.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

ROANOKE RIVER BASIN

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

TEMPERATURE (DEG. C) OF WATER. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	16.5	13.0	13.5	13.0	24.5	21.5	26.5	25.0	26.0	24.0	25.5	23.5
2	19.5	14.5	13.5	12.0	24.5	21.5	26.5	25.0	25.0	23.5	23.5	23.0
3	18.0	15.0	14.5	12.0	24.5	22.0	25.5	25.0	25.0	24.0	23.5	22.0
4	16.0	13.5	14.0	12.0	23.0	21.0	25.5	25.0	24.0	23.0	23.5	21.5
5	18.5	15.0	13.0	11.5	21.5	20.0	25.5	23.5	23.0	22.0	23.0	21.5
6	18.0	15.0	16.0	13.0	21.0	20.5	23.5	21.0	23.0	22.0	23.0	21.0
7	19.0	15.5	16.0	14.5	21.5	20.5	23.5	21.0	23.0	23.0	23.5	21.0
8	18.0	14.5	14.5	13.0	22.0	21.0	23.5	22.0	23.5	23.0	24.0	23.0
9	19.0	15.5	14.5	13.0	22.0	21.0	25.5	23.5	24.5	23.5	24.5	23.0
10	19.0	16.0	15.5	14.5	23.0	21.0	26.0	24.5	24.5	24.0	24.5	24.0
11	19.5	19.0	15.5	14.5	22.0	20.5	26.0	24.5	24.0	23.5	24.5	22.0
12	19.0	16.5	16.5	15.5	23.5	20.5	24.5	22.0	24.5	23.5	24.5	23.0
13	18.0	16.5	17.0	16.0	24.5	22.0	24.0	21.0	25.5	23.5	24.0	23.0
14	18.0	14.5	16.0	14.5	24.0	20.5	23.0	22.0	25.5	24.0	23.0	21.5
15	17.0	14.5	14.5	13.5	21.5	19.0	23.5	22.0	26.0	24.5	21.5	21.0
16	16.5	13.5	14.0	13.5	21.5	20.0	23.5	21.0	26.5	24.5	23.0	20.5
17	15.5	14.0	14.5	13.5	23.5	20.5	21.0	20.5	26.5	25.0	24.0	21.5
18	14.0	13.0	16.5	14.5	24.5	22.0	23.5	21.0	26.5	24.5	25.0	22.0
19	13.5	13.0	18.5	16.5	25.5	23.5	24.5	21.5	26.0	24.5	25.0	23.5
20	13.5	12.0	20.0	17.0	25.5	23.5	24.5	22.0	26.0	24.5	25.0	24.0
21	13.5	11.0	21.0	19.0	24.0	23.5	25.0	23.0	26.0	23.5	24.0	23.0
22	14.5	10.0	21.0	19.5	24.0	22.0	25.5	23.5	24.5	21.5	24.5	22.0
23	15.5	10.5	21.0	19.5	24.0	22.0	26.5	25.0	23.5	21.0	24.0	21.0
24	17.0	12.0	21.5	20.0	24.0	23.0	27.0	25.5	23.5	21.0	21.0	20.0
25	16.5	13.0	22.0	20.5	24.0	22.0	27.0	25.5	24.0	23.0	21.0	20.0
26	13.0	10.0	23.0	20.0	24.5	23.5	25.5	21.5	24.5	23.5	21.0	19.5
27	10.0	9.0	22.0	20.0	25.5	23.5	24.0	23.0	25.5	23.5	20.0	18.0
28	12.0	9.5	21.5	20.5	27.0	25.0	25.0	23.5	25.5	24.5	20.0	18.0
29	13.5	11.0	22.0	20.0	27.0	25.0	24.5	23.0	25.5	24.5	20.0	18.0
30	13.5	13.5	23.5	21.0	26.5	25.0	24.5	23.0	25.5	24.0	18.5	16.5
31	---	---	24.5	22.0	---	---	26.5	24.0	25.5	24.5	---	---
MONTH	19.5	9.0	24.5	11.5	27.0	19.0	27.0	20.5	26.5	21.0	25.5	16.5
YEAR	27.0	.5										

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
25...	1233	328	379	336
25...	1330	337	287	261
MAY				
31...	1615	11	9	.27
JUN				
06...	1515	7.0	8	.15
JUL				
18...	1110	32	49	4.2
21...	1435	9.5	51	1.3
AUG				
31...	1140	6.0	35	.57

ROANOKE RIVER BASIN

02077240 DOUBLE CREEK NEAR ROSEVILLE, N. C.

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

DRAINAGE AREA.--7.47 mi² (19.35 km²).

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

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

REMARKS.--Records good. Recording rain gage at station. Suspended-sediment records for the current year are published on page 42 of this report.

AVERAGE DISCHARGE.--12 years (water years 1965-75, 1978) 7.86 ft³/s (0.223 m³/s), 14.29 in/yr (363 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,390 ft³/s (96.0 m³/s), July 13, 1975, gage height, 7.41 ft (2.259 m), from rating curve extended above 620 ft³/s (17.6 m³/s) on basis of computation of peak flow through culvert at gage height 5.79 ft (1.765 m); minimum, 0.03 ft³/s (0.0008 m³/s) Oct. 3, 4, 5, 7, 1968, Oct. 6, 7, 1970.

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

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 9	0045	447	12.7	4.94	1.506	May 4	2030	750	21.2	5.87	1.789
Jan. 13	2215	172	4.87	3.66	1.116	May 8	0600	248	7.02	4.09	1.247
Jan. 17	1830	225	6.37	3.97	1.210	May 9	0230	764	21.6	5.91	1.801
Jan. 26	0230	483	13.7	5.06	1.542	May 13	1845	365	10.3	4.62	1.408
Mar. 10	1745	310	8.78	4.40	1.341	July 16	0930	498	14.1	5.11	1.558
Apr. 26	1115	*812	23.0	*6.03	1.838	Aug. 4	1745	252	7.14	4.11	1.253
Apr. 27	0445	252	7.14	4.11	1.253						

Minimum discharge, 0.22 ft³/s (0.006 m³/s) Oct. 1, gage height, 1.66 ft (0.506 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.27	2.2	7.2	4.0	6.9	4.0	5.4	8.5	4.5	2.7	4.8	13
2	.96	2.1	5.3	3.7	6.7	3.8	5.1	7.0	4.0	2.5	15	2.9
3	.81	3.0	4.2	3.3	6.1	6.0	4.8	6.0	3.8	3.4	9.4	2.2
4	.35	8.6	3.7	3.0	5.6	7.8	4.8	164	3.8	2.9	35	1.8
5	.31	6.4	28	3.0	5.2	7.6	4.6	74	3.6	2.7	14	1.7
6	.33	22	21	4.6	5.0	6.9	4.4	19	7.9	2.5	26	1.6
7	.32	15	8.3	6.5	4.6	6.4	4.5	13	6.0	2.2	20	1.4
8	.34	7.2	5.9	47	4.8	10	4.3	133	8.2	1.9	10	1.3
9	.90	4.9	5.0	119	4.8	14	4.2	179	22	1.8	6.0	1.2
10	.70	3.9	4.2	17	4.7	175	4.0	27	9.3	1.7	19	1.2
11	.48	3.0	3.6	9.9	4.4	50	4.0	15	5.6	3.1	6.7	1.2
12	.47	2.6	3.4	8.2	4.4	20	4.0	11	4.7	2.0	4.7	1.1
13	1.6	2.3	3.4	42	4.5	13	4.0	74	4.3	1.8	3.7	1.0
14	15	2.2	10	56	4.8	13	3.7	43	3.9	2.8	3.1	1.1
15	5.5	2.1	16	24	4.4	11	3.5	17	3.7	2.4	2.9	1.0
16	2.8	2.0	7.6	13	4.2	8.4	3.5	12	3.5	93	2.6	1.0
17	2.4	2.0	6.2	51	4.3	7.5	3.5	9.6	3.4	11	2.4	1.0
18	1.7	1.8	9.0	35	4.2	6.6	3.7	7.9	3.3	6.0	2.3	.96
19	1.5	1.7	7.5	36	4.3	6.0	4.0	7.0	3.1	4.7	2.1	.94
20	1.2	1.7	6.4	103	4.1	5.7	3.9	6.5	3.7	3.8	2.1	.92
21	1.1	1.7	7.1	35	4.0	5.6	3.5	5.9	3.8	3.2	1.9	1.0
22	1.0	2.0	5.8	19	4.3	5.3	3.2	5.5	3.6	2.7	1.8	.96
23	.95	2.5	5.0	14	3.9	5.1	3.0	5.3	3.3	2.5	1.7	1.0
24	.89	2.2	4.7	13	4.0	4.9	2.9	5.2	3.1	2.3	1.6	1.3
25	.90	2.2	5.8	209	3.9	5.6	5.8	4.9	3.9	2.3	1.5	1.1
26	28	4.0	4.8	150	3.7	12	304	4.7	7.8	2.5	1.6	.95
27	8.6	2.6	4.1	23	3.5	12	139	4.6	4.8	2.3	1.5	.87
28	4.9	3.0	3.9	14	3.7	8.4	29	4.4	3.6	3.6	1.4	.88
29	3.5	4.6	3.4	10	---	7.0	14	4.3	3.4	2.3	1.2	.78
30	2.7	3.9	3.8	8.4	---	6.1	10	4.5	2.9	2.1	1.1	.81
31	2.3	---	4.4	7.5	---	5.7	---	9.0	---	7.1	1.3	---
TOTAL	92.78	125.4	218.7	1092.1	129.0	460.4	598.3	891.8	152.5	187.8	208.4	48.17
MEAN	2.99	4.18	7.05	35.2	4.61	14.9	19.9	28.8	5.08	6.06	6.72	1.61
MAX	28	22	28	209	6.9	175	304	179	22	93	35	13
MIN	.27	1.7	3.4	3.0	3.5	3.8	2.9	4.3	2.9	1.7	1.1	.78
CFSM	.40	.56	.94	4.71	.62	2.00	2.66	3.86	.68	.81	.90	.22
IN.	.46	.62	1.09	5.44	.64	2.29	2.98	4.44	.76	.94	1.04	.24

WTR YR 1978 TOTAL 4205.35 MEAN 11.5 MAX 304 MIN .27 CFSM 1.54 IN 20.94

ROANOKE RIVER BASIN

02077240 DOUBLE CREEK NEAR ROSEVILLE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
NOV				
07...	0945	15	35	1.4
14...	1615	2.0	2	.01
DEC				
20...	0900	6.1	9	.15
JAN				
09...	0915	88	242	57
09...	1415	58	149	23
25...	1015	368	834	829
MAR				
10...	0945	192	328	170
APR				
27...	1508	93	170	43
MAY				
04...	1010	6.7	12	.22
04...	1622	162	1130	494
04...	1825	555	1780	2670
JUL				
18...	0830	6.5	34	.60
AUG				
31...	0950	1.2	5	.02

02077250 SOUTH HYCO CREEK NEAR ROSEVILLE, N. C.

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

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

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1964-66. October 1966 to 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) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge record good except those below about 300 ft³/s (8.5 m³/s) from Feb. 1 to Sept. 30, which are poor. Suspended-sediment records for the current year are published on page 45 of this report.

AVERAGE DISCHARGE.--12 years, 55.5 ft³/s (1.572 m³/s), 13.70 in/yr (348 mm/yr).

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

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

EXTREMES FOR CURRENT YEAR.--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. 9	0400	2060	58.3	21.01	6.404	May 5	2400	2280	64.6	21.50	6.553
Jan. 26	0600	1610	45.6	19.99	6.093	May 9	0600	1730	49.0	20.27	6.178
Mar. 10	2230	1180	33.4	18.93	5.770	May 13	2300	1210	34.3	19.00	5.791
Apr. 26	1330	*2960	83.8	*23.01	7.013	July 16	1500	891	25.2	18.16	5.535

Minimum discharge, 0.93 ft³/s (0.026 m³/s) Oct. 8, gage height, 12.93 ft (3.941 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	15	52	30	64	26	50	140	39	30	18	55
2	2.2	12	54	27	56	26	43	110	36	27	28	14
3	2.1	13	45	23	50	37	37	96	35	29	50	9.0
4	1.3	49	37	20	47	56	34	575	35	28	190	7.4
5	1.3	62	83	19	43	63	31	948	34	27	141	6.5
6	1.2	161	211	26	40	60	29	291	44	26	124	5.9
7	1.0	213	119	50	37	57	27	216	57	26	128	5.7
8	1.0	133	87	191	35	75	25	736	41	26	111	5.4
9	1.8	100	67	1060	34	130	24	933	106	26	87	5.4
10	2.0	78	49	299	33	735	23	368	62	25	119	5.2
11	1.9	56	36	225	32	546	22	306	40	28	61	5.4
12	1.9	36	29	188	31	252	22	232	37	27	78	4.2
13	4.2	23	25	260	30	198	20	407	36	26	74	9.0
14	82	17	37	529	33	182	18	579	35	28	71	8.6
15	74	15	124	344	28	174	16	300	32	31	49	6.9
16	35	14	81	236	28	156	16	200	32	460	16	6.9
17	2.8	14	64	295	27	142	15	150	30	199	12	6.6
18	21	13	75	424	26	130	16	110	30	44	6.9	6.6
19	14	11	73	285	25	121	18	90	30	36	6.3	6.6
20	8.9	10	62	574	24	113	22	80	33	33	5.7	6.6
21	6.2	10	60	405	23	104	18	72	37	24	5.2	6.6
22	5.3	12	53	298	27	94	16	66	32	18	4.7	6.9
23	4.8	16	43	257	23	84	15	62	22	13	4.7	6.9
24	4.9	16	38	238	25	75	14	56	26	10	4.4	6.9
25	4.9	16	40	877	23	71	30	52	37	8.8	4.4	7.2
26	245	29	40	1010	23	100	1610	46	65	7.3	5.0	6.9
27	168	24	34	366	23	110	995	41	52	6.7	4.7	6.9
28	93	22	30	270	23	89	431	40	38	12	4.7	6.6
29	62	33	27	160	---	75	313	40	33	8.8	4.4	6.6
30	38	36	27	100	---	66	200	39	33	6.6	4.0	6.6
31	22	---	31	70	---	59	---	45	---	6.0	4.1	---
TOTAL	914.8	1259	1833	9156	913	4206	4150	7426	1199	1303.2	1426.2	255.0
MEAN	29.5	42.0	59.1	295	32.6	136	138	240	40.0	42.0	46.0	8.50
MAX	245	213	211	1060	64	735	1610	948	106	460	190	55
MIN	1.0	10	25	19	23	26	14	39	22	6.0	4.0	4.2
CFSM	.54	.76	1.08	5.36	.59	2.47	2.51	4.36	.73	.76	.84	.16
IN.	.62	.85	1.24	6.19	.62	2.84	2.81	5.02	.81	.88	.96	.17

CAL YR 1977 TOTAL 11497.83 MEAN 31.5 MAX 616 MIN .00 CFSM .57 IN 7.78
WTR YR 1978 TOTAL 34041.20 MEAN 93.3 MAX 1610 MIN 1.0 CFSM 1.70 IN 23.02

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

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, 26.0°C Aug. 16, 17, 18; minimum, 1.0°C Dec. 12, 13, Jan. 30, 31, Feb. 1, 4, 7, 8, 10, 11, 12.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMRER	
1	17.0	13.5	12.0	11.5	19.5	16.5	23.5	21.0	25.0	23.5	25.5	24.0
2	19.0	14.5	13.5	10.5	19.5	16.0	23.5	21.0	24.0	22.0	24.0	23.5
3	18.0	14.5	14.5	10.5	19.0	16.5	23.0	21.5	24.0	23.0	24.0	23.5
4	16.5	13.0	13.5	11.0	17.0	16.0	23.0	21.5	23.5	23.0	24.0	22.0
5	19.0	14.5	14.5	11.0	17.0	15.0	23.0	21.0	23.5	22.0	23.5	22.0
6	18.0	14.5	16.0	12.0	18.0	15.5	22.0	20.0	23.5	23.0	23.5	21.5
7	19.0	14.5	15.0	13.0	18.0	16.5	23.0	20.0	23.5	23.0	23.5	21.5
8	19.0	14.0	13.5	12.0	18.5	17.0	23.5	20.5	23.5	23.0	23.5	23.0
9	19.0	14.5	15.5	12.0	19.5	18.5	24.0	22.0	24.5	23.0	23.5	23.0
10	20.0	15.5	15.5	13.0	19.5	17.0	24.5	23.0	25.0	23.5	23.5	23.0
11	19.5	18.0	16.0	12.0	19.5	16.5	24.5	23.5	24.5	23.5	23.5	23.5
12	19.0	15.5	16.0	13.5	19.5	17.0	23.5	20.5	24.5	23.5	23.5	23.0
13	18.0	16.5	15.5	14.5	20.5	18.5	23.0	21.0	25.0	24.0	24.0	23.5
14	18.0	14.5	15.0	13.5	20.0	16.5	23.0	22.0	25.0	24.0	23.5	23.0
15	17.0	14.5	14.0	12.0	19.0	15.5	23.5	21.5	25.5	24.5	23.0	21.5
16	16.5	13.5	14.5	13.0	19.0	16.5	23.5	20.5	26.0	24.5	23.0	21.0
17	15.5	14.0	15.5	13.0	19.5	17.0	22.0	20.0	26.0	24.5	23.0	22.0
18	14.0	13.5	16.5	13.5	20.5	18.0	23.5	21.0	26.0	24.5	23.5	23.0
19	13.5	13.0	16.5	14.5	21.0	19.0	23.5	21.5	25.5	24.0	24.0	23.5
20	14.0	13.0	18.0	14.5	21.0	19.0	24.0	21.5	25.5	24.5	24.0	23.5
21	13.5	11.5	18.0	15.5	20.0	19.0	24.0	21.5	25.5	23.0	24.0	23.0
22	14.0	10.0	17.0	15.5	20.5	19.0	24.5	22.0	24.5	21.0	23.5	22.0
23	15.0	11.0	16.5	15.5	20.5	19.0	25.0	23.5	23.5	20.5	23.5	21.0
24	15.5	13.0	17.0	15.5	21.0	19.0	25.0	24.0	23.5	21.0	21.0	20.5
25	16.5	13.5	18.5	16.0	21.0	19.0	24.5	24.0	24.0	22.0	20.5	20.0
26	13.5	11.0	19.0	16.0	21.0	20.0	24.5	23.0	24.5	23.0	20.5	19.5
27	11.0	10.0	19.0	15.5	23.5	20.5	24.5	23.5	24.5	23.5	20.0	18.0
28	14.0	9.5	18.0	16.5	23.5	21.0	24.5	23.5	25.5	24.0	18.5	18.0
29	14.5	10.0	19.0	15.5	23.5	21.0	25.0	23.0	25.5	24.5	18.5	18.0
30	13.5	12.0	19.0	16.5	23.5	21.0	24.5	23.0	25.5	24.0	18.0	16.5
31	---	---	19.5	18.0	---	---	25.5	24.0	25.5	24.0	---	---
MONTH	20.0	9.5	19.5	10.5	23.5	15.0	25.5	20.0	26.0	20.5	25.5	16.5
YEAR	26.0	1.0										

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
26...	1030	214	298	172
26...	1115	217	280	164
MAY				
31...	1515	43	82	9.5
JUN				
06...	1440	44	37	4.4
AUG				
31...	1100	4.0	10	.11

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

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

DRAINAGE AREA.--196 mi² (508 km²).

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Water-discharge record good above 10 ft³/s (0.28 m³/s), and poor below. Flow regulated by Roxboro Steam-Electric Generating Plant afterbay Reservoir (see p. 354).

AVERAGE DISCHARGE.--5 years, 210 ft³/s (5.947 m³/s), 14.55 in/yr (370 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,300 ft³/s (320 m³/s) July 14, 1975, gage height, 24.40 ft (7.437 m); minimum, 0.25 ft³/s (0.007 m³/s) Sept. 21, 22, 1977, gage height, 2.13 ft (0.649 m); minimum daily, 0.31 ft³/s (0.009 m³/s) Sept. 21, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,490 ft³/s (240 m³/s) Apr. 27. gage height, 21.95 ft (6.690 m); minimum, 5.0 ft³/s (0.14 m³/s) Oct. 1, gage height, 2.34 ft (0.713 m); minimum daily, 5.4 ft³/s (0.15 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	22	28	476	44	55	43	566	332	69	63	84
2	6.6	22	30	230	44	56	43	444	256	68	62	75
3	7.2	22	31	32	44	74	43	492	76	68	60	75
4	7.7	22	32	31	53	109	43	663	76	67	64	75
5	7.7	23	35	31	119	142	44	3300	76	67	65	74
6	8.2	79	50	31	177	166	44	2840	75	66	69	74
7	8.6	124	38	31	190	166	44	1270	76	65	296	74
8	9.0	16	38	79	176	639	44	1730	76	65	435	73
9	9.3	27	38	3050	167	553	45	2930	78	64	426	73
10	9.4	22	39	3270	162	1430	45	2570	78	63	424	74
11	9.4	26	40	1170	159	3380	148	1600	78	63	306	73
12	9.7	27	40	621	153	2390	229	860	78	63	117	73
13	11	27	40	866	145	1310	222	307	77	61	116	72
14	12	27	41	1440	146	801	158	647	77	61	95	72
15	12	27	57	1400	142	245	64	1640	76	60	79	71
16	12	27	40	1220	136	70	63	1090	76	210	79	70
17	12	27	37	783	132	467	63	634	75	117	79	70
18	13	27	38	1030	126	458	64	412	74	63	79	70
19	13	27	39	2180	120	50	63	347	73	64	79	70
20	13	27	462	2710	112	597	63	325	73	188	78	70
21	13	26	638	2550	104	1040	63	299	74	276	77	68
22	13	26	44	2240	100	419	63	258	72	173	76	68
23	14	26	43	1090	92	47	64	235	71	171	76	69
24	15	26	43	65	83	46	64	232	70	164	75	68
25	16	27	43	1090	76	47	65	215	70	163	74	67
26	99	27	44	3950	67	50	2720	184	70	101	75	67
27	33	27	48	3340	59	49	8460	144	70	63	74	66
28	20	27	61	1770	53	48	3750	113	69	63	74	66
29	21	27	68	370	---	150	1690	96	70	63	74	65
30	22	28	246	46	---	418	975	88	69	63	74	64
31	22	---	412	45	---	280	---	246	---	63	75	---
TOTAL	484.2	915	2883	37237	3181	15752	19489	26777	2661	2975	3895	2130
MEAN	15.6	30.5	93.0	1201	114	508	650	864	88.7	96.0	126	71.0
MAX	99	124	638	3950	190	3380	8460	3300	332	276	435	84
MIN	5.4	16	28	31	44	46	43	88	69	60	60	64

CAL YR 1977 TOTAL 25173.19 MEAN 69.0 MAX 647 MIN .31
WTR YR 1978 TOTAL 118379.20 MEAN 324 MAX 8460 MIN 5.4

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

WATER-QUALITY RECORDS

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

INSTRUMENTATION.--Temperature recorder since June 1974.

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

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 29.0°C May 21; minimum, 3.0°C Feb. 7, 8, 9.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.5	21.0	14.5	14.0	9.0	9.0	6.0	6.0	4.5	4.0	4.5	4.5
2	23.0	21.0	14.5	14.0	9.0	9.0	6.0	5.5	4.5	4.0	4.5	4.5
3	22.0	20.5	15.0	14.5	9.0	8.5	5.5	5.5	4.5	4.0	4.5	4.0
4	21.0	19.5	15.5	15.0	9.0	9.0	5.5	5.0	4.5	4.0	4.0	4.0
5	20.0	18.5	16.0	15.5	9.5	9.0	5.5	5.0	4.0	4.0	4.0	4.0
6	19.5	19.0	16.0	16.0	9.5	8.5	5.5	5.5	4.0	3.5	4.0	4.0
7	20.0	18.5	16.5	16.0	8.5	7.0	5.5	5.5	3.5	3.0	4.0	4.0
8	19.0	18.5	17.0	16.5	8.0	7.0	6.0	5.5	3.0	3.0	4.0	4.0
9	19.5	18.5	18.0	17.0	7.0	7.0	6.5	6.0	3.5	3.0	4.0	4.0
10	18.5	18.0	17.0	16.5	7.0	6.5	6.5	6.0	3.5	3.5	4.0	4.0
11	18.0	16.5	16.5	15.5	6.5	6.0	6.5	6.5	3.5	3.5	5.5	4.0
12	17.0	16.5	15.5	14.0	6.5	6.0	6.5	6.5	3.5	3.5	6.5	5.5
13	16.5	15.5	14.0	13.0	6.5	6.0	6.5	6.0	4.0	3.5	7.0	6.5
14	15.5	14.0	13.5	13.0	7.0	6.0	6.0	6.0	4.0	4.0	8.0	6.5
15	14.5	13.5	13.0	12.0	7.0	6.5	6.0	6.0	4.0	4.0	9.0	8.0
16	13.5	13.0	13.0	12.0	7.0	6.5	6.0	6.0	4.0	4.0	8.5	8.0
17	13.0	11.5	13.5	13.0	7.0	6.5	6.0	5.5	4.0	4.0	9.0	8.5
18	13.0	11.0	13.5	13.0	7.0	7.0	5.5	5.5	4.0	4.0	9.5	9.0
19	13.0	11.5	13.0	12.0	8.0	7.0	5.5	5.5	4.0	4.0	9.5	8.5
20	13.5	11.5	13.0	12.0	7.0	7.0	5.5	5.5	4.0	4.0	9.0	9.0
21	13.5	12.0	12.0	11.5	8.0	7.0	5.5	5.5	4.0	4.0	10.5	9.0
22	14.0	13.0	12.0	11.5	8.0	8.0	5.5	5.5	4.0	4.0	11.0	10.0
23	14.0	13.0	11.5	11.5	8.0	7.0	5.5	5.0	4.0	3.5	10.5	10.0
24	14.5	13.5	11.5	11.5	8.0	7.0	5.0	5.0	4.0	3.5	10.0	9.5
25	14.5	13.5	11.5	11.5	8.0	8.0	5.0	5.0	4.5	4.0	9.5	9.0
26	14.5	14.0	11.5	10.0	8.0	7.0	6.0	5.0	4.5	4.5	9.5	9.5
27	15.5	14.5	10.0	9.5	7.0	6.5	6.0	6.0	5.0	4.5	10.0	9.5
28	16.5	15.5	9.5	9.5	6.5	6.5	6.0	5.5	5.0	4.5	10.5	10.0
29	16.5	16.0	9.5	9.0	6.5	6.0	5.5	5.0	---	---	12.0	10.0
30	16.0	15.0	9.0	9.0	6.0	6.0	5.0	4.5	---	---	11.5	10.0
31	15.0	14.5	---	---	6.0	6.0	4.5	4.5	---	---	11.0	10.0
MONTH	23.0	11.0	18.0	9.0	9.5	6.0	6.5	4.5	5.0	3.0	12.0	4.0

ROANOKE RIVER BASIN

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.5	10.0	15.5	15.0	19.5	19.0	21.5	21.0	25.5	25.0	27.0	26.5
2	12.0	10.5	16.0	15.0	20.0	17.0	21.5	21.0	25.5	25.0	26.5	26.0
3	10.5	10.5	16.0	15.5	18.0	16.5	21.5	21.5	25.5	25.0	26.5	26.0
4	11.5	10.5	15.5	15.0	17.0	16.5	21.5	21.5	25.5	25.0	26.5	26.0
5	13.5	11.0	16.0	15.0	19.0	16.5	21.5	21.5	25.5	25.0	26.5	26.0
6	11.5	11.0	16.0	15.5	18.0	16.5	22.0	21.5	25.5	25.0	26.5	26.0
7	13.5	11.0	16.0	15.5	18.0	17.0	23.0	22.0	28.0	25.5	26.5	26.0
8	12.0	11.0	15.5	15.5	18.5	16.5	23.5	22.0	28.0	28.0	27.0	26.5
9	12.0	11.0	17.0	15.5	18.5	17.0	23.5	22.0	28.5	28.0	27.0	26.5
10	13.0	11.0	17.0	16.0	18.5	16.5	23.5	23.0	28.5	28.5	26.5	26.5
11	16.0	11.0	17.0	16.0	18.5	18.0	23.0	23.0	28.5	27.0	27.0	26.5
12	16.5	13.5	17.0	16.0	19.5	18.5	23.5	23.0	27.0	26.5	26.5	26.5
13	14.0	13.5	17.0	15.5	19.5	19.0	23.5	23.0	27.0	26.5	26.5	26.0
14	14.5	13.0	20.0	14.5	19.5	18.5	24.0	23.5	26.5	26.0	26.0	25.5
15	13.5	13.0	19.5	19.0	19.5	19.0	24.0	23.5	26.5	26.0	25.5	25.5
16	13.0	12.0	19.5	19.0	19.5	19.0	23.5	23.5	27.0	26.0	25.5	25.5
17	13.0	12.0	20.5	19.0	20.5	19.0	24.0	23.5	27.0	26.0	25.5	25.5
18	13.0	12.0	25.0	19.0	20.0	19.5	24.0	23.5	26.5	26.0	25.5	25.0
19	13.0	12.0	23.5	21.0	20.5	19.5	24.0	23.5	26.5	26.0	26.0	25.0
20	14.5	13.0	27.0	20.0	20.0	19.5	26.0	24.0	27.0	26.0	25.5	25.0
21	14.5	14.0	29.0	24.0	20.5	20.0	26.0	26.0	27.0	26.0	25.5	25.0
22	14.5	14.0	25.5	20.0	20.5	20.0	26.0	25.5	27.0	26.0	25.5	25.0
23	14.0	13.0	24.5	21.5	20.5	20.0	26.0	25.5	27.0	26.0	25.5	25.0
24	14.5	13.5	28.0	24.5	20.5	24.5	26.0	26.0	27.0	26.0	25.0	25.0
25	14.0	13.0	28.5	24.5	20.5	20.0	26.0	25.5	27.0	26.5	25.0	24.5
26	13.5	11.5	26.5	23.5	21.0	20.5	26.0	25.0	26.5	26.0	24.5	24.0
27	13.5	13.5	23.5	20.5	21.5	20.5	25.5	25.0	26.5	26.5	24.0	24.0
28	14.5	13.5	20.5	20.5	21.5	20.5	25.5	25.0	27.0	26.5	24.0	23.5
29	15.0	14.5	21.0	18.5	21.5	20.5	25.5	25.0	27.0	26.5	24.0	23.5
30	15.5	15.0	19.5	18.5	21.5	21.0	25.5	25.0	27.0	26.5	23.5	23.0
31	---	---	19.5	18.5	---	---	25.5	25.0	28.0	26.5	---	---
MONTH	16.5	10.0	29.0	14.5	21.5	16.5	26.0	21.0	28.5	25.0	27.0	23.0
YEAR	29.0	3.0										

ROANOKE RIVER BASIN

02077670 MAYO CREEK NEAR BETHEL HILL, N. C.

LOCATION.--Lat 36°32'26", long 78°52'21", Person County, Hydrologic Unit 03010104, on right bank 0.1 mi (0.2 km) upstream from Virginia State line, 0.8 mi (1.3 km) downstream from Secondary Road 1501, 2.9 mi (4.7 km) northeast of Bethel Hill, and 4.8 mi (7.7 km) downstream from Spoonwater Creek.

DRAINAGE AREA.--52.6 mi² (136.2 km²).

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

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

REMARKS.--Records excellent. Suspended-sediment records for the current year are published on page 51 of this report.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 4, 1974 reached a stage of 11.11 ft (3.39 m) from floodmarks, disharge, 4,300 ft³/s (122 m³/s); no flow July 31, 1977.

EXTREMES FOR THE CURRENT PERIOD.--August and September 1977: Maximum discharge, 304 ft³/s (8.61 m³/s) Aug. 15, gage height, 4.12 ft (1.256 m), no peak above base of 850 ft³/s (24.1 m³/s); no flow Aug. 1-13.

Water year 1978

Peak discharge above base of 850 ft³/s (24.1 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)
Jan. 9	0230	855	24.2	7.00	2.134	May 5	0930	1780	50.4	8.85	2.697
Jan. 26	0500	1760	49.8	8.83	2.691	May 9	1700	1720	48.7	8.78	2.676
Mar. 10	2100	1580	44.7	8.61	2.624	May 14	0800	872	24.7	7.11	2.167
Apr. 26	2200	*3950	112	*10.83	3.301						

Minimum discharge, 0.16 ft³/s (0.005 m³/s) Oct. 3, gage height, 1.28 ft (0.390 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											.00	.40
2											.00	.33
3											.00	.25
4											.00	.20
5											.00	.16
6											.00	.13
7											.00	.15
8											.00	102
9											.00	92
10											.00	35
11											.00	14
12											.00	7.7
13											.00	4.6
14											7.2	2.9
15											89	2.3
16											6.4	1.8
17											3.7	2.1
18											74	1.7
19											25	1.9
20											7.9	1.4
21											3.8	1.3
22											2.1	1.2
23											1.7	.78
24											12	.60
25											6.0	.47
26											2.8	.43
27											1.7	.35
28											1.1	.32
29											.69	.30
30											.53	.26
31											.45	---
TOTAL											246.07	277.03
MEAN											7.94	9.23
MAX											89	102
MIN											.00	.13
CFSM											.15	.18
IN.											.17	.20

ROANOKE RIVER BASIN

02077670 MAYO CREEK NEAR BETHEL HILL, N. C.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.27	12	48	33	56	24	36	86	30	12	66	166
2	.28	9.9	42	29	53	25	34	68	23	13	26	50
3	.26	11	29	25	48	35	30	57	21	13	23	23
4	.76	15	24	22	41	64	29	364	20	14	99	17
5	.54	36	97	22	37	64	29	1280	19	13	63	14
6	.43	354	207	31	36	54	27	271	22	11	253	12
7	.31	267	70	67	32	50	27	133	43	9.6	132	10
8	.23	78	42	167	32	64	25	575	34	9.0	62	9.6
9	.29	46	33	739	31	126	25	1170	89	8.9	36	8.7
10	.42	32	28	171	30	936	24	511	49	8.2	42	11
11	.93	25	23	85	30	923	24	183	28	9.9	42	12
12	.83	20	21	61	30	207	23	111	22	8.4	26	8.6
13	.83	18	20	159	30	120	22	182	19	7.8	22	8.4
14	183	15	107	546	30	96	22	623	17	18	18	8.9
15	80	15	284	266	29	89	20	176	16	21	16	8.1
16	22	14	87	112	29	71	22	108	16	529	16	7.0
17	17	13	57	231	29	67	21	85	15	150	15	7.2
18	12	13	180	445	28	55	20	68	15	46	13	5.7
19	8.5	11	107	175	28	47	20	58	13	29	12	4.1
20	7.3	10	66	688	27	43	23	50	13	22	11	5.4
21	5.3	10	75	367	26	39	21	43	96	18	11	4.3
22	5.2	12	65	160	26	37	20	38	103	16	11	6.0
23	5.4	15	45	101	25	35	18	32	27	14	8.7	6.2
24	4.9	16	38	88	25	33	18	32	19	22	8.2	6.6
25	4.3	14	45	799	24	33	27	29	17	46	7.7	5.6
26	299	32	44	1580	23	86	2080	28	16	18	8.6	5.7
27	95	22	32	332	22	106	1770	25	190	15	8.4	5.2
28	36	18	28	134	22	69	424	25	36	19	6.9	4.9
29	23	28	25	95	---	53	212	25	20	17	7.3	3.7
30	18	27	25	74	---	45	111	23	16	13	6.7	4.1
31	14	---	34	64	---	39	---	55	---	9.8	10	---
TOTAL	846.28	1208.9	2028	7868	879	3735	5204	6514	1064	1160.6	1087.5	449.0
MEAN	27.3	40.3	65.4	254	31.4	120	173	210	35.5	37.4	35.1	15.0
MAX	299	354	284	1580	56	936	2080	1280	190	529	253	166
MIN	.23	9.9	20	22	22	24	18	23	13	7.8	6.7	3.7
CFSM	.52	.77	1.24	4.83	.60	2.28	3.29	3.99	.68	.71	.67	.29
IN.	.60	.85	1.43	5.56	.62	2.64	3.68	4.61	.75	.82	.77	.32

WTR YR 1978 TOTAL 32044.28 MEAN 87.8 MAX 2080 MIN .23 CFSM 1.67 IN 22.66

02077670 MAYO CREEK NEAR BETHEL HILL, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
NOV				
07...	1220	184	125	62
19...	0930	16	12	.52
DEC				
20...	1640	65	20	3.5
MAY				
05...	0952	1780	454	2180
05...	1525	1240	272	911
08...	1128	665	239	429
08...	1215	710	289	554
JUL				
17...	1100	115	261	81
AUG				
31...	1515	58	30	4.7

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

REMARKS.--Water-discharge record excellent. Flow regulated since August 1950 by Philpott Lake on Smith River, usable capacity, 6,325,000,000 ft³ (179,124,000 m³); since September 1950 by John H. Kerr Reservoir, usable capacity, 101,247,000,000 ft³ (2,867,315,000 m³); since June 1955 by Roanoke Rapids Lake (see p. 352); since September 1962 by Leesville Lake, since October 1962 by Lake Gaston (see p. 352); and since September 1963 by Smith Mountain Lake.

AVERAGE DISCHARGE.--66 years (1912-78) 8,085 ft³/s (229.0 m³/s) adjusted for storage, 13.06 in/yr (332 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, 37,400 ft³/s (1,060 m³/s) May 1, gage height, 11.74 ft (3.578 m); minimum, 1,070 ft³/s (30.3 m) Nov. 1, gage height, 2.02 ft (0.616 m). Minimum daily, 1,230 ft³/s (34.8 m³/s) Dec. 14, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2440	1710	3120	1580	23900	11500	18700	35300	18700	2350	2360	2400
2	2160	2260	2450	7540	24100	14100	18600	34600	18600	2330	2350	2450
3	2020	9070	4810	8100	24000	15100	16100	34600	18700	7090	5850	5230
4	1950	8390	1360	5150	22900	15100	16300	34700	18600	7070	3670	4560
5	1770	5570	12200	4370	22200	13600	18400	34400	18600	7720	2330	4500
6	2120	5080	12500	3710	22300	18700	18500	34700	18600	8270	2330	5950
7	1870	10600	13800	5980	22300	8180	18500	34700	18600	7520	8250	5260
8	2010	12300	12700	1240	22300	13100	17400	34600	18700	8250	8030	6810
9	1960	12700	12300	12400	22300	12000	2450	34600	18600	5650	8390	7460
10	1860	7670	9820	18600	22400	12500	9060	34700	18600	10100	7640	2360
11	1840	10300	6480	18600	22300	12300	9880	34600	18600	2420	9350	2470
12	1860	16400	10600	18700	22400	18700	11100	34100	16000	7850	3640	6240
13	5540	14000	2930	18800	22300	18600	9280	34500	12000	6500	4990	3690
14	6750	12800	1230	18100	22200	18600	9130	34400	14800	10600	10200	5200
15	1790	4120	3660	9590	21600	18500	2470	34500	18600	8950	8230	7310
16	1740	2560	9080	18700	22200	18500	2330	34300	18600	2450	9740	3740
17	1710	3590	3920	18800	22100	18600	8450	34700	18500	8930	9970	5740
18	1710	5890	1310	18700	18800	18600	7870	34700	2850	9500	8570	8890
19	1710	5800	9560	17600	18600	18500	9140	34700	13800	11000	3510	9650
20	1810	3400	6520	19000	18800	18600	8490	34700	18600	10600	2420	2360
21	2100	13300	12100	18900	18700	18600	7650	34600	18700	10100	9070	3500
22	1690	13500	9190	18800	18600	18600	2590	34700	12400	10700	9450	2320
23	1690	13500	8320	18600	18700	18600	2300	34100	11700	10500	9750	2320
24	10200	5060	2320	18600	17900	18500	8750	24300	11400	12800	8340	2270
25	6640	12400	1230	18600	8610	18500	4930	25600	2300	10900	6680	2420
26	4150	12700	12300	18800	3860	18600	11300	25600	3280	10700	2510	2320
27	9830	4340	12500	18900	9400	18700	19000	25700	12300	9790	2460	2320
28	2770	11700	11400	18800	12800	18700	18900	25600	11200	2370	4120	2740
29	1740	9290	10100	18900	---	18600	20100	22400	8050	2390	9150	2330
30	1720	9940	6530	20100	---	18500	26100	19900	3500	2350	4810	2290
31	6090	---	5080	23300	---	18600	---	18700	---	4070	5640	---
TOTAL	95240	259940	231420	457560	548570	517880	353770	984300	433480	231820	193800	127100
MEAN	3072	8665	7465	14760	19590	16710	11790	31750	14450	7478	6252	4237
MAX	10200	16400	13800	23300	24100	18700	26100	35300	18700	12800	10200	9650
MIN	1690	1710	1230	1240	3860	8180	2300	18700	2300	2330	2330	2270
(†)	+2725	-53	+1520	+15340	-13239	+4044	+11813	-7643	-8608	-983	-106	-666

CAL YR 1977 TOTAL 1878480 MEAN 5147 MAX 18700 MIN 1170 MEAN‡ 5270 CFSM‡ 0.63 IN‡ 8.55
WTR YR 1978 TOTAL 4434880 MEAN 12150 MAX 35300 MIN 1230 MEAN‡ 12604 CFSM‡ 1.50 IN‡ 20.36

† 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, 1977 to current year.

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

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

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.--
SPECIFIC CONDUCTANCE: Maximum daily, 129 micromhos Jan. 3, 7, 1978; minimum daily, 70 micromhos May 16, 1978.
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, 129 micromhos Jan. 3, 7; minimum daily, 70 micromhos May 16.
WATER TEMPERATURES: Maximum daily, 28.0°C July 29, 30, Aug. 11, 21, 29, Sept. 1, 6, 7; minimum daily, 1.5°C Feb. 11, 12.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV										
01...	1130	1090	115	6.8	15.0	3	--	7.0	38	K18
16...	1200	1330	112	6.8	13.0	5	--	9.8	K4	K4
DEC										
08...	1000	18400	117	5.8	7.0	10	--	11.8	--	--
FEB										
01...	1330	23900	92	6.4	3.0	30	--	15.8	--	--
28...	1230	18700	70	6.0	2.0	80	--	13.7	K100	18
MAR										
30...	1115	18600	80	6.9	8.0	35	--	12.6	--	--
MAY										
01...	1200	35400	75	6.5	12.5	--	--	10.4	K8	34
16...	1300	33800	72	7.4	14.0	--	50	9.1	K14	28
JUL										
05...	1100	11900	80	7.0	21.5	--	10	7.1	K4	<2
19...	1130	17600	80	6.1	24.5	--	5.0	5.6	K77	44
AUG										
08...	0730	2560	83	5.5	24.5	--	3.0	6.8	--	--
SEP										
05...	1145	2610	91	6.6	25.0	--	10	--	25	K14

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)
NOV										
01...	31	0	7.4	3.0	8.5	35	.7	2.3	42	0
16...	32	0	7.5	3.1	8.8	36	.7	2.2	47	0
DEC										
08...	32	0	7.7	3.1	10	38	.8	2.5	40	0
FEB										
01...	27	2	6.5	2.7	6.5	32	.5	2.1	31	0
28...	22	5	5.1	2.2	4.2	28	.4	1.5	21	0
MAR										
30...	24	4	5.8	2.2	5.6	32	.5	1.8	24	0
MAY										
01...	--	--	--	--	--	--	--	--	--	--
16...	23	5	5.5	2.3	3.9	25	.4	1.8	22	0
JUL										
05...	26	2	6.1	2.5	4.3	25	.4	1.9	29	0
19...	26	0	6.4	2.5	4.8	27	.4	2.0	32	0
AUG										
08...	30	2	7.2	2.8	4.7	24	.4	2.0	34	0
SEP										
05...	--	0	--	--	--	--	--	--	36	0

K 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 1977 TO SEPTEMBER 1978

DATE	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)
NOV										
01...	34	11	6.4	7.2	.1	4.9	66	61	.09	194
16...	39	12	6.7	8.5	.1	5.0	70	65	.10	251
DEC										
08...	33	101	8.7	8.6	.1	7.1	80	68	.11	3970
FEB										
01...	25	20	8.7	6.3	.1	11	68	59	.09	4390
28...	17	34	9.6	4.7	.0	8.4	65	46	.09	3280
MAR										
30...	20	4.8	9.3	5.4	.1	9.3	72	51	.10	3620
MAY										
01...	--	--	--	--	--	--	--	--	--	--
16...	18	1.4	9.0	5.3	.1	7.3	65	46	.09	5930
JUL										
05...	24	4.6	7.2	3.6	.1	7.1	67	47	.09	2150
19...	26	41	7.1	4.4	.1	6.8	62	50	.08	2950
AUG										
08...	28	172	6.4	4.8	.1	7.3	60	52	.08	415
SEP										
05...	30	14	8.2	7.2	.1	8.3	64	--	.09	451

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)
NOV										
01...	.13	.08	--	--	--	.64	--	--	.18	.07
16...	.13	.06	--	--	--	.34	--	--	.03	.01
DEC										
08...	.31	.01	--	--	--	.24	--	--	.03	.01
FEB										
01...	.32	.06	.33	.39	.17	.22	.71	3.1	.04	.02
28...	.32	.08	--	--	--	.27	--	--	.09	.04
MAR										
30...	.32	.06	.21	.27	.00	.34	.59	2.6	.06	.01
MAY										
01...	.29	.03	.29	.32	.00	.32	.61	2.7	.03	.02
16...	.29	.07	.40	.47	.15	.32	.76	3.4	.07	.01
JUL										
05...	.18	.05	.17	.22	.00	.23	.40	1.8	.02	.00
19...	.15	.04	.34	.38	.00	.42	.53	2.3	.02	.01
AUG										
08...	.04	.04	.30	.34	.00	.38	.38	1.7	.02	.00
SEP										
05...	.66	.14	.54	.68	.00	.75	1.3	5.9	.21	.31

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)
NOV											
01...	--	--	--	--	--	--	--	--	--	--	--
16...	0	0	2	0	0	0	0	0	0	10	10
DEC											
08...	--	--	--	--	--	--	--	--	--	--	--
FEB											
01...	1	1	0	0	0	0	0	0	0	10	9
28...	--	--	--	--	--	--	--	--	--	--	--
MAR											
30...	--	--	--	--	--	--	--	--	--	--	--
MAY											
01...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
JUL											
05...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
AUG											
08...	0	0	0	0	0	0	4	0	7	20	19
SEP											
05...	--	--	--	--	--	--	--	--	--	--	--

DATE	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, SUS-PENDED RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)
NOV											
01...	--	--	--	--	--	--	--	--	--	--	--
16...	0	0	0	0	4	3	1	390	--	70	2
DEC											
08...	--	--	--	--	--	--	--	--	--	--	--
FEB											
01...	1	0	0	0	6	5	1	1100	--	170	5
28...	--	--	--	--	--	--	--	--	--	--	--
MAR											
30...	--	--	--	--	--	--	--	--	--	--	--
MAY											
01...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
JUL											
05...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
AUG											
08...	1	0	0	0	2	0	2	140	100	40	35
SEP											
05...	--	--	--	--	--	--	--	--	--	--	--

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV, (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)
NOV											
01...	--	--	--	--	--	--	--	--	--	--	--
16...	0	3	90	80	10	<.5	.0	<.5	0	0	0
DEC											
08...	--	--	--	--	--	--	--	--	--	--	--
FEB											
01...	5	0	40	30	10	<.5	.0	<.5	0	0	0
28...	--	--	--	--	--	--	--	--	--	--	--
MAR											
30...	--	--	--	--	--	--	--	--	--	--	--
MAY											
01...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
JUL											
05...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
AUG											
08...	0	43	220	170	50	<.5	.0	<.5	0	0	0
SEP											
05...	--	--	--	--	--	--	--	--	--	--	--

DATE	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	PERIPHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERIPHYTON BIOMASS ASH WEIGHT G/SQ M
NOV											
01...	--	--	--	--	--	--	15	--	--	--	--
16...	0	0	0	10	0	10	--	5.4	1.4	--	--
DEC											
08...	--	--	--	--	--	--	4.0	--	--	1.89	1.50
FEB											
01...	0	0	0	10	10	0	--	5.8	.5	--	--
28...	--	--	--	--	--	--	7.2	--	--	--	--
MAR											
30...	--	--	--	--	--	--	5.0	--	--	.079	.000
MAY											
01...	--	--	--	--	--	--	8.9	--	--	--	--
16...	--	--	--	--	--	--	--	11	1.6	--	--
JUL											
05...	--	--	--	--	--	--	5.2	--	--	--	--
19...	--	--	--	--	--	--	6.4	--	--	--	--
AUG											
08...	2	0	2	10	0	10	--	5.4	--	--	--
SEP											
05...	--	--	--	--	--	--	9.0	--	--	--	--

DATE	CHLOR-A PERIPHYTON CHROMOGRAPHIC FLUOROM (MG/M2)	CHLOR-B PERIPHYTON CHROMOGRAPHIC FLUOROM (MG/M2)	LENGTH OF EXPOSURE (DAYS)
DEC			
08...	.000	.000	21
MAR			
30...	.000	.000	29

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ATRAZINE, TOTAL (UG/L)	ATRAZINE, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL (UG/L)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL (UG/L)	P,P' DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL (UG/L)
NOV 16...	1200	ND	ND	ND	ND	ND	ND	ND	.4	ND
FEB 28...	1230	ND	--	ND	--	ND	--	ND	--	ND

DATE	P,P' DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL (UG/L)	P,P' DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL (UG/L)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN TOTAL (UG/L)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL (UG/L)
NOV 16...	.4	ND	.5	ND	ND	ND	ND	ND	ND	ND
FEB 28...	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOTAL (UG/L)
NOV 16...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 28...	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	SIMAZINE TOTAL COULSON COND. (UG/L)	SIMAZINE IN BOTTOM MATERIAL (UG/KG DRY SOLIDS)	TOXAPHENE, TOTAL (UG/L)
NOV 16...	ND	ND	ND	<.00	ND	<.00	ND	ND	ND	ND
FEB 28...	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOTTOM MATERIAL (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOTTOM MATERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 16...	ND	<.00	ND	ND	ND	ND	ND	ND	ND
FEB 28...	--	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 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	NOV 16,77		MAY 16,78		SEP 5,78	
TIME	1200		1300		1145	
TOTAL CELLS/ML	3400		1200		6700	
DIVERSITY: DIVISION	1.6		1.5		1.5	
.CLASS	1.6		1.5		1.5	
..ORDER	2.1		1.7		2.1	
...FAMILY	2.8		1.7		2.7	
....GENUS	3.1		1.8		3.4	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...COELASTRACEAE						
....COELASTRUM	170	5	--	-	880	13
...HYDRODICTYACEAE						
....PEDIASTRUM	43	1	--	-	--	-
...MICRACTINIACEAE						
....GOLENKINIA	*	0	--	-	--	-
....MICRACTINIUM	36	1	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	140	4	--	-	92	1
....FRANCEIA	*	0	--	-	--	-
....OOCYSTIS	--	-	130	11	290	4
....SELENASTRUM	260	8	16	1	--	-
....TETRAEDRON	*	0	--	-	--	-
...SCENEDESMACEAE						
....ACTINASTRUM	--	-	--	-	130	2
....CRUCIGENIA	--	-	--	-	73	1
....SCENEDESMUS	370	11	--	-	200	3
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	16	1	--	-
..ZYGNEMATALES						
...DESMIDIACEAE						
....COSMARIUM	--	-	--	-	55	1
....EUASTRUM	*	0	--	-	--	-
....STAURASTRUM	--	-	--	-	92	1
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	93	3	--	-	55	1
....MELOSIRA	980#	29	730#	62	150	2
....STEPHANODISCUS	*	0	--	-	--	-
..PENNALES						
...FRAGILARIACEAE						
....FRAGILARIA	*	0	--	-	200	3
....SYNEDRA	36	1	--	-	510	8
...GOMPHONEMATACEAE						
....GOMPHONEMA	*	0	--	-	55	1
...NAVICULACEAE						
....NAVICULA	*	0	16	1	--	-
...NITZSCHIACEAE						
....NITZSCHIA	--	-	--	-	240	4
...TABELLARIACEAE						
....TABELLARIA	--	-	--	-	55	1

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	NOV 16,77 1200		MAY 16,78 1300		SEP 5,78 1145	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROCCOCCALES						
...CHROCCOCCACEAE						
....ANACYSTIS	630#	18	110	10	750	11
..HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	71	2	--	-	--	-
...OSCILLATORIACEAE						
....LYNGBYA	--	-	--	-	1400#	20
....OSCILLATORIA	520#	15	--	-	1500#	22
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....TRACHELOMONAS	*	0	160	14	--	-
PYRRHOPHYTA (FIRE ALGAE)						
.DINOPHYCEAE						
..PERIDINIALES						
...CERATIACEAE						
....CERATIUM	*	0	--	-	--	-
...PERIDINIACEAE						
....PERIDINIUM	--	-	--	-	37	1

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

ROANOKE RIVER BASIN

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	111	114	115	94	75	85	81	77	77	83	90
2	125	110	118	128	95	74	89	86	74	78	83	90
3	113	108	116	129	96	75	86	84	75	76	79	90
4	110	108	116	126	96	75	84	84	79	76	80	91
5	118	109	116	128	92	81	84	85	81	78	82	92
6	116	109	116	128	89	76	84	78	81	76	83	94
7	113	109	118	129	92	77	84	79	77	77	84	98
8	113	108	119	128	87	77	81	73	79	77	84	95
9	109	108	116	111	87	80	82	75	79	77	90	97
10	112	109	119	112	89	79	82	71	79	75	88	96
11	111	108	121	108	85	77	81	85	79	76	88	98
12	113	107	119	108	86	78	82	72	82	77	88	99
13	109	107	118	108	86	78	81	75	83	77	84	93
14	110	107	119	108	85	79	80	71	81	77	91	96
15	111	109	118	108	85	78	81	71	77	78	86	97
16	110	110	119	106	81	79	81	70	73	78	83	95
17	113	109	118	106	82	77	81	79	77	80	86	96
18	112	112	118	102	83	77	81	74	75	77	86	95
19	109	108	118	103	80	77	81	72	76	76	86	95
20	112	110	118	101	79	77	81	75	72	83	88	97
21	109	111	115	100	77	75	81	73	79	84	88	96
22	113	108	98	104	81	75	81	74	75	80	90	94
23	112	106	109	101	77	75	81	75	77	84	88	98
24	111	113	112	105	75	75	81	78	77	82	88	93
25	109	112	82	104	79	82	81	83	76	84	98	96
26	109	114	112	100	77	82	78	78	77	83	88	99
27	108	112	112	95	77	84	79	77	76	80	86	96
28	108	113	115	98	77	84	79	81	76	83	88	94
29	111	110	115	100	---	103	79	79	74	82	88	96
30	111	110	115	98	---	84	81	75	76	79	88	98
31	111	---	116	96	---	84	---	79	---	85	91	---
MEAN	112	110	115	109	85	79	82	77	77	79	87	95

WTR YR 1978 MEAN 92 MAX 129 MIN 70

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.0	---	11.5	6.5	2.5	4.0	10.0	14.0	20.0	24.0	27.0	28.0
2	24.5	---	12.0	6.0	2.5	4.0	10.5	14.0	20.0	23.5	26.0	27.0
3	24.0	---	11.0	6.0	2.5	4.0	11.0	13.5	20.0	24.0	26.0	27.0
4	23.0	---	11.0	6.0	2.5	3.5	11.0	14.0	19.0	24.0	26.0	27.0
5	22.5	---	11.0	6.0	2.5	3.0	12.0	14.0	20.0	24.0	25.0	27.0
6	22.0	---	11.0	6.0	2.5	3.0	12.5	14.0	21.0	23.5	25.0	28.0
7	22.0	---	10.0	6.0	2.0	3.5	12.0	14.0	20.0	23.0	27.0	28.0
8	21.0	---	9.0	6.0	2.0	3.5	12.5	14.0	21.0	23.0	27.0	27.0
9	20.5	---	8.0	6.0	2.5	3.0	12.5	14.5	21.0	23.0	27.0	27.0
10	20.0	---	8.0	6.0	2.5	3.5	12.5	16.0	21.0	24.0	27.0	27.0
11	20.0	---	7.5	5.5	1.5	4.5	15.5	16.5	21.5	24.0	28.0	27.0
12	20.0	---	7.0	5.0	1.5	4.5	15.0	16.0	21.0	24.0	27.0	27.0
13	20.0	---	7.0	5.0	2.0	5.0	12.5	15.0	21.0	24.0	27.0	27.0
14	18.0	---	8.0	4.0	2.5	5.0	12.5	15.0	20.0	24.0	27.0	27.0
15	18.0	---	8.0	4.0	3.5	5.0	15.0	15.5	20.0	24.0	27.5	26.0
16	17.5	14.5	9.0	4.0	3.0	5.0	15.0	16.0	18.0	25.0	27.5	26.0
17	17.0	14.5	9.0	4.0	3.0	5.5	14.5	15.5	19.0	24.0	27.5	26.0
18	17.0	14.5	9.0	4.0	3.0	5.5	14.5	17.0	17.0	24.0	27.5	27.0
19	16.5	14.0	9.0	4.0	3.0	5.5	12.5	17.5	20.0	24.0	27.0	27.0
20	16.0	14.0	9.0	4.0	3.0	7.0	12.5	17.0	20.0	24.0	27.0	27.0
21	16.0	14.0	8.5	4.0	3.0	8.0	14.0	17.0	20.0	26.0	28.0	26.5
22	16.0	14.5	8.0	4.0	3.0	8.0	14.0	17.0	21.0	24.0	27.5	26.5
23	16.0	14.0	8.0	4.0	3.0	8.0	14.0	18.0	21.0	25.0	27.5	25.5
24	16.5	14.0	7.5	4.0	3.5	8.0	15.0	18.0	21.5	26.0	26.5	25.5
25	16.5	14.0	8.0	4.0	3.0	8.0	15.0	18.0	22.0	26.0	27.5	25.0
26	17.0	13.5	8.0	4.0	4.0	8.0	13.0	18.0	22.0	25.0	27.0	25.0
27	17.0	12.0	7.5	3.5	4.0	9.0	13.0	18.5	23.5	25.0	27.0	25.0
28	18.0	13.0	6.5	3.0	4.0	9.0	14.5	18.0	24.0	26.0	27.0	25.0
29	17.5	13.0	6.5	3.0	---	10.0	14.5	19.0	24.0	28.0	28.0	24.5
30	17.0	12.0	6.0	3.0	---	10.5	14.5	20.0	24.0	28.0	27.0	23.0
31	17.0	---	6.0	3.0	---	10.5	---	19.5	---	27.0	27.0	---
MEAN	19.0	13.5	8.5	4.5	3.0	6.0	13.5	16.5	21.0	24.5	27.0	26.5

WTR YR 1978 MEAN 15.5 MAX 28.0 MIN 1.5

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
01...	1130	1090	10	29	62
16...	1200	1330	14	50	50
DEC					
01...	0920	11900	11	353	100
08...	1000	18400	10	497	100
FEB					
01...	1330	23900	19	1230	100
28...	1230	18700	38	1920	100
MAR					
30...	1115	18600	20	1000	100
MAY					
01...	1200	35400	13	1240	96
16...	1300	33800	22	2010	78
JUL					
05...	1100	11900	9	289	100
19...	1130	17600	10	475	83
AUG					
08...	0730	2560	6	41	100
SEP					
05...	1145	2610	3	21	100

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER YEAR OCTOBER 1977 to SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT									
10...	--	1860	80	6.3	19.0	8.9	<10	1.6	7200
NOV									
08...	--	12300	100	6.8	17.0	8.5	12	1.1	1200
DEC									
05...	--	12200	110	6.3	6.0	9.4	10	1.1	20
JAN									
12...	0940	18600	60	6.9	2.0	10.5	15	1.7	<10
FEB									
08...	1215	22000	50	7.3	1.0	12.1	26	.7	20
MAR									
14...	1136	18600	80	7.0	8.0	10.5	12	.9	110
APR									
17...	1200	14000	70	6.8	17.0	8.3	13	.9	<10
JUN									
27...	1430	18500	100	--	26.0	7.5	14	--	970
JUL									
12...	1430	26600	--	6.6	25.0	6.2	16	.8	620

02081500 TAR RIVER NEAR TAR RIVER, N. C.

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

DRAINAGE AREA.--167 mi² (433 km²).

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

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

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

REMARKS.--Records good. 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 63 of this report.

AVERAGE DISCHARGE.--39 years, 154 ft³/s (4.361 m³/s), 12.52 in/yr (318 mm/yr).

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

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

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 7	0400	2530	71.6	8.06	2.457	Mar. 11	0430	3780	107	9.74	2.969
Jan. 9	1730	4360	123	10.46	3.188	Apr. 27	0330	*14200	402	*18.87	5.752
Jan. 14	1000	2150	60.9	7.44	2.258	May 5	1400	5380	152	11.66	3.554
Jan. 20	1630	3170	89.8	8.97	2.734	May 9	2100	2510	71.1	8.03	2.448
Jan. 26	1500	4790	136	11.00	3.353	July 17	0100	2530	71.6	8.06	2.457

Minimum discharge, 0.50 ft³/s (0.014 m³/s) Oct. 8, 11, 12, gage height, 1.17 ft (0.357 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.72	13	97	116	145	71	120	241	39	20	13	134
2	.79	9.4	123	100	128	79	107	201	36	15	11	150
3	.70	10	88	82	126	117	95	164	33	14	10	52
4	.69	54	63	68	116	268	87	311	31	13	23	29
5	.62	64	70	58	106	248	85	3890	30	13	212	20
6	.60	962	487	60	104	192	80	1080	31	12	623	14
7	.60	1650	207	126	94	157	77	308	40	10	184	11
8	.56	266	103	159	83	163	71	1110	38	9.0	406	8.3
9	.63	124	78	2930	88	452	66	2130	47	8.4	143	6.8
10	.60	82	66	1310	88	2010	62	1430	82	7.3	105	6.2
11	.55	57	53	299	86	3070	60	408	51	28	112	60
12	.53	41	43	187	82	795	56	237	35	17	67	33
13	.77	31	39	499	81	372	53	219	29	15	43	19
14	16	26	68	1900	94	276	52	1200	27	17	33	12
15	158	23	795	1080	100	288	48	432	23	131	26	8.3
16	59	21	294	380	93	223	45	249	21	999	22	6.5
17	28	20	148	373	103	177	43	173	19	1150	18	5.4
18	15	19	395	1410	103	145	43	129	18	126	15	4.4
19	9.7	17	349	622	97	124	51	106	18	68	11	3.8
20	6.8	15	176	2610	88	115	61	90	16	44	9.5	3.2
21	4.9	14	761	1560	81	109	54	81	16	32	13	2.7
22	3.7	13	428	513	82	101	47	73	19	26	33	2.3
23	3.0	16	191	363	81	94	42	65	41	22	18	2.1
24	2.2	22	130	333	81	88	40	60	27	18	11	1.9
25	1.8	25	160	1220	80	114	49	57	19	20	8.2	5.4
26	275	32	190	4260	75	497	5940	51	16	19	6.4	6.8
27	327	40	120	1700	67	1370	10200	47	188	18	11	5.0
28	89	36	91	411	63	429	1760	45	133	16	15	3.7
29	42	70	77	284	---	243	468	44	46	34	9.5	2.8
30	26	87	72	209	---	174	303	42	28	24	6.9	2.2
31	18	---	102	173	---	136	---	40	---	16	96	---
TOTAL	1093.46	3859.4	6064	25395	2615	12697	20265	14713	1197	2961.7	2314.5	621.8
MEAN	35.3	129	196	819	93.4	410	676	475	39.9	95.5	74.7	20.7
MAX	327	1650	795	4260	145	3070	10200	3890	188	1150	623	150
MIN	.53	9.4	39	58	63	71	40	40	16	7.3	6.4	1.9
CFSM	.21	.77	1.17	4.90	.56	2.46	4.05	2.84	.24	.57	.45	.12
IN.	.24	.86	1.35	5.66	.58	2.83	4.51	3.28	.27	.66	.52	.14

CAL YR 1977 TOTAL 31052.16 MEAN 85.1 MAX 1650 MIN .02 CFSM .51 IN 6.92
WTR YR 1978 TOTAL 93796.86 MEAN 257 MAX 10200 MIN .53 CFSM 1.54 IN 20.89

02081500 TAR RIVER NEAR TAR RIVER, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
MAY				
31...	1200	39	11	1.2
JUN				
06...	1150	31	10	.84
JUL				
19...	1050	67	113	20
21...	1200	32	63	5.4

PAMLICO RIVER BASIN

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

LOCATION (REVISED).--Lat 36°05'39", long 78°17'52", 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) National Geodetic Vertical Datum of 1929. 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 except those for periods of no gage-height record, Apr. 3 to May 7, which are fair. Suspended-sediment records for the current year are published on page 65 of this report.

AVERAGE DISCHARGE.--5 years, 432 ft³/s (12.23 m³/s), 13.64 in/yr (346 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,100 ft³/s (371 m³/s) Apr. 28, 1978, gage height, 24.36 ft (7.425 m) from floodmarks; minimum gage height observed, 1.30 ft (0.396 m) several days in September 1967, August, September and October 1968 at 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)
Oct. 27	2000	2500	70.8	13.87	4.228	Jan. 27	1830	6380	181	19.98	6.090
Nov. 8	0730	5060	143	18.55	5.654	Mar. 12	0530	6140	174	19.73	6.014
Dec. 22	1500	2450	69.4	13.72	4.182	Mar. 28	1130	2730	77.3	14.48	4.414
Jan. 11	0230	4800	136	18.24	5.560	Apr. 28	Unknown	*13100	371	*24.36	7.425
Jan. 15	1630	3860	109	16.91	5.154	May 11	0030	3730	106	16.63	5.069
Jan. 21	1900	5560	157	19.12	5.828	July 18	0200	3140	88.9	15.50	4.724

Minimum discharge, 24 ft³/s (0.68 m³/s) Oct. 6, 7, gage height, 3.99 ft (1.216 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	149	258	358	495	251	403	2500	174	134	104	268
2	31	131	298	336	460	263	370	1900	164	115	105	303
3	38	129	279	292	443	322	350	1600	155	111	150	213
4	31	156	223	252	401	623	340	1400	149	114	210	129
5	28	225	198	232	371	645	330	1200	142	107	226	99
6	26	1230	435	234	368	553	320	1000	139	100	728	83
7	25	3760	669	290	311	472	310	800	143	94	921	76
8	25	4600	342	371	319	443	300	1120	159	88	424	70
9	28	1400	254	1240	338	759	290	2320	233	83	464	67
10	36	474	227	3570	313	2450	280	3360	265	79	262	88
11	36	349	197	3500	301	4790	270	2800	215	167	248	88
12	34	275	166	807	293	5500	260	900	159	272	208	103
13	50	226	168	736	289	3000	250	684	138	119	158	95
14	169	194	180	2460	304	900	240	1520	127	220	133	78
15	882	176	820	3680	320	750	230	1700	119	702	118	69
16	450	166	1100	2500	307	691	220	800	114	1340	108	66
17	202	159	509	862	328	576	210	654	111	2780	100	63
18	124	151	510	1830	338	496	220	522	108	1900	92	60
19	91	134	878	2620	320	435	230	428	103	355	86	56
20	75	125	550	3140	293	401	250	371	99	224	86	54
21	64	119	903	5060	272	377	240	330	108	172	91	53
22	57	120	2270	4000	276	359	230	297	164	141	93	52
23	54	126	1000	1720	271	335	210	271	156	123	98	145
24	50	144	516	759	273	313	190	257	134	113	81	125
25	48	145	456	877	275	309	250	244	115	208	71	80
26	510	169	540	2850	262	650	2000	227	108	453	71	67
27	2310	182	426	5770	243	1700	5000	211	838	239	73	63
28	1100	163	333	4200	233	2400	13000	207	964	145	71	61
29	367	184	278	1400	---	900	8000	202	306	152	75	58
30	246	254	267	685	---	567	4000	193	175	142	78	55
31	183	---	316	564	---	457	---	184	---	117	253	---
TOTAL	7396	15815	15566	57195	9017	32687	38793	30202	6084	11109	5986	2887
MEAN	239	527	502	1845	322	1054	1293	974	203	358	193	96.2
MAX	2310	4600	2270	5770	495	5500	13000	3360	964	2780	921	303
MIN	25	119	166	232	233	251	190	184	99	79	71	52
CFSM	.56	1.23	1.17	4.29	.75	2.45	3.01	2.27	.47	.83	.45	.22
IN.	.64	1.37	1.35	4.95	.78	2.83	3.36	2.61	.53	.96	.52	.25

CAL YR 1977 TOTAL 104943.9 MEAN 288 MAX 4600 MIN 8.1 CFSM .67 IN 9.08
WTR YR 1978 TOTAL 232737.0 MEAN 638 MAX 13000 MIN 25 CFSM 1.48 IN 20.13

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

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
03...	0930	40	18	1.9
NOV				
09...	1345	976	54	142
18...	1035	151	13	5.3
DEC				
27...	0800	441	29	35
MAR				
20...	0845	401	20	22
MAY				
08...	0830	838	66	149
JUN				
12...	1000	163	22	9.7
JUL				
19...	1010	363	80	78
SEP				
11...	0915	87	47	11

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

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

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

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

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

REMARKS.--Records good. The city of Rocky Mount diverted an average of 12.0 ft^3/s (0.34 m^3/s) for municipal water supply, most of which was returned as sewage below station. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--6 years, 885 ft^3/s (25.06 m^3/s), 15.47 in/yr (393 mm/yr).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,500 ft^3/s (326 m^3/s) Apr. 30, gage height, 21.62 ft (6.590 m); minimum, 85 ft^3/s (2.41 m^3/s) Sept. 22, 23, gage height, 3.57 ft (1.088 m); minimum gage height, 3.52 ft (1.073 m) Oct. 6, 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	336	374	581	1120	523	890	10900	267	402	237	186
2	103	275	398	599	981	557	741	8000	276	283	208	375
3	98	248	407	561	891	757	679	1980	278	228	227	393
4	93	245	407	465	834	1090	619	1240	261	205	299	360
5	93	274	392	404	767	1330	569	1740	279	172	382	262
6	92	1580	407	439	732	1330	542	2600	264	138	467	197
7	92	5210	503	606	676	1100	525	3520	260	143	804	164
8	92	5890	755	658	618	957	492	4190	304	139	1080	137
9	94	5210	547	948	607	940	456	3060	538	131	673	125
10	93	4550	401	1710	634	2450	447	2710	678	120	616	111
11	94	1540	356	2920	612	4280	435	3250	651	149	513	121
12	92	727	322	3680	576	5190	414	3410	489	213	431	169
13	94	529	295	2470	577	5480	438	1780	341	362	374	166
14	95	429	314	2610	586	5800	445	1250	263	282	514	159
15	95	374	525	3540	598	3000	424	1850	224	301	465	148
16	100	342	1040	4060	606	1600	390	2330	202	1080	529	132
17	107	322	1450	4060	629	1260	368	1540	190	2270	389	120
18	110	303	1010	2530	649	1060	399	1110	182	3270	242	109
19	109	293	1060	2800	678	935	684	864	176	2830	186	103
20	109	270	1230	5200	655	788	1160	712	166	958	161	93
21	126	254	1170	5850	603	759	1030	601	146	497	152	90
22	153	243	1570	5610	594	709	804	527	115	347	159	87
23	153	262	2470	5470	572	677	597	479	171	271	149	88
24	547	256	1790	4500	565	620	463	441	299	228	138	175
25	871	256	1010	2180	572	588	404	407	264	348	130	278
26	439	309	821	2260	559	777	1810	387	218	667	120	227
27	116	314	817	3310	540	1730	5580	363	326	1030	157	170
28	1150	317	677	4190	499	2610	7230	347	1270	747	152	143
29	1940	303	550	5000	---	3060	8670	310	1490	450	145	123
30	800	295	482	5270	---	1870	10900	252	760	341	128	110
31	471	---	532	2120	---	1120	---	263	---	283	124	---
TOTAL	8724	31756	24082	86601	18530	54947	48605	62413	11348	18885	10351	5121
MEAN	281	1059	777	2794	662	1772	1620	2013	378	609	334	171
MAX	1940	5890	2470	5850	1120	5800	10900	10900	1490	3270	1080	393
MIN	92	243	295	404	499	523	368	252	115	120	120	87
CFSM	.36	1.36	1.00	3.60	.85	2.28	2.09	2.59	.49	.78	.43	.22
IN.	.42	1.52	1.15	4.15	.89	2.63	2.33	2.99	.54	.90	.50	.25

CAL YR 1977 TOTAL 201411 MEAN 552 MAX 5890 MIN 80 CFSM .71 IN 9.64
WTR YR 1978 TOTAL 381363 MEAN 1045 MAX 10900 MIN 87 CFSM 1.35 IN 18.26

PAMLICO RIVER BASIN

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

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

DRAINAGE AREA.--916 mi² (2372 km²).

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

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

REMARKS.--Records good. Some regulation at low flow by mill above station. The City of Rocky Mount diverted an average of 15.4 ft³/s (0.44 m³/s) for municipal water supply, most of which was returned as sewage below station.

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

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	427	459	797	1380	674	1210	12100	303	483	297	258
2	94	367	506	819	1200	723	1050	10200	304	365	275	467
3	99	267	508	772	1120	1060	874	4120	365	281	213	550
4	93	299	508	657	1050	1460	810	1590	421	257	365	481
5	93	359	495	556	978	1640	729	2020	377	241	490	337
6	64	1610	526	622	936	1680	710	2890	326	144	543	243
7	50	5360	564	868	898	1390	670	3830	307	210	807	204
8	85	7490	881	921	860	1200	588	4400	394	165	1190	171
9	103	6970	687	1190	802	1190	588	3770	791	131	780	126
10	71	5490	508	1660	815	2920	539	2950	941	179	754	141
11	80	2260	448	2670	802	4850	550	3430	826	208	738	160
12	108	977	412	3520	749	6120	561	3620	624	223	547	187
13	121	706	366	3020	727	6400	533	2180	426	380	451	219
14	153	572	413	2810	764	6330	555	1500	317	370	598	190
15	141	494	754	3760	786	5630	544	1900	306	275	892	193
16	87	452	1090	4400	783	2200	513	2450	259	1170	1320	151
17	117	426	1610	4490	819	1550	470	1830	195	2230	709	128
18	125	396	1220	3230	833	1330	553	1340	246	3400	404	157
19	94	404	1230	3040	870	1150	1030	1040	264	3340	222	131
20	106	331	1410	6040	839	1020	1630	863	153	1130	207	56
21	104	330	1460	7260	773	1000	1370	723	263	604	195	126
22	158	320	1670	7300	756	940	1080	624	125	441	204	83
23	145	357	2470	6490	730	880	790	573	161	314	176	121
24	391	333	2130	5870	721	820	646	541	394	281	165	143
25	886	349	1270	3180	739	760	515	440	341	790	162	519
26	666	409	1030	2620	711	1100	2210	455	307	1250	160	457
27	177	409	1010	3510	675	2200	6170	432	510	1750	138	207
28	943	411	897	4420	622	3120	8650	416	1360	1270	222	216
29	2400	407	739	5110	---	3550	9440	417	1630	650	171	201
30	1150	349	660	5560	---	2450	11100	249	937	445	133	106
31	623	---	744	2980	---	1520	---	308	---	382	157	---
TOTAL	9614	39331	28675	100142	23738	68857	56678	73201	14173	23359	13685	6729
MEAN	310	1311	925	3230	848	2221	1889	2361	472	754	441	224
MAX	2400	7490	2470	7300	1380	6400	11100	12100	1630	3400	1320	550
MIN	50	267	366	556	622	674	470	249	125	131	133	56
CFSM	.34	1.43	1.01	3.53	.93	2.43	2.06	2.58	.52	.82	.48	.25
IN.	.39	1.60	1.16	4.07	.96	2.80	2.30	2.97	.58	.95	.56	.27

CAL YR 1977 TOTAL 243756 MEAN 668 MAX 7490 MIN 46 CFSM .73 IN 9.90
WTR YR 1978 TOTAL 458182 MEAN 1255 MAX 12100 MIN 50 CFSM 1.37 IN 18.61

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) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 466 of this report. An average of about 4.8 ft³/s (0.14 m³/s) was diverted above station from Sandy Creek tributary, Tar River basin, and an average of 7.5 ft³/s (0.21 m³/s) from Kerr Reservoir for municipal water supply. About 0.31 ft³/s (0.009 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. Withdrawals from Sandy Creek tributary for municipal water supply ended Feb. 21, 1978.

AVERAGE DISCHARGE.--15 years, 145 ft³/s (4.106 m³/s), 12.08 in/yr (307 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)
Oct. 27	1030	1060	30.0	8.70	2.652	Mar. 13	1030	1140	32.3	9.11	2.777
Nov. 7	2130	1880	53.2	11.70	3.566	Apr. 29	0030	*2590	73.3	*12.64	3.853
Jan. 20	1600	1420	40.2	10.36	3.158	July 25	1000	1010	28.6	8.46	2.579
Mar. 11	0400	1230	34.8	9.55	2.911						

Minimum discharge, 15 ft³/s (0.42 m³/s) Oct. 2, 3, 8, 9, gage height, 2.09 ft (0.637 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	105	99	142	196	124	174	489	87	73	66	147
2	16	92	100	134	180	137	162	290	83	61	61	130
3	16	86	94	118	175	188	147	233	80	55	239	102
4	19	85	88	106	166	351	138	256	77	54	181	72
5	22	96	85	99	158	294	136	552	75	55	202	57
6	22	496	97	102	155	241	133	480	76	52	153	49
7	18	1720	107	134	150	194	130	453	75	48	184	46
8	16	1640	97	136	142	189	127	345	76	44	284	43
9	15	1210	87	203	134	262	124	402	95	40	240	41
10	18	750	87	273	135	920	121	404	114	37	141	39
11	20	255	85	299	132	1190	120	334	118	38	130	46
12	26	167	80	277	127	1040	122	270	100	52	97	67
13	30	133	78	351	126	1110	124	207	81	62	92	51
14	41	116	84	832	135	732	124	232	74	46	237	43
15	118	105	200	685	137	378	119	389	69	76	165	40
16	166	99	180	590	132	279	113	400	66	414	114	37
17	218	95	150	487	142	241	109	289	64	549	84	35
18	132	93	170	509	149	208	117	195	63	463	67	34
19	77	89	450	501	146	196	164	161	61	272	60	31
20	61	83	350	1320	136	170	192	138	59	129	57	29
21	53	80	340	1330	127	163	194	126	57	102	54	28
22	47	79	450	1080	126	155	152	117	75	91	52	27
23	42	81	400	898	127	146	128	107	76	81	50	68
24	38	86	250	452	129	139	120	106	78	84	48	122
25	35	89	200	322	131	134	116	123	68	724	45	90
26	316	98	210	566	127	293	663	112	59	181	44	75
27	978	104	170	577	120	608	1790	99	92	126	43	60
28	383	93	138	605	114	435	2250	93	130	122	42	47
29	553	88	121	677	---	318	2320	92	141	90	42	38
30	383	88	114	344	---	238	1380	90	130	83	51	32
31	138	---	128	228	---	193	---	88	---	81	87	---
TOTAL	4035	9401	5289	14377	3954	11256	11809	7672	2499	4385	3412	1726
MEAN	130	280	171	464	141	363	394	247	83.3	141	110	57.5
MAX	978	1720	450	1330	196	1190	2320	552	141	724	284	147
MIN	16	79	78	99	114	124	109	88	57	37	42	27
CFSM	.80	1.72	1.05	2.85	.87	2.23	2.42	1.52	.51	.87	.68	.35
IN.	.92	1.92	1.21	3.28	.90	2.57	2.70	1.75	.57	1.00	.78	.39

CAL YR 1977 TOTAL 48776.6 MEAN 134 MAX 1720 MIN 2.4 CFSM .82 IN 11.13
WTR YR 1978 TOTAL 78815.0 MEAN 216 MAX 2320 MIN 16 CFSM 1.33 IN 17.99

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

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

DRAINAGE AREA.--175 mi² (453 km²).

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

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

GAGE.--Water-stage recorder. Datum of gage is 116.44 ft (35.491 m) National Geodetic Vertical Datum of 1929. 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 466 of this report.

AVERAGE DISCHARGE.--19 years, 167 ft³/s (4.729 m³/s), 12.96 in/yr (329 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. 27	0430	1530	43.3	10.90	3.322	Jan. 21	1700	2160	61.2	13.39	4.081
Nov. 8	0600	*3340	94.6	*16.27	4.959	Mar. 12	0430	2030	57.5	12.93	3.941
Jan. 15	0730	1280	36.2	9.71	2.960	Apr. 28	0630	*3340	94.6	*16.27	4.959

Minimum discharge, 12 ft³/s (0.34 m³/s) Oct. 7, 8, gage height, 1.39 ft (0.424 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	75	97	172	180	126	211	276	72	45	38	56
2	15	67	108	141	178	146	193	231	65	39	101	92
3	15	65	95	120	169	185	171	197	60	36	218	52
4	18	68	85	104	165	379	160	217	58	38	116	35
5	16	81	87	99	168	344	160	667	55	39	106	31
6	13	804	107	106	168	271	151	784	54	36	185	27
7	12	2290	109	148	152	235	145	368	56	32	437	25
8	12	3130	86	157	143	230	139	298	57	30	227	23
9	14	1300	79	304	151	439	132	714	90	27	110	22
10	15	248	88	579	148	1200	127	729	115	26	79	23
11	19	173	82	309	138	1770	126	575	78	28	85	29
12	18	137	74	147	132	1870	124	302	56	32	66	30
13	20	118	75	389	135	799	119	217	49	33	55	24
14	38	104	85	1130	150	365	120	307	46	29	100	21
15	142	97	219	1200	151	314	113	514	42	40	73	20
16	108	93	208	565	135	269	106	276	40	192	56	20
17	52	91	134	296	161	244	101	205	39	527	46	19
18	35	89	173	570	170	223	113	168	38	267	39	18
19	29	81	531	714	157	198	193	145	36	75	35	17
20	26	75	330	1670	145	188	345	128	33	53	32	15
21	24	73	326	2070	131	179	322	117	31	44	29	14
22	23	74	531	1460	133	175	170	106	33	39	27	14
23	21	79	357	411	128	164	133	99	51	35	25	15
24	21	88	190	275	133	157	123	172	43	33	24	16
25	21	86	176	296	140	153	114	134	35	271	24	20
26	635	95	221	747	131	416	826	94	33	467	23	20
27	1390	105	159	868	119	1080	2370	82	232	121	23	18
28	1020	85	129	551	114	1080	3150	79	310	66	23	16
29	223	87	115	279	---	500	1640	84	122	65	24	14
30	122	98	115	216	---	298	396	84	61	56	23	14
31	92	---	155	196	---	236	---	75	---	44	35	---
TOTAL	4223	10056	5326	16289	4125	14233	12293	8444	2090	2865	2484	760
MEAN	136	335	172	525	147	459	410	272	69.7	92.4	80.1	25.3
MAX	1390	3130	531	2070	180	1870	3150	784	310	527	437	92
MIN	12	65	74	99	114	126	101	75	31	26	23	14
CFSM	.78	1.91	.98	3.00	.84	2.62	2.34	1.55	.40	.53	.46	.15
IN.	.90	2.14	1.13	3.46	.88	3.03	2.61	1.79	.44	.61	.53	.16

CAL YR 1977 TOTAL 57066.1 MEAN 156 MAX 3130 MIN 5.4 CFSM .89 IN 12.13
WTR YR 1978 TOTAL 83188.0 MEAN 228 MAX 3150 MIN 12 CFSM 1.30 IN 17.68

PAMLICO RIVER BASIN

02083000 FISHING CREEK NEAR ENFIELD, N. C.

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

DRAINAGE AREA.--521 mi² (1,349 km²).

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

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

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

REMARKS.--Records good except those for period of no gage-height record, Jan. 1 to Feb. 6, which are fair. 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 71 of this report.

AVERAGE DISCHARGE.--55 years, 491 ft³/s (13.91 m³/s), 12.80 in/yr (325 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, 6,470 ft³/s (183 m³/s) Apr. 29, gage height, 15.28 ft (4.657 m); minimum, 47 ft³/s (1.33 m³/s) Oct. 8, gage height, 0.33 ft (0.101 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	254	248	480	1000	391	647	2950	260	218	172	211
2	53	212	263	540	800	443	586	1290	252	161	147	351
3	52	194	281	510	650	518	533	762	228	140	246	423
4	52	188	256	440	600	862	486	631	212	133	378	231
5	60	205	229	380	540	1060	467	1260	203	133	530	154
6	60	828	229	440	520	918	456	1670	196	135	574	126
7	52	2670	300	500	480	744	436	1650	191	128	729	112
8	49	3540	560	610	470	658	418	1190	204	119	814	101
9	50	4790	400	800	462	785	398	1330	307	110	596	94
10	52	3730	280	1000	488	1890	378	1720	391	103	468	90
11	53	1450	260	1500	476	2890	368	1570	380	105	349	94
12	63	600	240	2500	449	3380	373	1110	302	112	281	110
13	72	450	230	2100	435	3620	370	791	226	133	220	118
14	81	380	240	2400	454	3040	366	746	189	123	208	113
15	138	300	300	2700	485	1720	353	1160	173	110	428	99
16	361	270	500	2800	471	1030	325	1210	161	390	403	91
17	323	240	1000	2600	472	780	304	903	152	1140	291	88
18	252	235	800	2300	532	687	307	657	147	1220	205	85
19	156	227	900	2600	531	618	459	530	144	718	161	83
20	116	210	1000	2900	507	566	669	460	138	376	139	79
21	101	197	1050	3700	465	535	908	414	131	220	126	75
22	93	192	1200	3500	443	512	690	376	130	171	115	72
23	86	197	1700	3200	438	491	463	347	137	148	108	73
24	82	208	1100	2600	432	465	382	359	218	134	101	80
25	81	225	800	2000	445	446	349	687	174	644	97	106
26	286	233	660	2200	445	597	949	554	144	1160	94	125
27	2030	254	580	2500	413	2070	2890	374	231	826	92	115
28	2210	273	463	3000	384	2340	4490	306	674	454	96	93
29	1480	234	397	3300	---	2000	6050	323	646	275	99	83
30	668	223	364	2000	---	1180	5610	315	369	223	93	76
31	356	---	400	1500	---	789	---	285	---	729	94	---
TOTAL	9621	23209	17230	59600	14287	38025	31480	27930	7310	10791	8454	3751
MEAN	310	774	556	1923	510	1227	1049	901	244	348	273	125
MAX	2210	4790	1700	3700	1000	3620	6050	2950	674	1220	814	423
MIN	49	188	229	380	384	391	304	285	130	103	92	72
CFSM	.60	1.49	1.07	3.69	.98	2.36	2.01	1.73	.47	.67	.52	.24
IN.	.69	1.66	1.23	4.26	1.02	2.72	2.25	1.99	.52	.77	.60	.27

CAL YR 1977 TOTAL 154448 MEAN 423 MAX 4790 MIN 20 CFSM .81 IN 11.03
WTR YR 1978 TOTAL 251688 MEAN 690 MAX 6050 MIN 49 CFSM 1.32 IN 17.97

PAMLICO RIVER BASIN

02083000 FISHING CREEK NEAR ENFIELD, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
NOV				
08...	1300	3400	108	991
DEC				
27...	1425	567	13	20
MAR				
21...	1300	511	12	17
MAY				
03...	0900	773	37	77
JUN				
12...	1500	289	18	14
JUL				
20...	1250	373	62	62
SEP				
07...	1430	109	20	5.9

02083500 TAR RIVER AT TARBORO, N. C.

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

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

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Water-discharge record excellent. Some diurnal fluctuation at low flow caused by mills above station. Town of Tarboro diverted 3.4 ft³/s (0.10 m³/s) for municipal water supply.

AVERAGE DISCHARGE.--51 years, 2,234 ft³/s (63.27 m³/s), 14.18 in/yr (360 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, 21,200 ft³/s (600 m³/s) May 3, gage height, 26.40 ft (8.047 m); minimum, 171 ft³/s (4.84 m³/s) Oct, 8, 9, gage height, 1.63 ft (0.497 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	196	1970	980	2130	8830	1870	7150	18000	1070	1850	932	357
2	196	1360	1090	2170	6050	1990	5530	19800	942	1160	829	910
3	194	1160	1150	2150	4180	2260	3940	21100	946	926	726	1050
4	193	978	1160	1970	3350	3430	3050	18700	1240	772	664	1270
5	191	889	1150	1760	2900	4380	2560	14000	1410	666	856	1340
6	190	1220	1150	1630	2680	4700	2280	10000	1290	568	1120	1000
7	187	4260	1180	1900	2510	4750	2120	8300	950	499	1320	860
8	175	6220	1220	2210	2360	4440	1950	7920	860	443	1650	691
9	183	7630	1470	2570	2250	4070	1800	8080	1200	422	2150	558
10	222	8390	1330	3150	2180	4830	1700	8520	1990	377	1820	490
11	191	9440	1140	3700	2170	6890	1600	8290	2120	440	1690	438
12	182	10000	1060	4580	2120	8650	1550	7880	1800	474	1640	415
13	234	8340	1010	5260	2050	9560	1550	7670	1490	468	1410	417
14	317	6290	967	5600	2030	11100	1540	7260	1190	1060	1390	460
15	376	3680	1300	5710	2040	12400	1520	5800	942	868	1230	469
16	353	2030	1900	6280	2050	12900	1440	5300	835	616	1510	467
17	318	1600	2410	7040	2150	11000	1350	5270	725	1790	1910	420
18	446	1380	2980	7970	2250	8440	1320	4840	634	3360	1350	387
19	474	1220	3150	8580	2310	6110	1720	3990	627	4430	976	374
20	424	1120	3220	9020	2370	4150	2650	3130	602	4720	735	362
21	358	1000	3820	10100	2280	3240	3450	2570	502	3090	629	336
22	358	934	4490	11700	2190	2800	3420	2160	670	1950	559	325
23	348	918	4730	13300	2160	2550	3060	1850	599	1370	525	319
24	361	996	5150	14500	2110	2370	2490	1660	634	991	482	310
25	427	976	5080	14900	2120	2220	2060	1560	803	1060	458	520
26	922	999	3900	14300	2100	2490	2930	1560	741	1550	420	606
27	852	1060	3250	12400	2020	5100	6570	1400	725	2420	440	688
28	819	1040	2810	10600	1910	6750	9080	1440	1440	3010	565	532
29	2440	1040	2440	9750	---	7550	11100	1290	2610	2390	545	522
30	3580	1020	2070	9380	---	8360	14500	1380	2770	1640	461	428
31	3010	---	2030	9300	---	8490	---	1250	---	1120	464	---
TOTAL	18717	89160	70787	215610	75720	179840	106980	212170	34357	46500	31456	17321
MEAN	604	2972	2283	6955	2704	5801	3566	6844	1145	1500	1015	577
MAX	3580	10000	5150	14900	8830	12900	14500	21100	2770	4720	2150	1340
MIN	175	889	967	1630	1910	1870	1320	1250	502	377	420	310
CFSM	.28	1.39	1.07	3.25	1.26	2.71	1.67	3.20	.54	.70	.47	.27
IN.	.33	1.55	1.23	3.75	1.32	3.13	1.86	3.69	.60	.81	.55	.30

CAL YR 1977 TOTAL 615625 MEAN 1687 MAX 10000 MIN 144 CFSM .79 IN 10.70
WTR YR 1978 TOTAL 1098618 MEAN 3010 MAX 21100 MIN 175 CFSM 1.41 IN 19.10

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, 158 micromhos Oct. 11, 12; minimum daily, 41 micromhos May 2.
WATER TEMPERATURES: Maximum daily, 29.0°C July 10, Aug. 20; minimum daily, 2.0°C Feb. 2-8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV										
01...	1400	1940	80	6.8	14.0	40	--	4.6	210	160
11...	0730	9190	66	6.1	16.0	30	--	5.7	250	K2200
DEC										
05...	1230	1160	94	6.7	9.0	15	--	9.8	K910	260
JAN										
25...	1045	14900	47	5.6	2.0	60	--	12.4	220	K2300
FEB										
28...	1155	1910	76	6.9	2.5	10	--	12.5	K8	K32
MAR										
28...	1215	6540	66	6.2	9.5	45	--	9.0	2300	9400
APR										
25...	1400	2000	75	7.1	15.0	20	--	8.5	--	--
MAY										
23...	1015	1830	78	6.6	22.0	30	--	8.0	140	2000
JUN										
13...	1445	1370	82	6.8	27.0	--	20	7.5	170	K48
JUL										
18...	1615	3490	70	6.9	24.5	--	25	7.6	--	850
AUG										
07...	1330	1360	78	6.7	26.0	--	25	9.4	210	--
SEP										
06...	1500	471	77	6.5	23.5	--	25	8.6	130	340

K 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 1977 TO SEPTEMBER 1978

DATE	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)
NOV										
01...	19	6	4.6	1.8	5.5	34	.6	3.4	16	0
11...	17	9	4.2	1.7	4.3	30	.4	3.4	10	0
DEC										
05...	22	0	5.4	2.0	9.2	45	.9	2.4	32	0
JAN										
25...	13	9	3.1	1.3	3.1	30	.4	1.9	5	0
FEB										
28...	18	4	4.6	1.7	6.4	40	.6	1.6	18	0
MAR										
28...	15	3	4.1	1.2	4.2	34	.5	2.0	15	0
APR										
25...	21	3	5.4	1.9	5.9	35	.6	2.0	22	0
MAY										
23...	22	3	5.5	2.0	5.2	31	.5	2.3	23	0
JUN										
13...	23	0	5.8	2.0	6.0	34	.5	2.1	31	0
JUL										
18...	19	0	4.8	1.7	5.8	36	.6	2.5	26	0
AUG										
07...	20	0	4.9	1.9	6.2	37	.6	2.4	26	0
SEP										
06...	23	7	5.9	1.9	5.6	32	.5	2.3	19	0

DATE	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)
NOV										
01...	13	4.1	12	6.0	.0	12	83	53	.11	435
11...	8	13	11	5.5	.1	9.9	90	46	.12	2230
DEC										
05...	26	10	9.8	8.7	.1	18	78	71	.11	244
JAN										
25...	4	20	8.7	4.4	.1	6.7	66	32	.09	2660
FEB										
28...	15	3.6	9.2	6.9	.0	11	58	50	.08	299
MAR										
28...	12	15	8.5	4.9	.1	7.0	70	39	.10	1240
APR										
25...	18	2.8	7.6	8.0	.1	11	73	53	.10	394
MAY										
23...	19	9.2	8.4	6.5	.1	13	68	55	.09	336
JUN										
13...	25	7.9	5.7	5.9	.1	13	78	56	.11	289
JUL										
18...	21	5.2	5.7	4.7	.1	13	45	51	.06	424
AUG										
07...	21	8.3	5.9	5.2	.1	15	86	55	.12	316
SEP										
06...	16	9.6	11	6.5	.1	13	80	56	.11	102

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)
NOV										
01...	.14	.02	--	--	--	.26	--	--	.02	.01
11...	.07	.05	--	--	--	1.1	--	--	.14	.08
DEC										
05...	.32	.15	--	--	--	.99	--	--	.15	.10
JAN										
25...	.34	.04	.47	.51	.00	.55	.85	3.8	.09	.04
FEB										
28...	.48	.08	--	--	--	.35	--	--	.06	.05
MAR										
28...	.36	.07	.61	.68	.22	.46	1.0	4.6	.14	.07
APR										
25...	.32	.05	.66	.71	.16	.55	1.0	4.6	.10	.07
MAY										
23...	.47	.05	.59	.64	.13	.51	1.1	4.9	.13	.07
JUN										
13...	.35	.01	.78	.79	.23	.56	1.1	5.0	.15	.08
JUL										
18...	.28	.06	.70	.76	.35	.41	1.0	4.6	.27	.07
AUG										
07...	.32	.01	.62	.63	.02	.61	.95	4.2	.20	.17
SEP										
06...	.24	.00	.91	.91	--	--	1.2	5.1	.17	.17

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)
NOV											
01...	--	--	--	--	--	--	--	--	--	--	--
11...	1	1	0	0	0	0	2	0	3	<10	<10
JAN											
25...	0	0	0	0	0	0	3	3	0	<10	<7
FEB											
28...	--	--	--	--	--	--	--	--	--	--	--
MAR											
28...	--	--	--	--	--	--	--	--	--	--	--
APR											
25...	--	--	--	--	--	--	--	--	--	--	--
MAY											
23...	1	0	1	0	0	0	0	0	2	10	9
JUN											
13...	--	--	--	--	--	--	--	--	--	--	--
JUL											
18...	--	--	--	--	--	--	--	--	--	--	--
AUG											
07...	1	1	0	100	0	100	2	0	2	20	17
SEP											
06...	--	--	--	--	--	--	--	--	--	--	--

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
NOV											
01...	--	--	--	--	--	--	--	--	--	--	--
11...	0	0	0	0	7	1	6	1600	--	550	23
JAN											
25...	3	6	0	7	8	5	3	2000	--	280	20
FEB											
28...	--	--	--	--	--	--	--	--	--	--	--
MAR											
28...	--	--	--	--	--	--	--	--	--	--	--
APR											
25...	--	--	--	--	--	--	--	--	--	--	--
MAY											
23...	1	2	2	0	14	11	3	2200	--	660	13
JUN											
13...	--	--	--	--	--	--	--	--	--	--	--
JUL											
18...	--	--	--	--	--	--	--	--	--	--	--
AUG											
07...	3	2	2	0	5	3	2	1200	1200	50	10
SEP											
06...	--	--	--	--	--	--	--	--	--	--	--

DATE	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)
NOV											
01...	--	--	--	--	--	--	--	--	--	--	--
11...	0	23	120	60	60	<.5	.0	<.5	0	0	0
JAN											
25...	14	6	30	0	30	<.5	.0	<.5	0	0	0
FEB											
28...	--	--	--	--	--	--	--	--	--	--	--
MAR											
28...	--	--	--	--	--	--	--	--	--	--	--
APR											
25...	--	--	--	--	--	--	--	--	--	--	--
MAY											
23...	3	10	90	40	50	<.5	.0	<.5	0	0	0
JUN											
13...	--	--	--	--	--	--	--	--	--	--	--
JUL											
18...	--	--	--	--	--	--	--	--	--	--	--
AUG											
07...	7	3	70	30	40	<.5	.0	<.5	0	0	0
SEP											
06...	--	--	--	--	--	--	--	--	--	--	--

PAMLICO RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M
NOV										
01...	--	--	--	--	--	--	7.0	--	--	--
11...	0	0	0	10	10	0	--	16	--	--
JAN										
25...	0	0	0	30	10	20	--	6.4	--	--
FEB										
28...	--	--	--	--	--	--	4.9	--	--	--
MAR										
28...	--	--	--	--	--	--	12	--	.551	.472
APR										
25...	--	--	--	--	--	--	8.2	--	--	--
MAY										
23...	1	1	0	20	10	10	--	8.8	--	--
JUN										
13...	--	--	--	--	--	--	8.1	--	2.36	1.57
JUL										
18...	--	--	--	--	--	--	26	--	.945	.551
AUG										
07...	1	0	1	20	20	0	--	7.2	--	--
SEP										
06...	--	--	--	--	--	--	16	--	--	--

DATE	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	LENGTH OF EXPO-SURE (DAYS)
MAR			
28...	.040	.000	27
JUN			
13...	.300	.030	20
JUL			
18...	.070	.000	24

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	NOV 11,77	MAR 28,78	MAY 23,78	SEP 6,78
TIME	0730	1215	1015	1500
TOTAL CELLS/ML	840	570	450	10000
DIVERSITY: DIVISION	1.4	1.6	1.0	1.3
.CLASS	1.4	1.6	1.0	1.3
..ORDER	2.2	2.2	1.9	2.1
...FAMILY	2.4	2.7	2.1	2.8
....GENUS	2.9	3.4	2.4	3.4

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	--	-	*	0
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	140	1
...HYDRODICTYACEAE								
....PEDIASTRUM	--	-	--	-	--	-	230	2
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	--	-	*	0
...OOCYSTACEAE								
....ANKISTRODESMUS	71	8	110#	19	--	-	320	3
....DICTYOSPHAERIUM	--	-	68	12	--	-	1200	11
....KIRCHNERIELLA	47	6	54	10	--	-	470	5
....OOCYSTIS	24	3	--	-	--	-	90	1
....SELENASTRUM	--	-	--	-	14	3	--	-
...SCENEDESMACEAE								
....CRUCIGENIA	--	-	--	-	--	-	290	3
....SCENEDESMUS	--	-	54	10	--	-	320	3
....TETRASTRUM	--	-	--	-	54	12	--	-
..TETRASPORALES								
...COCCOMYXACEAE								
....ELAKATOTHRIX	--	-	--	-	--	-	*	0
...PALMELLACEAE								
....SPHAEROCYSTIS	--	-	--	-	160#	36	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	14	2	--	-	130	1
...VOLVOCACEAE								
....GONIUM	--	-	27	5	--	-	--	-
..ZYGNEMATALES								
...DESMIDIACEAE								
....COSMARIUM	--	-	--	-	--	-	54	1
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	--	-	41	7	14	3	180	2
....MELOSIRA	87	10	--	-	140#	30	390	4
....STEPHANODISCUS	--	-	14	2	--	-	--	-
..PENNALES								
...DIATOMACEAE								
....DIATOMA	16	2	--	-	--	-	--	-
...FRAGILARIACEAE								
....FRAGILARIA	--	-	--	-	27	6	--	-
....SYNEDRA	--	-	68	12	14	3	--	-
...GOMPHONEMATACEAE								
....GOMPHONEMA	16	2	--	-	--	-	--	-
...NAVICULACEAE								
....GYROSIGMA	--	-	--	-	14	3	--	-
....NAVICULA	39	5	27	5	14	3	*	0
...NITZSCHIACEAE								
....NITZSCHIA	8	1	--	-	--	-	300	3

PAMLICO RIVER BASIN

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	NOV 11,77 0730		MAR 28,78 1215		MAY 23,78 1015		SEP 6,78 1500	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROCCOCCALES								
...CHROCCOCCACEAE								
....ANACYSTIS	210#	25	--	-	--	-	3200#	31
..HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	87	10	--	-	--	-	1300	12
....CYLINDROSPERMUM	220#	26	--	-	--	-	--	-
...OSCILLATORIACEAE								
....LYNGBYA	--	-	--	-	--	-	270	3
....OSCILLATORIA	--	-	--	-	--	-	1100	11
...RIVULARIACEAE								
....RAPHIDIOPSIS	--	-	54	10	--	-	--	-
..CHROCCOCCALES								
...CHROCCOCCACEAE								
....GOMPHOSPHAERIA	--	-	--	-	--	-	270	3
EUGLENOPHYTA (EUGLENOIDS)								
.CRYPTOPHYCEAE								
..CRYPTOMONIDALES								
...CRYPTOMONODACEAE								
....CRYPTOMONAS	--	-	27	5	--	-	--	-
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	8	1	14	2	--	-	--	-

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

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	81	90	77	59	84	72	44	84	83	73	98
2	138	86	97	76	64	84	73	41	94	86	80	104
3	142	91	91	77	64	85	106	42	97	87	88	97
4	143	91	94	80	70	85	86	46	92	89	89	88
5	153	96	92	81	73	76	99	54	82	93	90	80
6	124	87	88	84	72	75	82	64	87	95	84	82
7	113	72	92	85	70	72	85	63	81	96	81	85
8	128	73	92	85	73	75	86	60	81	95	74	89
9	131	68	86	81	77	75	91	58	78	110	66	97
10	139	65	89	84	77	76	88	62	96	101	65	102
11	158	69	95	78	73	67	86	67	98	95	72	101
12	158	63	99	77	77	65	100	65	98	99	74	107
13	112	63	97	68	77	61	96	63	80	109	79	100
14	134	69	92	73	75	58	96	69	86	101	77	113
15	132	73	100	65	80	56	98	69	95	100	84	109
16	138	78	88	64	79	54	100	70	91	94	82	105
17	125	85	88	63	80	61	100	71	93	75	69	114
18	122	88	82	63	81	63	96	71	101	72	73	112
19	126	91	79	62	79	71	99	73	100	65	82	110
20	114	94	78	61	79	78	80	75	119	59	82	109
21	115	88	77	57	76	96	77	79	99	63	94	106
22	132	91	73	55	77	84	78	86	95	67	96	115
23	138	88	74	53	78	77	77	81	103	72	94	118
24	132	90	72	51	81	81	77	82	99	80	100	144
25	124	88	70	60	83	80	78	78	112	83	98	128
26	100	91	72	50	82	83	77	82	101	78	98	128
27	103	94	73	56	85	75	54	78	94	71	104	93
28	91	92	73	57	79	69	59	74	84	59	102	95
29	104	90	73	59	---	74	54	73	73	62	119	99
30	73	91	77	55	---	65	49	82	78	67	96	113
31	70	---	77	53	---	92	---	84	---	75	118	---
MEAN	124	83	85	67	76	74	83	68	92	83	87	105

WTR YR 1978 MEAN 86 MAX 158 MIN 41

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	16.0	13.0	5.0	3.0	5.0	15.0	13.0	24.0	27.0	28.0	27.0
2	25.0	17.0	11.0	5.0	2.0	5.0	17.0	13.0	25.0	27.0	27.0	26.0
3	23.0	18.0	11.0	5.0	2.0	5.0	16.0	13.0	25.0	26.0	27.0	26.0
4	20.0	19.0	11.0	4.0	2.0	4.0	18.0	13.0	25.0	27.0	28.0	26.0
5	20.0	20.0	11.0	4.0	2.0	5.0	18.0	14.0	23.0	25.0	28.0	25.0
6	19.0	20.0	12.0	5.0	2.0	5.0	18.0	15.0	23.0	25.0	28.0	25.0
7	20.0	20.0	9.0	5.0	2.0	5.0	19.0	15.0	25.0	26.0	28.0	25.0
8	19.0	20.0	8.0	7.0	2.0	5.0	20.0	15.0	25.0	27.0	28.0	26.0
9	20.0	20.0	8.0	8.0	3.0	5.0	20.0	16.0	26.0	28.0	28.0	26.0
10	19.0	19.0	7.0	5.0	3.0	5.0	20.0	17.0	25.0	29.0	28.0	27.0
11	19.0	17.0	6.0	4.0	3.0	5.0	20.0	17.0	25.0	26.0	27.0	26.0
12	18.0	15.0	5.0	4.0	4.0	7.0	20.0	18.0	25.0	26.0	27.0	27.0
13	15.0	13.0	6.0	4.0	3.0	8.0	19.0	18.0	25.0	26.0	27.0	26.0
14	14.0	11.0	5.0	4.0	4.0	9.0	19.0	18.0	24.0	25.0	27.0	25.0
15	15.0	10.0	8.0	4.0	5.0	10.0	19.0	18.0	24.0	26.0	28.0	24.0
16	15.0	11.0	9.0	5.0	5.0	11.0	19.0	18.0	25.0	25.0	28.0	25.0
17	14.0	14.0	9.0	4.0	5.0	11.0	17.0	18.0	24.0	26.0	28.0	27.0
18	15.0	14.0	9.0	4.0	5.0	11.0	15.0	18.0	25.0	26.0	28.0	26.5
19	14.0	13.0	10.0	5.0	5.0	11.0	16.0	19.0	25.0	25.0	28.0	26.5
20	14.0	12.0	9.0	5.0	5.0	11.0	16.0	20.0	26.0	25.0	29.0	26.0
21	14.0	12.0	9.0	5.0	5.0	13.0	16.0	20.0	27.0	25.0	28.0	26.0
22	14.0	13.0	9.0	4.0	5.0	14.0	16.0	21.0	27.0	26.0	28.0	26.0
23	15.0	12.0	8.0	4.0	5.0	15.0	16.0	22.0	27.0	28.0	27.0	24.0
24	15.0	13.0	8.0	3.0	5.0	15.0	16.0	22.0	27.0	28.0	26.0	24.0
25	15.0	12.0	8.0	4.0	6.0	15.0	17.0	23.0	27.0	28.0	27.0	24.0
26	16.0	11.0	7.0	5.0	6.0	14.0	15.0	23.0	27.0	27.0	28.0	23.0
27	17.0	10.0	5.0	6.0	7.0	13.0	13.0	22.0	28.0	26.0	27.0	22.0
28	18.0	10.0	5.0	5.0	6.0	13.0	13.0	22.0	27.0	26.0	28.0	22.0
29	17.0	10.0	4.0	5.0	---	14.0	13.0	23.0	28.0	28.0	28.0	21.0
30	17.0	10.0	4.0	4.0	---	14.0	13.0	23.0	27.0	28.0	28.0	21.0
31	16.0	---	5.0	3.0	---	14.0	---	24.0	---	28.0	28.0	---
MEAN	17.0	14.5	8.0	4.5	4.0	9.5	17.0	18.5	25.5	26.5	27.5	25.0

WTR YR 1978 MEAN 16.5 MAX 29.0 MIN 2.0

PAMLICO RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
01...	1400	1940	44	230	94
11...	0730	9190	66	1640	45
DEC					
05...	1230	1160	19	60	67
JAN					
25...	1045	14900	42	1690	83
FEB					
28...	1155	1910	16	83	75
MAR					
28...	1215	6540	185	3270	99
APR					
25...	1400	2000	24	130	89
MAY					
23...	1015	1830	25	124	91
JUN					
13...	1445	1370	28	104	90
JUL					
18...	1615	3490	76	716	87
AUG					
07...	1330	1360	30	110	85
SEP					
06...	1500	471	20	25	93

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER YEAR OCTOBER 1977 to SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT									
10...	--	223	180	6.3	17.0	5.2	41	4.0	80
NOV									
09...	--	7630	70	6.4	18.0	4.5	46	2.7	670
DEC									
13...	--	1010	90	7.0	4.0	8.7	18	3.0	60
JAN									
16...	1300	6310	60	6.8	2.0	10.6	41	2.3	330
FEB									
23...	1430	2160	80	6.9	3.0	10.1	15	1.6	940
MAR									
20...	1330	5440	50	6.9	10.0	8.6	19	1.8	40
APR									
24...	1330	2430	70	6.8	17.0	7.7	30	1.3	--
MAY									
17...	1510	5230	40	5.9	19.0	7.8	27	1.0	60

02083800 CONETOE CREEK NEAR BETHEL, N. C.

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

DRAINAGE AREA.--78.1 mi² (202 km²).

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

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

REMARKS.--Records good except those for period of no gage-height record, Nov. 7-15, which are fair. Suspended-sediment records for the current year are published on page 83 of this report.

AVERAGE DISCHARGE.--21 years, (1957-78) 86.4 ft³/s (2.447 m³/s), 15.02 in/yr (382 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,580 ft³/s (73.1 m³/s) Aug. 23, 1967, gage height, 15.74 ft (4.798 m); minimum 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)
Nov. 7	Unknown	*1040	29.5	*12.54	3.822	Mar. 28	0130	757	21.4	10.82	3.298
Dec. 22	0430	676	19.1	9.67	2.947	Apr. 29	0400	917	26.0	12.18	3.712
Jan. 20	Unknown	Unknown		Unknown		May 6	2030	920	26.1	12.20	3.719
Jan. 26	Unknown	678	19.2	9.68	2.950	May 9	1400	636	18.0	9.62	2.932
Mar. 4	1100	611	17.3	9.01	2.746	May 14	1330	513	14.5	8.32	2.536
Mar. 11	0930	794	22.5	10.84	3.304						

Minimum discharge, 1.7 ft³/s (0.048 m³/s) Sept. 17, 18, 19, 20, 21, 22, 23, gage height, 0.09 ft (0.027 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	77	61	201	130	134	149	263	33	25	8.7	17
2	11	67	61	165	120	150	126	200	31	22	9.5	20
3	14	63	56	134	110	233	106	161	65	20	8.7	7.9
4	11	60	53	114	100	574	96	229	42	19	8.4	6.4
5	10	101	56	103	96	374	88	782	34	18	13	5.8
6	9.9	394	68	106	92	234	79	895	30	16	16	6.6
7	9.6	1000	61	197	88	182	74	815	37	15	11	4.4
8	9.3	700	53	177	84	157	67	530	29	14	8.6	4.7
9	10	500	51	294	83	180	61	618	46	13	7.9	4.4
10	12	400	48	256	83	530	57	502	54	13	7.6	3.8
11	10	300	45	166	79	779	54	290	40	15	7.4	3.6
12	10	240	43	134	77	545	53	195	31	14	7.1	3.5
13	18	200	42	146	77	294	53	161	27	13	7.3	3.5
14	81	150	50	257	82	220	55	457	24	12	7.1	3.3
15	147	120	340	215	76	190	50	333	22	12	6.8	3.0
16	93	110	251	164	72	159	46	229	20	14	6.6	3.0
17	67	99	172	161	110	137	42	173	19	17	6.5	2.2
18	52	89	158	300	115	119	56	138	18	13	6.2	2.2
19	43	80	223	600	128	106	147	116	16	12	6.1	1.7
20	37	73	188	900	121	98	140	99	15	11	6.0	1.7
21	32	68	405	700	105	91	114	87	15	11	6.3	1.9
22	30	65	617	500	103	86	89	77	98	11	6.1	2.0
23	28	63	345	400	107	79	73	67	47	10	5.9	2.1
24	27	63	223	340	110	74	63	61	30	9.6	5.6	2.2
25	26	61	195	300	146	69	57	56	24	11	5.2	2.8
26	77	66	179	640	147	127	342	51	20	10	5.0	3.5
27	290	62	144	550	121	654	793	46	23	9.7	5.0	3.7
28	171	58	124	400	106	705	874	44	76	9.1	5.8	3.9
29	134	55	111	250	---	415	870	42	49	8.8	5.7	3.5
30	113	54	106	160	---	241	505	39	32	8.4	4.8	3.5
31	90	---	212	140	---	181	---	36	---	8.0	4.8	---
TOTAL	1683.8	5438	4741	9170	2868	8117	5379	7792	1047	414.6	226.7	137.8
MEAN	54.3	181	153	296	102	262	179	251	34.9	13.4	7.31	4.59
MAX	290	1000	617	900	147	779	874	895	98	25	16	20
MIN	9.3	54	42	103	72	69	42	36	15	8.0	4.8	1.7
CFSM	.70	2.32	1.96	3.79	1.31	3.36	2.29	3.21	.45	.17	.09	.06
IN.	.80	2.59	2.26	4.37	1.37	3.87	2.56	3.71	.50	.20	.11	.07

CAL YR 1977 TOTAL 29021.3 MEAN 79.5 MAX 1000 MIN 5.4 CFSM 1.02 IN 13.82
WTR YR 1978 TOTAL 47014.9 MEAN 129 MAX 1000 MIN 1.7 CFSM 1.65 IN 22.39

02083800 CONETOE CREEK NEAR BETHEL, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
NOV				
16...	1200	107	20	5.8
DEC				
29...	0800	113	12	3.7
APR				
26...	1400	520	579	813
MAY				
03...	1540	158	19	8.1
JUN				
14...	1300	24	10	.65
SEP				
05...	1710	5.2	5	.07

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

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

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
NOV											
08...	1930	414	45	4.4	18.0	150	3.6	42	1000	11	7
10...	1600	119	46	4.4	18.5	110	3.7	K12	600	11	6
JAN											
20...	1230	573	38	5.5	7.5	45	--	--	--	9	6
APR											
26...	1532	513	40	5.0	15.0	300	7.5	--	--	10	6
26...	1845	606	51	5.6	12.5	80	8.2	K2100	>2000	10	3
27...	1000	492	37	5.0	11.0	130	9.5	--	--	9	7

DATE	ACIDITY (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)
NOV											
08...	--	--	2.7	1.0	2.2	26	.3	2.3	5	0	4
10...	.0	.0	2.7	1.0	3.1	33	.4	2.0	6	0	5
JAN											
20...	--	--	2.2	.8	2.2	31	.3	1.6	3	0	2
APR											
26...	--	--	2.7	.8	2.4	29	.3	2.3	5	0	4
26...	--	--	2.5	.9	2.8	31	.4	3.0	9	0	7
27...	--	--	2.3	.8	1.9	27	.3	1.5	3	0	2

DATE	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)
NOV											
08...	318	10	5.2	.0	4.7	74	31	.10	82.7	.15	.00
10...	382	9.8	6.2	.0	6.1	66	34	.09	21.2	.12	.00
JAN											
20...	15	5.4	4.1	.0	2.6	45	22	.06	69.6	.36	.02
APR											
26...	80	7.2	2.4	.1	2.9	54	24	.07	74.8	.39	.06
26...	36	7.1	4.1	.1	2.9	58	28	.08	94.9	.45	.06
27...	48	7.6	4.4	.1	3.2	51	24	.07	67.7	.39	.03

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)
NOV											
08...	.15	.15	.60	.01	.59	.75	3.3	.05	--	.04	1
10...	.12	.12	.73	.23	.50	.85	3.8	.05	--	.04	2
JAN											
20...	.38	.36	.98	.34	.64	1.4	6.0	.16	.49	.05	1
APR											
26...	.45	.41	2.0	1.0	.99	2.5	11	.46	1.4	.11	--
26...	.51	.55	2.8	.90	1.9	3.3	15	.48	1.5	.18	--
27...	.42	.41	.72	.03	.69	1.1	5.0	.13	.40	.06	--

DATE	ARSENIC SUSPENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)
NOV									
08...	1	0	1	0	1	670	630	5	3
10...	0	2	5	4	1	680	610	10	0
JAN									
20...	1	0	4	4	0	1700	190	0	0
APR									
26...	--	--	10	8	2	5000	320	6	1
26...	--	--	10	7	3	5800	270	5	1
27...	--	--	5	1	4	1800	220	9	0

DATE	LEAD, DISSOLVED (UG/L AS PB)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
NOV									
08...	2	.5	.0	<.5	10	0	10	33	7.5
10...	10	<.5	.0	<.5	10	0	10	12	2.4
JAN									
20...	2	<.5	.0	<.5	40	30	10	9.5	1.3
APR									
26...	5	--	--	--	30	20	10	--	--
26...	4	--	--	--	30	30	0	--	--
27...	10	--	--	--	40	30	10	17	2.2

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
NOV												
08...	1930	414	8	8.9	--	--	--	--	--	--	--	--
10...	1600	119	6	1.9	--	--	--	--	--	--	--	--
21...	1435	13	37	1.3	--	--	--	--	--	--	--	--
DEC												
19...	1700	135	29	11	--	--	--	--	--	--	--	--
JAN												
20...	1230	573	83	128	--	--	--	--	--	--	--	--
21...	1010	320	17	15	--	--	--	--	--	--	--	--
21...	1110	310	39	33	--	--	--	--	--	--	--	--
MAR												
20...	1620	15	4	.16	--	--	--	--	--	--	--	--
APR												
26...	1532	513	488	676	--	--	--	--	--	--	--	--
26...	1845	606	391	640	86	94	96	96	98	99	99	100
27...	1000	492	69	92	--	--	--	--	--	--	--	--
MAY												
02...	1600	35	10	.94	--	--	--	--	--	--	--	--
05...	1610	332	84	76	--	--	--	--	--	--	--	--
JUN												
13...	1310	6.3	14	.24	--	--	--	--	--	--	--	--
JUL												
27...	1317	13	8	.28	--	--	--	--	--	--	--	--

PAMLICO RIVER BASIN

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT												
04...	0900	.39	170	6.7	14.5	39	3.5	--	--	69	9	23
NOV												
08...	1800	132	90	6.6	18.5	190	4.6	210	K1500	26	15	7.5
10...	1400	47	100	5.6	18.0	120	4.6	140	1700	31	18	9.3
JAN												
20...	1155	695	45	5.9	7.5	40	--	--	--	13	8	3.8
APR												
26...	1510	1120	60	5.2	14.5	80	8.0	--	--	17	11	4.8
26...	1800	1350	44	5.4	12.5	--	8.8	K7100	>2000	--	--	--
26...	2400	1070	35	5.3	12.0	300	8.2	K6100	K7800	11	8	3.2
27...	1100	465	48	5.2	--	80	--	--	--	14	11	4.1
JUN												
20...	1300	.67	177	6.8	20.0	40	2.4	--	--	59	14	19

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT											
04...	2.9	8.2	19	.4	6.8	74	0	61	24	6.3	13
NOV											
08...	1.7	4.3	24	.4	3.6	13	0	11	5.2	15	8.2
10...	1.8	5.3	25	.4	3.5	15	0	12	60	17	9.8
JAN											
20...	.9	2.2	23	.3	2.2	6	0	5	12	6.5	2.5
APR											
26...	1.1	3.3	26	.4	2.8	7	0	6	71	10	5.2
26...	--	--	--	--	--	--	--	--	--	--	--
26...	.7	1.7	22	.2	2.0	4	0	3	32	6.0	--
27...	.9	2.3	23	.3	1.9	4	0	3	40	9.0	4.0
JUN											
20...	2.7	7.0	19	.4	4.9	54	0	44	14	8.8	11

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)
OCT											
04...	.1	12	123	110	.17	.13	.78	.06	.84	.85	.5
NOV											
08...	.1	7.1	90	54	.12	32.1	.53	.02	.55	.51	--
10...	.1	7.6	103	62	.14	13.1	.49	.01	.50	.49	--
JAN											
20...	.1	2.4	44	26	.06	82.6	.56	.04	.60	.57	--
APR											
26...	.2	2.5	56	34	.08	169	.88	.08	.96	.91	--
26...	--	--	--	--	--	--	.65	.12	.77	.71	--
26...	.1	1.9	44	--	.06	127	.53	.06	.59	.56	--
27...	.1	2.9	60	27	.08	75.3	.71	.03	.74	.70	--
JUN											
20...	.2	10	130	90	.18	.24	.24	.04	.28	.32	--

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL (UG/L AS AS)
OCT											
04...	1.6	.00	1.6	2400	2.4	11	.60	--	.61	970	1
NOV											
08...	.84	.05	.79	--	1.4	6.2	.23	--	.19	--	1
10...	.63	.00	.65	--	1.1	5.0	.20	--	.17	--	1
JAN											
20...	.99	.47	.52	--	1.6	7.0	.37	1.1	.13	--	1
APR											
26...	3.3	2.1	1.2	--	4.3	19	.39	1.2	.18	--	--
26...	4.4	3.7	.69	--	5.2	23	.54	1.7	.26	--	--
26...	1.7	1.2	.53	--	2.3	10	.63	1.9	.13	--	--
27...	1.0	.32	.68	--	1.7	7.7	.33	1.0	.13	--	--
JUN											
20...	4.1	--	--	--	4.4	19	1.4	4.3	1.4	--	--

DATE	ARSENIC SUSPENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)
OCT										
04...	1	0	0	2	2	0	<10	1300	1300	1500
NOV										
08...	0	1	--	3	0	4	--	660	430	--
10...	0	1	--	5	3	2	--	710	510	--
JAN										
20...	1	0	--	5	4	1	--	2500	200	--
26...	--	--	--	15	13	2	--	8500	230	--
26...	--	--	--	12	9	3	--	9000	150	--
26...	--	--	--	7	5	2	--	7000	210	--
27...	--	--	--	5	3	2	--	2500	310	--
JUN										
20...	--	--	--	2	--	--	--	2400	--	--

DATE	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/L AS HG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)
OCT										
04...	0	0	0	20	<.5	.0	<.5	.0	20	0
NOV										
08...	1	0	1	--	<.5	.0	<.5	--	20	0
10...	17	0	18	--	<.5	.0	<.5	--	10	0
JAN										
20...	0	0	0	--	<.5	.0	<.5	--	30	30
APR										
26...	38	37	1	--	--	--	--	--	60	60
26...	5	3	2	--	--	--	--	--	50	50
26...	10	9	1	--	--	--	--	--	30	20
27...	7	6	1	--	--	--	--	--	20	20
JUN										
20...	12	--	--	--	--	--	--	--	10	--

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	ZINC, DISSOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)
OCT 04...	20	20	9.1	5.8	--	12	--	.0	0	.00
NOV 08...	20	--	--	30	--	--	--	--	--	--
10...	10	--	--	11	1.3	--	--	--	--	--
JAN 20...	0	--	--	7.6	--	--	--	--	--	--
APR 26...	0	--	--	--	--	--	--	--	--	--
26...	0	--	--	--	--	--	--	--	--	--
26...	10	--	--	--	--	--	--	--	--	--
27...	0	--	--	11	1.9	--	--	--	--	--
JUN 20...	--	--	--	--	--	--	.00	--	--	--

DATE	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL (UG/L)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL (UG/L)
OCT 04...	.00	.0	.0	0	.00	.0	.00	.0	.00	.0	.00

DATE	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN TOTAL (UG/L)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
OCT 04...	.0	.00	2.0	.00	.0	.00	.0	.00	.0	.00	.0

DATE	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOTAL (UG/L)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)
OCT 04...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00

DATE	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL (UG/L)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 04...	.00	.0	0	0	.00	.0

PAMLICO RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
OCT												
04...	0900	.39	7	.01	--	--	--	--	--	--	--	--
NOV												
08...	1800	132	18	6.4	--	--	--	--	--	--	--	--
10...	1400	47	12	1.5	--	--	--	--	--	--	--	--
21...	1400	11	8	.24	--	--	--	--	--	--	--	--
DEC												
20...	1610	88	110	26	--	--	--	--	--	--	--	--
JAN												
20...	1155	695	118	221	--	--	--	--	--	--	--	--
21...	1030	205	27	15	--	--	--	--	--	--	--	--
FEB												
06...	1705	19	13	.67	--	--	--	--	--	--	--	--
MAR												
20...	1610	11	17	.50	--	--	--	--	--	--	--	--
APR												
26...	1510	1120	776	2350	--	--	--	--	--	--	--	--
26...	1800	1350	703	2560	60	90	96	96	97	98	98	99
26...	2400	1070	296	855	--	--	--	--	--	--	--	--
27...	1000	497	99	133	--	--	--	--	--	--	--	--
27...	1100	465	86	108	--	--	--	--	--	--	--	--
MAY												
02...	1550	20	25	1.3	--	--	--	--	--	--	--	--
05...	1555	1340	215	778	--	--	--	--	--	--	--	--
JUN												
13...	1335	5.8	52	.81	--	--	--	--	--	--	--	--
20...	1300	.67	37	.07	--	--	--	--	--	--	--	--
JUL												
27...	1245	1.1	17	.05	--	--	--	--	--	--	--	--
AUG												
24...	1325	.76	9	.02	--	--	--	--	--	--	--	--

PAMLICO RIVER BASIN

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

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

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

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Water-discharge record good.

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

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

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 29	2130	516	14.6	8.77	2.673
Nov. 7	0230	*2510	71.1	*12.50	3.810
Dec. 19	0730	350	9.91	8.35	2.545
Dec. 22	0630	312	8.84	8.25	2.515
Jan. 9	2130	308	8.72	8.24	2.512
Jan. 20	1330	1320	37.4	10.54	3.213
Jan. 26	1330	822	23.3	9.52	2.902
Mar. 11	0100	346	9.80	8.34	2.542
Apr. 27	0130	2020	57.2	11.61	3.539
May 5	0830	2280	64.6	12.42	3.786
July 17	0630	338	9.57	8.32	2.536

No flow July 6-15, Sept. 11-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.27	172	33	265	71	39	59	110	3.2	.31	3.3	.86
2	.26	123	33	178	64	43	49	80	2.4	.24	8.8	2.6
3	.28	109	32	127	66	55	40	61	2.2	.17	7.4	2.4
4	.16	151	30	96	65	110	34	146	11	.11	7.3	2.3
5	.13	173	29	76	62	114	30	1790	7.1	.03	5.5	1.9
6	.12	894	29	69	58	89	26	656	5.5	.00	6.5	1.1
7	.11	2150	28	119	58	70	23	257	6.3	.00	4.5	.51
8	.11	1020	25	147	52	62	19	150	22	.00	4.5	.21
9	.29	506	23	223	44	59	16	174	49	.00	1.5	.09
10	1.4	268	22	251	40	183	15	220	98	.00	.78	.02
11	1.2	165	20	154	37	304	13	144	53	.00	.58	.00
12	1.2	115	19	108	34	190	14	89	28	.00	.58	.00
13	13	86	18	96	33	127	19	62	17	.00	.61	.00
14	63	68	21	182	32	95	30	58	12	.00	1.0	.00
15	162	57	76	195	31	76	27	57	7.9	.00	.62	.00
16	132	50	126	138	31	63	22	47	5.6	26	.37	.00
17	85	46	108	113	44	54	17	38	4.0	246	.37	.00
18	59	41	133	214	55	46	40	31	2.7	61	21	.00
19	46	36	319	218	61	39	175	25	1.8	20	25	.00
20	35	32	223	1100	65	34	173	20	1.2	11	42	.00
21	27	29	193	727	61	30	115	16	.82	7.8	26	.00
22	22	28	299	364	57	28	79	13	2.0	6.1	22	.00
23	19	29	221	215	55	25	56	11	2.4	3.8	7.5	.00
24	16	30	145	145	53	23	43	9.2	1.8	1.9	3.5	.00
25	15	30	116	239	50	21	37	8.5	1.1	1.2	1.7	.00
26	31	34	109	757	45	32	621	6.9	.69	3.8	.84	.00
27	126	35	94	470	40	170	1480	5.6	.61	13	.57	.00
28	183	34	76	238	35	236	601	5.5	.59	12	6.5	.00
29	424	33	63	150	---	155	292	6.2	.46	7.6	3.2	.00
30	447	32	60	109	---	105	165	5.5	.38	4.3	1.0	.00
31	276	---	198	85	---	75	---	4.3	---	2.2	.54	---
TOTAL	2186.53	6576	2921	7568	1399	2752	4330	4306.7	350.75	428.56	215.56	11.99
MEAN	70.5	219	94.2	244	50.0	88.8	144	139	11.7	13.8	6.95	.40
MAX	447	2150	319	1100	71	304	1480	1790	98	246	42	2.6
MIN	.11	28	18	69	31	21	13	4.3	.38	.00	.37	.00
CFSM	1.57	4.87	2.09	5.42	1.11	1.97	3.20	3.09	.26	.31	.15	.009
IN.	1.81	5.44	2.41	6.26	1.16	2.27	3.58	3.56	.29	.35	.18	.01

CAL YR 1977 TOTAL 24212.04 MEAN 66.3 MAX 2150 MIN .00 CFSM 1.47 IN 20.01
WTR YR 1978 TOTAL 33046.09 MEAN 90.5 MAX 2150 MIN .00 CFSM 2.01 IN 27.32

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 July 6-15, Sept. 11-30.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 394 micromhos Nov. 15, 16, 1976; minimum, 30 micromhos May 5, 1978.
WATER TEMPERATURES: Maximum, 31.0°C July 9, 1977, July 23, Aug. 29, 30, 31, 1978; minimum, 0.0°C Dec. 20, 1975, Jan. 10, 11, 18-25, 1976.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 662 mg/L May 5, 1978; minimum daily mean, 0 mg/L during periods of no flow.
SEDIMENT LOADS: Maximum daily, 3650 tons (3310 tonnes) May 5, 1978; minimum daily, 0.0 tons (0.0 tonnes) during periods of no flow.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 312 micromhos Oct. 13; minimum, 30 micromhos May 5.
WATER TEMPERATURES: Maximum, 31.0°C July 23, Aug. 29, 30, 31; minimum, 0.5°C Dec. 29, Jan. 11, 12, 30, 31, Feb. 1-8, 11, 23.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 662 mg/L May 5; minimum daily mean, 0 mg/L during periods of no flow.
SEDIMENT LOADS: Maximum daily, 3650 tons (3310 tonnes) May 5; minimum daily, 0.0 tons (0.0 tonnes) during periods of no flow.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT												
04...	1630	.12	123	6.0	17.0	65	1.6	--	--	42	0	13
29...	0200	312	91	--	--	110	--	--	--	24	3	7.0
31...	0930	284	82	--	--	120	--	--	--	24	8	6.8
NOV												
06...	1100	429	108	--	--	110	--	--	--	28	1	8.0
06...	1330	769	100	--	--	110	--	--	--	25	3	7.2
08...	1700	813	60	5.5	19.0	210	4.6	160	K1400	18	11	5.1
10...	1200	260	64	5.8	18.0	130	4.9	120	1200	19	13	5.6
JAN												
20...	1355	1320	50	6.4	7.5	45	--	--	--	14	7	4.0
APR												
26...	2030	1830	54	5.5	--	--	--	--	--	--	--	--
27...	0040	2020	46	5.4	12.0	80	8.8	K8600	>2000	12	7	3.3
27...	1200	1370	47	5.8	12.0	--	10.6	--	--	--	--	--
JUN												
20...	1410	1.1	111	6.8	22.0	80	3.8	--	--	33	12	10

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT											
04...	2.2	6.7	24	.5	4.4	58	0	48	93	6.7	12
29...	1.6	5.2	26	.5	6.0	26	0	21	--	13	10
31...	1.7	5.0	27	.4	4.4	20	0	16	--	13	8.9
NOV											
06...	1.9	7.5	31	.6	6.4	33	0	27	--	14	12
06...	1.8	6.0	28	.5	6.0	27	0	22	--	12	11
08...	1.3	2.8	22	.3	3.0	9	0	7	46	11	6.0
10...	1.3	3.5	25	.3	3.0	8	0	7	20	12	6.9
JAN											
20...	.9	2.4	23	.3	2.6	8	0	7	5.1	6.9	3.4
APR											
26...	--	--	--	--	--	--	--	--	--	--	--
27...	.8	1.8	21	.2	2.2	6	0	5	38	7.3	3.0
27...	--	--	--	--	--	--	--	--	--	--	--
JUN											
20...	2.0	5.8	25	.4	4.0	26	0	21	6.6	7.5	10

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)
OCT											
04...	.1	8.8	96	83	.13	.03	.05	.01	.06	.07	.5
29...	.1	7.2	93	63	.13	78.3	.44	.01	.45	--	--
31...	.1	7.2	48	57	.07	36.8	.68	.08	.76	--	--
NOV											
06...	.1	9.0	55	75	.07	63.7	.35	.08	.43	--	--
06...	.1	8.1	91	66	.12	189	.28	.03	.31	--	--
08...	.1	4.8	78	39	.11	171	.30	.01	.31	.31	--
10...	.1	5.6	89	43	.12	62.5	.26	.01	.27	.27	--
JAN											
20...	.1	2.4	49	30	.07	175	.67	.03	.70	.68	--
APR											
26...	--	--	--	--	--	--	.96	.04	1.0	.85	--
27...	.2	2.0	54	24	.07	295	.70	.07	.77	.70	--
27...	--	--	--	--	--	--	.81	.04	.85	.74	--
JUN											
20...	.1	8.2	92	60	.13	.27	1.2	.02	1.2	1.3	--

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL (UG/L AS AS)
OCT											
04...	.77	.09	.68	690	.83	3.7	.23	--	.20	40	0
29...	.89	--	--	--	1.3	5.9	.25	--	--	--	--
31...	1.0	--	--	--	1.8	7.8	.27	--	--	--	--
NOV											
06...	1.0	--	--	--	1.4	6.3	.24	--	--	--	--
06...	1.0	--	--	--	1.3	5.8	.31	--	--	--	--
08...	1.0	.12	.88	--	1.3	5.8	.15	--	.14	--	0
10...	.76	.18	.58	--	1.0	4.6	.12	--	.11	--	1
JAN											
20...	1.3	.56	.74	--	2.0	8.9	.44	1.4	.14	--	1
APR											
26...	2.5	1.7	.83	--	3.5	16	.77	2.4	.16	--	--
27...	1.8	.99	.81	--	2.6	11	.87	2.7	.15	--	--
27...	1.3	.51	.79	--	2.2	9.5	.47	1.4	.16	--	--
JUN											
20...	.95	--	--	--	2.2	9.5	.38	1.2	--	--	--

DATE	ARSENIC SUSPENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)
OCT										
04...	0	0	0	3	3	0	<10	1500	960	760
29...	--	--	--	19	6	13	--	--	--	--
31...	--	--	--	7	0	11	--	--	--	--
NOV										
06...	--	--	--	23	--	--	--	--	--	--
06...	--	--	--	21	0	24	--	--	--	--
08...	0	0	--	2	0	3	--	1000	460	--
10...	0	1	--	8	4	4	--	1000	580	--
JAN										
20...	1	0	--	5	5	0	--	2700	210	--
APR										
26...	--	--	--	22	20	2	--	9700	150	--
27...	--	--	--	11	9	2	--	8200	190	--
27...	--	--	--	8	3	5	--	3700	290	--
JUN										
20...	--	--	--	14	--	--	--	0	--	--

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/L AS HG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)
OCT										
04...	1	1	0	<10	<.5	.0	<.5	.0	20	0
29...	2	--	--	--	--	--	--	--	--	--
31...	24	17	7	--	--	--	--	--	--	--
NOV										
06...	17	--	--	--	--	--	--	--	--	--
06...	30	0	35	--	--	--	--	--	--	--
08...	6	2	4	--	<.5	.0	<.5	--	40	20
10...	56	47	9	--	<.5	.0	<.5	--	20	10
JAN										
20...	0	0	3	--	<.5	.0	<.5	--	40	30
APR										
26...	23	19	4	--	--	--	--	--	50	50
27...	11	8	3	--	--	--	--	--	50	30
27...	6	4	2	--	--	--	--	--	20	10
JUN										
20...	24	--	--	--	--	--	--	--	30	--

DATE	ZINC, DISSOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)
OCT										
04...	20	10	10	6.5	--	3.0	--	.0	0	300
29...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
NOV										
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
08...	20	--	--	33	--	--	--	--	--	--
10...	10	--	--	20	.9	--	--	--	--	--
JAN										
20...	10	--	--	7.1	2.8	--	--	--	--	--
APR										
26...	0	--	--	9.8	7.1	--	--	--	--	--
27...	20	--	--	--	--	--	--	--	--	--
27...	10	--	--	15	2.9	--	--	--	--	--
JUN										
20...	--	--	--	--	--	--	.00	--	--	--

DATE	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL (UG/L)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL (UG/L)
OCT											
04...	.00	.0	.0	0	.00	.0	.00	.0	.00	.1	.00

DATE	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN TOTAL (UG/L)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
OCT											
04...	.0	.00	.9	.00	.0	.00	.0	.00	.0	.00	.0

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOTAL (UG/L)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)
OCT 04...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00

DATE	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL (UG/L)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 04...	.00	.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 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	120	117	82	81	106	99	78	76	74	66	96	93
2	123	120	85	82	112	104	88	78	79	68	97	88
3	123	122	92	84	113	103	91	85	86	80	96	86
4	123	122	99	93	110	102	92	86	88	81	95	89
5	122	121	97	93	108	102	96	82	91	81	96	80
6	122	121	94	49	114	105	96	93	90	82	93	86
7	122	122	58	49	117	111	104	96	85	80	120	89
8	123	122	54	49	113	104	95	85	88	81	96	90
9	123	119	61	54	117	102	94	83	89	85	96	91
10	151	119	66	61	116	102	88	78	92	84	95	78
11	277	161	68	66	104	101	86	78	93	81	79	62
12	195	176	70	68	106	102	89	85	95	82	71	59
13	312	160	73	70	112	104	94	85	95	88	73	59
14	228	151	75	73	112	105	100	88	99	92	81	64
15	148	124	78	75	138	109	89	85	100	95	93	68
16	123	115	81	78	115	97	91	85	98	94	93	75
17	115	112	84	81	98	93	91	83	105	93	89	79
18	112	109	85	84	93	80	96	85	102	97	95	84
19	109	108	86	85	87	75	87	70	109	98	94	84
20	108	107	88	86	77	74	71	49	98	91	96	85
21	108	107	91	88	85	75	55	50	96	87	98	91
22	110	108	99	92	90	81	58	55	95	88	100	91
23	113	110	113	99	86	81	60	57	93	80	109	91
24	116	113	113	107	86	81	64	60	102	84	101	90
25	122	116	111	107	90	84	65	56	99	91	108	98
26	145	120	117	107	101	90	59	52	100	98	130	100
27	146	110	117	109	99	90	59	53	99	94	111	87
28	108	87	111	98	95	89	55	54	97	95	84	78
29	91	86	102	96	95	87	57	55	---	---	80	72
30	91	80	99	98	94	91	60	57	---	---	79	75
31	81	79	---	---	104	78	70	60	---	---	80	78
MONTH	312	79	117	49	138	74	104	49	109	66	130	59
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	82	78	70	66	121	118	145	144	159	83	158	150
2	89	81	74	70	122	120	146	144	273	157	193	152
3	90	87	76	74	124	117	146	144	157	149	180	157
4	92	88	86	47	265	113	146	144	148	120	155	128
5	98	91	56	30	230	138	146	145	121	112	132	123
6	97	93	52	41	149	135	---	---	164	101	124	113
7	105	96	56	52	140	114	---	---	162	123	112	110
8	107	98	64	56	213	114	---	---	281	124	110	107
9	107	98	78	64	162	115	---	---	283	196	110	108
10	107	98	79	72	120	106	---	---	195	165	110	108
11	108	102	73	71	110	92	---	---	165	150	---	---
12	117	109	73	71	91	89	---	---	151	146	---	---
13	149	114	76	73	91	88	---	---	151	144	---	---
14	149	143	83	75	94	89	---	---	146	142	---	---
15	141	120	82	79	107	90	---	---	144	140	---	---
16	120	112	82	79	109	95	145	105	144	142	---	---
17	112	110	84	79	110	98	103	91	142	135	---	---
18	140	95	88	82	112	101	115	101	148	114	---	---
19	114	92	91	85	114	103	115	113	117	105	---	---
20	93	87	92	88	115	107	117	115	138	99	---	---
21	91	84	91	89	115	109	126	117	139	115	---	---
22	95	83	92	90	115	109	124	113	114	107	---	---
23	95	88	96	91	154	115	113	111	108	107	---	---
24	95	90	107	94	153	146	116	112	113	107	---	---
25	95	91	115	103	146	140	115	113	115	112	---	---
26	113	52	115	108	144	139	149	113	115	113	---	---
27	52	46	117	113	141	138	177	106	116	114	---	---
28	57	53	116	114	143	139	105	93	261	115	---	---
29	63	56	121	116	145	143	153	91	217	188	---	---
30	66	62	121	117	145	144	130	100	187	177	---	---
31	---	---	119	117	---	---	102	95	175	159	---	---
MONTH	149	46	121	30	265	88	177	91	283	83	193	107
YEAR	312	30										

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

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

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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	9	.01	8	3.7	8	.71	26	19	12	2.3	6	.63
2	10	.01	7	2.3	8	.71	14	6.7	12	2.1	9	1.0
3	8	.01	8	2.4	9	.78	9	3.1	11	2.0	10	1.5
4	8	.00	9	3.7	8	.65	7	1.8	12	2.1	19	5.6
5	8	.00	7	3.3	8	.63	6	1.2	11	1.8	12	3.7
6	5	.00	30	144	9	.70	7	1.3	10	1.6	6	1.4
7	6	.00	47	309	9	.68	21	6.7	10	1.6	6	1.1
8	6	.00	16	44	10	.68	18	7.1	9	1.3	7	1.2
9	7	.01	12	16	10	.62	43	29	9	1.1	7	1.1
10	10	.04	9	6.5	8	.48	46	31	9	.97	69	47
11	7	.02	9	4.0	7	.38	21	8.7	9	.90	54	44
12	4	.01	8	2.5	9	.46	11	3.2	8	.73	17	8.7
13	10	.35	7	1.6	8	.39	18	4.7	9	.80	14	4.8
14	23	3.9	7	1.3	10	.57	20	9.8	9	.78	13	3.3
15	26	11	7	1.1	25	5.1	14	7.4	9	.75	14	2.9
16	15	5.3	7	.94	15	5.1	10	3.7	8	.67	18	3.1
17	10	2.3	7	.87	14	4.1	8	2.4	8	.95	21	3.1
18	9	1.4	7	.77	21	8.4	19	11	8	1.2	15	1.9
19	6	.75	8	.78	59	51	30	18	9	1.5	15	1.6
20	6	.57	9	.78	25	15	117	361	12	2.1	14	1.3
21	7	.51	8	.63	18	9.4	42	82	9	1.5	13	1.1
22	7	.42	7	.53	24	19	21	21	8	1.2	10	.76
23	6	.31	8	.63	14	8.4	14	8.1	7	1.0	12	.81
24	6	.26	8	.65	10	3.9	12	4.7	6	.86	14	.87
25	6	.24	8	.65	7	2.2	26	25	8	1.1	11	.62
26	11	.92	11	1.0	8	2.4	113	235	7	.85	18	1.6
27	25	8.5	10	.94	10	2.5	60	76	8	.86	64	32
28	31	15	7	.64	7	1.4	28	18	8	.76	49	31
29	32	37	7	.62	7	1.2	16	6.5	---	---	24	10
30	14	17	7	.60	11	1.8	16	4.7	---	---	16	4.5
31	10	7.5	---	---	50	29	16	3.7	---	---	16	3.2
TOTAL	---	113.34	---	556.43	---	178.34	---	1021.5	---	35.38	---	225.39
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	18	2.9	17	5.0	10	.09	7	.01	22	.20	10	.02
2	16	2.1	15	3.2	10	.06	6	.00	35	.83	13	.09
3	14	1.5	13	2.1	12	.07	6	.00	13	.26	8	.05
4	14	1.3	175	142	58	1.6	6	.00	11	.22	6	.04
5	13	1.1	662	3650	26	.50	6	.00	10	.15	6	.03
6	12	.84	100	177	13	.19	0	.00	20	.35	6	.02
7	16	.99	30	21	25	.52	0	.00	13	.16	7	.01
8	16	.82	20	8.1	70	4.2	0	.00	14	.17	5	.00
9	12	.52	33	16	96	13	0	.00	10	.04	5	.00
10	12	.49	31	18	123	33	0	.00	9	.02	6	.00
11	12	.42	26	10	39	5.5	0	.00	8	.01	0	.00
12	13	.49	19	4.6	21	1.6	0	.00	7	.01	0	.00
13	13	.67	16	2.7	21	.96	0	.00	8	.01	0	.00
14	15	1.2	20	3.1	16	.52	0	.00	17	.05	0	.00
15	12	.87	18	2.8	13	.28	0	.00	7	.01	0	.00
16	8	.48	16	2.0	12	.18	35	7.8	5	.00	0	.00
17	11	.50	14	1.4	12	.13	94	67	5	.00	0	.00
18	30	3.7	13	1.1	10	.07	29	4.8	35	2.1	0	.00
19	48	23	14	.94	11	.05	14	.76	16	1.1	0	.00
20	27	13	14	.76	11	.04	15	.45	35	4.5	0	.00
21	19	5.9	15	.65	13	.03	9	.19	23	1.6	0	.00
22	14	3.0	13	.46	22	.12	8	.13	20	1.2	0	.00
23	12	1.8	13	.39	15	.10	10	.10	13	.26	0	.00
24	9	1.0	13	.32	9	.04	10	.05	10	.09	0	.00
25	12	1.2	11	.25	9	.03	7	.02	12	.06	0	.00
26	316	839	12	.22	9	.02	10	.10	13	.03	0	.00
27	195	903	11	.17	9	.01	21	.74	10	.02	0	.00
28	31	50	11	.16	6	.01	18	.58	30	.53	0	.00
29	19	15	11	.18	7	.01	15	.31	8	.07	0	.00
30	16	7.1	10	.15	6	.01	11	.13	8	.02	0	.00
31	---	---	10	.12	---	---	9	.05	11	.02	---	---
TOTAL	---	1883.89	---	4074.87	---	62.94	---	83.22	---	14.09	---	0.26

TOTAL LOAD FOR YEAR: 8249.65 TONS.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
APR 27...	0040	2020	184	1000	48	66	81	87	92	98	99	100

02084164 JUNIPER BRANCH NEAR SIMPSON, N. C.

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

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

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Water-discharge record good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 996 ft³/s (28.2 m³/s) May 5, 1978, gage height, 16.83 ft (5.130 m), present datum; no flow at times 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)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 14	1530	36	1.02	13.70	4.176	Mar. 10	1815	45	1.27	13.87	4.278
Oct. 29	1915	34	0.96	13.66	4.164	Mar. 27	1615	41	1.16	13.78	4.200
Nov. 6	1830	309	8.75	15.75	4.801	Apr. 19	0315	38	1.08	13.74	4.188
Dec. 31	1415	46	1.30	13.88	4.231	Apr. 26	1730	719	20.4	16.48	5.023
Jan. 9	1630	68	1.93	14.19	4.325	May 5	0245	*996	28.2	*16.83	5.130
Jan. 20	0515	300	8.50	15.71	4.788	May 10	0115	119	3.37	14.63	4.459
Jan. 25	2045	252	7.14	15.47	4.715	July 16	2145	97	2.75	14.52	4.426
Mar. 4	0715	33	0.94	13.64	4.157	Aug. 1	2000	46	1.30	13.77	4.197

No flow June 30, July 1-10, 14, 15, Sept. 15-30, and Aug. 25, 26 (due to temporary impoundment).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	9.3	6.5	28	13	10	9.0	18	1.3	.00	19	2.8
2	.14	8.4	6.2	20	13	9.1	8.4	15	1.1	.00	16	1.7
3	.25	9.3	5.6	15	13	15	7.3	12	1.0	.00	16	.87
4	.17	12	5.3	12	12	29	7.0	81	2.3	.00	9.8	.67
5	.13	11	5.6	10	11	19	6.8	385	1.4	.00	7.3	.46
6	.12	141	5.8	12	11	14	6.1	56	1.0	.00	7.3	.42
7	.11	125	5.1	25	9.9	12	5.9	30	3.5	.00	5.6	.33
8	.14	41	4.3	20	9.4	11	4.9	25	6.7	.00	4.0	.18
9	1.3	24	4.1	48	9.0	12	4.0	54	15	.00	2.2	.11
10	2.8	18	4.1	31	8.7	36	3.7	69	19	.00	1.1	.06
11	1.3	14	3.8	18	8.4	29	3.6	27	5.5	.03	1.8	.04
12	1.1	12	3.5	14	8.7	20	5.3	18	3.0	.06	4.6	.03
13	8.7	10	3.5	17	8.7	16	7.3	14	2.3	.01	2.0	.01
14	25	9.2	5.8	27	8.9	13	9.1	12	1.5	.00	1.4	.01
15	24	8.7	20	21	8.2	12	5.4	12	1.1	.00	.88	.00
16	12	7.9	18	16	8.8	11	4.5	9.9	.92	35	.33	.00
17	7.6	7.4	9.8	15	13	9.5	4.0	8.5	.59	33	.17	.00
18	6.0	7.3	13	34	12	8.2	15	9.0	.38	3.9	.28	.00
19	4.8	6.8	16	41	14	7.5	33	7.6	.14	1.6	.13	.00
20	3.8	6.5	11	200	12	7.3	21	6.6	.04	.80	.10	.00
21	3.2	6.2	19	59	10	7.2	13	6.0	.01	1.1	.97	.00
22	2.9	6.0	26	29	11	6.8	9.8	5.0	1.7	.27	.60	.00
23	2.5	6.2	17	22	10	6.2	8.2	4.1	1.2	.05	.20	.00
24	2.3	6.4	18	18	10	6.2	7.0	3.8	.20	.01	.03	.00
25	2.2	6.2	9.8	89	9.5	5.8	8.3	4.3	.12	.68	.00	.00
26	7.6	7.5	13	158	8.7	9.9	265	3.0	.03	9.4	.00	.00
27	13	6.7	16	49	7.8	37	141	2.5	.22	2.0	.02	.00
28	9.0	5.9	8.9	26	7.3	26	50	3.1	.09	.32	.55	.00
29	28	5.6	8.1	20	---	17	29	2.4	.02	.11	.35	.00
30	23	5.8	11	16	---	13	22	1.5	.00	.02	.15	.00
31	13	---	42	15	---	10	---	1.2	---	.01	.12	---
TOTAL	206.30	551.3	345.8	1125	287.0	445.7	724.6	906.5	71.36	88.37	102.98	7.69
MEAN	6.65	18.4	11.2	36.3	10.3	14.4	24.2	29.2	2.38	2.85	3.32	.26
MAX	28	141	42	200	14	37	265	385	19	35	19	2.8
MIN	.11	5.6	3.5	10	7.3	5.8	3.6	1.2	.00	.00	.00	.00
CFSM	.89	2.45	1.49	4.84	1.37	1.92	3.23	3.89	.32	.38	.44	.04
IN.	1.02	2.73	1.71	5.58	1.42	2.21	3.59	4.50	.35	.44	.51	.04

CAL YR 1977 TOTAL 2669.17 MEAN 7.31 MAX 141 MIN .00 CFSM .98 IN 13.24
WTR YR 1978 TOTAL 4862.60 MEAN 13.3 MAX 385 MIN .00 CFSM 1.77 IN 24.12

PAMLICO RIVER BASIN

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT												
04...	1215	.19	130	6.1	17.0	50	4.7	--	--	52	5	17
JAN												
20...	1120	225	57	5.5	7.5	45	--	--	--	16	13	4.4
APR												
26...	1410	411	60	5.0	14.5	160	8.1	--	--	15	9	4.1
26...	1645	637	46	5.7	13.0	--	9.6	K3500	K7200	--	--	--
26...	2100	398	44	5.3	14.0	100	7.8	K3700	K7400	12	9	3.3
27...	1130	104	77	5.2	10.0	200	10.8	--	--	24	21	6.9
JUN												
20...	1340	.06	146	7.0	20.5	50	6.0	--	--	51	16	16

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT											
04...	2.3	7.0	21	.4	3.4	57	0	47	72	14	11
JAN											
20...	1.2	2.7	24	.3	2.3	4	0	3	20	9.2	3.2
APR											
26...	1.1	2.4	22	.3	3.0	7	0	6	112	10	5.5
26...	--	--	--	--	--	--	--	--	--	--	--
26...	.9	2.0	23	.3	2.2	4	0	3	32	8.8	2.8
27...	1.7	3.3	21	.3	2.6	4	0	3	40	14	5.5
JUN											
20...	2.6	6.4	20	.4	3.5	42	0	34	6.7	15	13

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)
OCT											
04...	.1	11	93	95	.13	.05	.13	.00	.13	.14	.5
JAN											
20...	.1	2.6	53	33	.07	32.2	1.3	.02	1.3	1.2	--
APR											
26...	.1	2.5	60	32	.08	66.6	1.1	.12	1.2	1.1	--
26...	--	--	--	--	--	--	.89	.10	.99	.94	--
26...	.1	2.0	50	24	.07	53.7	.90	.07	.97	.93	--
27...	.1	3.8	80	40	.11	22.5	2.1	.02	2.1	2.0	--
JUN											
20...	.2	8.8	112	86	.15	.02	1.4	.01	1.4	1.5	--

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL (UG/L AS AS)
OCT											
04...	.55	.12	.43	8100	.68	3.0	.15	--	.12	400	0
JAN											
20...	.83	.35	.48	--	2.1	9.4	.27	.83	.09	--	1
APR											
26...	3.5	2.7	.85	--	4.7	21	.92	2.8	.14	--	--
26...	2.6	1.5	1.1	--	3.6	16	.36	1.1	.14	--	--
26...	1.8	1.0	.76	--	2.8	12	.93	2.9	.17	--	--
27...	.99	.04	.95	--	3.1	14	.26	.80	.13	--	--
JUN											
20...	.96	--	--	--	2.4	10	.26	.80	--	--	--

DATE	ARSENIC SUSPENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)
OCT										
04...	0	0	4	2	2	0	<10	1400	870	2200
JAN										
20...	1	0	--	9	9	0	--	1500	170	--
APR										
26...	--	--	--	14	0	14	--	13000	140	--
26...	--	--	--	11	5	6	--	9800	190	--
26...	--	--	--	8	5	3	--	7200	200	--
27...	--	--	--	6	0	9	--	1500	510	--
JUN										
20...	--	--	--	4	--	--	--	1500	--	--

DATE	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/L AS HG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)
OCT										
04...	2	0	2	<10	<.5	.0	<.5	.0	10	0
JAN										
20...	4	2	2	--	<.5	.0	<.5	--	30	20
APR										
26...	45	15	30	--	--	--	--	--	60	50
26...	22	22	0	--	--	--	--	--	60	50
26...	4	0	4	--	--	--	--	--	40	40
27...	6	0	8	--	--	--	--	--	20	10
JUN										
20...	14	--	--	--	--	--	--	--	10	--

DATE	ZINC, DISSOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)
OCT										
04...	10	30	8.9	6.2	--	34	--	.0	0	.00
JAN										
20...	10	--	--	9.0	1.9	--	--	--	--	--
APR										
26...	10	--	--	--	--	--	--	--	--	--
26...	10	--	--	--	--	--	--	--	--	--
26...	0	--	--	--	--	--	--	--	--	--
27...	10	--	--	22	1.4	--	--	--	--	--
JUN										
20...	--	--	--	--	--	--	.00	--	--	--

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL (UG/L)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL (UG/L)
OCT 04...	.00	.0	.0	0	.00	.0	.00	10	.00	1.7	.00

DATE	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN TOTAL (UG/L)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
OCT 04...	.0	.00	5.2	.00	.0	.00	.0	.00	.0	.00	.0

DATE	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOTAL (UG/L)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)
OCT 04...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00

DATE	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL (UG/L)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 04...	.00	.0	0	0	.00	.0

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
OCT												
04...	1215	.19	12	.01	--	--	--	--	--	--	--	--
NOV												
08...	1630	34	7	.64	--	--	--	--	--	--	--	--
09...	1600	23	5	.31	--	--	--	--	--	--	--	--
DEC												
21...	1150	18	21	1.0	--	--	--	--	--	--	--	--
JAN												
20...	1120	225	223	135	--	--	--	--	--	--	--	--
20...	1747	147	40	16	--	--	--	--	--	--	--	--
21...	1045	58	18	2.8	--	--	--	--	--	--	--	--
FEB												
06...	1554	11	7	.21	--	--	--	--	--	--	--	--
MAR												
20...	1405	7.3	7	.14	--	--	--	--	--	--	--	--
APR												
26...	1344	342	1070	988	--	--	--	--	--	--	--	--
26...	1410	411	1260	1400	--	--	--	--	--	--	--	--
26...	1645	637	740	1270	68	86	92	94	94	97	97	99
26...	1841	590	604	962	--	--	--	--	--	--	--	--
26...	2041	433	352	412	--	--	--	--	--	--	--	--
26...	2100	398	335	360	--	--	--	--	--	--	--	--
27...	0952	113	64	20	--	--	--	--	--	--	--	--
27...	1130	104	47	13	--	--	--	--	--	--	--	--
MAY												
02...	1800	13	9	.32	--	--	--	--	--	--	--	--
05...	1422	175	170	80	--	--	--	--	--	--	--	--
JUN												
13...	1505	2.4	13	.08	--	--	--	--	--	--	--	--
20...	1340	.06	56	.01	--	--	--	--	--	--	--	--
JUL												
27...	1041	2.2	14	.08	--	--	--	--	--	--	--	--
AUG												
10...	0930	1.1	13	.04	--	--	--	--	--	--	--	--
24...	1040	.08	22	.00	--	--	--	--	--	--	--	--
SEP												
07...	1615	.37	9	.01	--	--	--	--	--	--	--	--

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 except those for period of no gage-height record, Nov. 4-9, which are fair. Runoff affected by ditches and canals above station. Suspended sediment records for the current year are published on page 106 of this report.

AVERAGE DISCHARGE.--28 years, 10.6 ft³/s (0.300 m³/s), 9.60 in/yr (244 mm/yr).

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

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

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

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 26	1430	156	4.42	9.90	3.018	Jan. 25	1500	156	4.42	9.90	3.018
Oct. 29	0330	240	6.80	11.20	3.414	Apr. 26	1230	232	6.57	11.08	3.377
Nov. 7	Unknown	*461	13.0	*13.71	4.179	May 4	2330	312	8.84	12.14	3.700
Jan. 20	0130	273	7.73	11.65	3.551	June 3	2330	134	3.79	9.49	2.893

Minimum discharge, 0.50 ft³/s (0.014 m³/s) Sept. 27, 28, 29, 30, gage height, 5.11 ft (1.558 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	29	8.0	27	16	9.2	9.0	20	3.1	.82	15	3.6
2	1.0	25	7.4	22	15	9.9	6.9	16	3.0	.78	17	2.3
3	.96	22	6.6	18	15	15	5.7	12	9.6	1.0	17	1.6
4	.98	40	6.0	15	14	22	5.6	49	28	1.4	9.6	1.5
5	.96	50	5.6	14	14	18	5.6	156	12	.90	6.9	1.3
6	.99	100	9.0	16	13	15	5.6	64	7.1	.79	9.4	1.2
7	.97	400	8.0	25	11	13	5.6	41	6.6	.68	5.5	1.1
8	.99	100	7.2	21	9.4	13	5.5	36	6.4	.66	4.2	.96
9	1.3	60	6.8	41	8.7	14	5.3	51	14	.63	3.3	.96
10	1.2	35	6.5	25	9.2	43	5.0	38	19	.62	2.6	.90
11	1.1	27	6.2	20	7.4	32	4.8	27	11	6.4	2.0	.90
12	1.2	22	5.7	17	6.9	24	4.7	19	6.9	2.6	1.9	.85
13	4.6	18	5.4	33	6.8	19	4.6	14	5.6	1.6	3.5	.85
14	33	16	8.1	39	6.8	16	5.5	13	4.2	1.1	3.6	.79
15	24	14	23	28	6.8	14	5.6	10	3.2	.87	3.0	.79
16	17	12	19	22	7.2	11	5.3	7.5	2.4	11	2.1	.79
17	14	10	15	23	12	9.2	5.1	6.8	2.0	3.8	1.7	.74
18	10	8.4	27	29	13	8.2	22	7.0	1.6	2.5	1.5	.74
19	7.4	7.1	32	57	16	7.3	39	6.9	1.1	1.7	1.3	.74
20	5.7	6.6	24	183	15	6.1	27	6.8	.89	1.3	1.2	.69
21	4.6	6.6	35	64	14	5.4	20	6.4	.95	1.0	1.2	.64
22	4.0	6.5	33	39	13	5.4	14	5.7	1.2	.87	1.1	.64
23	3.4	6.6	24	30	11	5.4	10	5.1	1.5	.78	1.0	.64
24	2.9	7.2	20	25	11	5.5	7.1	4.6	1.5	.89	.98	.59
25	2.5	7.0	19	69	9.5	5.4	9.2	4.5	1.3	1.6	.94	.54
26	66	8.7	18	87	8.4	9.8	144	4.4	1.1	1.8	.96	.54
27	49	8.0	15	44	7.5	33	82	4.2	1.0	.95	18	.50
28	60	7.1	13	32	7.3	27	49	3.8	1.2	.83	5.3	.54
29	162	6.6	11	26	---	20	33	3.6	1.5	.75	3.7	.50
30	60	6.0	14	21	---	15	24	3.4	.87	.68	2.7	.50
31	37	---	35	19	---	12	---	3.2	---	.65	2.0	---
TOTAL	579.75	1072.4	474.5	1131	303.9	462.8	575.7	649.9	159.81	51.95	150.18	28.93
MEAN	18.7	35.7	15.3	36.5	10.9	14.9	19.2	21.0	5.33	1.68	4.84	.96
MAX	162	400	35	183	16	43	144	156	28	11	18	3.6
MIN	.96	6.0	5.4	14	6.8	5.4	4.6	3.2	.87	.62	.94	.50

CAL YR 1977 TOTAL 4924.77 MEAN 13.5 MAX 400 MIN .75
WTR YR 1978 TOTAL 5640.82 MEAN 15.5 MAX 400 MIN .50

PAMLICO RIVER BASIN

02084500 HERRING RUN NEAR WASHINGTON, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
03...	1700	.96	4	.01
NOV				
09...	0950	52	560	79
16...	1440	12	15	.49
DEC				
27...	1624	15	17	.69
FEB				
07...	1733	11	13	.39
MAR				
21...	1422	5.4	9	.13
APR				
27...	1030	79	603	129
MAY				
04...	0811	22	152	9.0

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) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Runoff affected by ditches and canals above station. Suspended sediment records for the current year are published on page 108 of this report.

AVERAGE DISCHARGE.--13 years, 41.0 ft³/s (1.161 m³/s), 26.51 in/yr (673 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, 1,220 ft³/s (34.6 m³/s) Nov. 7, gage height, 11.37 ft (3.466 m). No flow Oct. 2-12, Sept. 24-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	37	41	144	94	30	61	93	9.0	2.1	.55	.34
2	.00	30	45	121	84	42	51	83	14	2.1	.47	2.0
3	.00	36	41	91	85	50	42	72	10	2.8	.41	5.5
4	.00	52	36	70	82	95	36	75	12	2.9	.33	6.4
5	.00	54	38	58	74	101	31	106	11	2.3	.27	6.9
6	.00	443	65	52	62	84	27	104	10	1.8	.27	6.8
7	.00	1130	66	68	56	67	24	86	17	1.3	.25	6.0
8	.00	698	55	73	49	60	21	71	23	.94	.20	5.0
9	.00	425	47	96	44	63	18	116	41	.60	.17	4.2
10	.00	297	41	114	39	97	15	224	62	.37	.15	3.6
11	.00	215	35	97	34	140	14	213	48	.32	.16	2.9
12	.00	159	30	82	30	120	14	146	38	.40	.67	2.4
13	.68	120	27	83	28	94	18	106	28	.34	4.9	2.0
14	6.5	92	28	177	26	76	27	100	22	.31	39	1.5
15	11	74	56	176	24	65	25	121	17	.28	17	1.2
16	7.8	61	64	138	24	56	21	97	14	.27	7.3	.92
17	5.9	52	53	116	32	48	17	73	12	.27	5.3	.62
18	5.1	44	52	193	34	41	37	87	9.9	.53	4.1	.38
19	4.5	37	69	204	39	35	127	81	8.5	.56	3.1	.26
20	4.0	32	66	525	41	31	152	60	7.2	.37	2.4	.20
21	3.6	28	63	481	38	29	128	43	6.2	.49	1.9	.15
22	3.3	25	77	326	35	26	90	32	5.4	.64	2.1	.10
23	2.9	36	72	231	32	23	66	24	4.8	.46	2.9	.05
24	2.5	55	60	174	29	21	48	20	4.8	.46	2.6	.00
25	2.2	53	55	168	26	19	39	19	4.2	5.5	2.0	.00
26	6.1	51	55	362	24	26	127	16	3.5	5.9	1.5	.00
27	33	49	48	344	21	103	285	13	3.1	3.9	1.0	.00
28	32	43	40	250	20	149	251	11	2.7	2.6	.78	.00
29	44	39	34	184	---	125	172	10	2.8	1.8	.57	.00
30	68	35	33	142	---	93	121	9.4	2.6	1.2	.38	.00
31	51	---	116	114	---	73	---	8.3	---	.82	.29	---
TOTAL	294.09	4502	1608	5454	1206	2082	2105	2319.7	453.7	44.63	103.02	59.42
MEAN	9.49	150	51.9	176	43.1	67.2	70.2	74.8	15.1	1.44	3.32	1.98
MAX	68	1130	116	525	94	149	285	224	62	5.9	39	6.9
MIN	.00	25	27	52	20	19	14	8.3	2.6	.27	.15	.00
CFSM	.45	7.14	2.47	8.38	2.05	3.20	3.34	3.56	.72	.07	.16	.09
IN.	.52	7.97	2.85	9.66	2.14	3.69	3.73	4.11	.80	.08	.18	.11

CAL YR 1977 TOTAL 14173.10 MEAN 38.8 MAX 1130 MIN .00 CFSM 1.85 IN 25.11
WTR YR 1978 TOTAL 20231.56 MEAN 55.4 MAX 1130 MIN .00 CFSM 2.64 IN 35.84

PAMLICO RIVER BASIN

02084540 DURHAM CREEK AT EDWARD, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
NOV				
18...	0855	44	10	1.2
DEC				
28...	1015	40	5	.54
FEB				
08...	0927	49	6	.79
MAR				
22...	0820	27	4	.29
MAY				
02...	0920	79	7	1.5
JUN				
13...	0956	29	16	1.3
JUL				
26...	1017	5.9	7	.11
SEP				
07...	1000	6.2	2	.03

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 above 3 ft³/s (0.085 m³/s), and good below. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7.2 ft³/s (0.20 m³/s) May 25, 1977, gage height, 11.62 ft (3.557 m); no flow Aug. 30 to Sept. 15, 28-30, Oct. 1-25, 1977, Sept. 10-30, 1978

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5.8 ft³/s (0.16 m³/s) Nov. 7, gage height, 11.32 ft (3.450 m); no flow Oct. 1-25, Sept. 10-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.1	.18	1.4	1.2	.46	.47	1.1	.11	.05	.03	.02
2	.00	.66	.16	1.1	1.1	.52	.39	.78	.10	.05	.04	.02
3	.00	.48	.15	.89	.86	.85	.35	.62	.11	.05	.04	.02
4	.00	.40	.15	.75	.75	1.8	.31	.72	.42	.05	.03	.02
5	.00	.39	.15	.65	.66	1.4	.29	2.4	.28	.05	.02	.02
6	.00	2.4	.16	.63	.63	1.2	.25	2.1	.21	.04	.02	.01
7	.00	5.8	.13	.72	.52	.92	.23	1.4	.18	.04	.02	.01
8	.00	4.2	.12	.74	.47	.82	.20	2.6	.16	.04	.02	.01
9	.00	3.2	.12	1.9	.43	.75	.18	2.8	1.4	.03	.01	.01
10	.00	2.6	.12	1.8	.40	2.5	.17	2.9	2.8	.03	.01	.00
11	.00	2.2	.11	1.3	.36	2.6	.16	2.8	2.5	.06	.10	.00
12	.00	1.7	.11	1.1	.34	1.9	.16	1.9	1.1	.08	.18	.00
13	.00	1.2	.11	1.6	.31	1.4	.18	1.4	.72	.06	.19	.00
14	.00	.89	.13	3.1	.30	1.2	.17	2.5	.53	.05	.45	.00
15	.00	.69	.20	2.4	.27	.98	.14	2.1	.41	.04	.25	.00
16	.00	.59	.19	1.7	.28	.79	.12	1.6	.33	.05	.16	.00
17	.00	.49	.18	1.8	.33	.70	.12	1.1	.27	.06	.12	.00
18	.00	.40	.33	2.8	.34	.60	.19	.88	.22	.06	.09	.00
19	.00	.34	1.4	2.6	.56	.50	.32	.67	.18	.06	.08	.00
20	.00	.29	1.3	4.7	.63	.42	.33	.54	.15	.06	.07	.00
21	.00	.26	1.3	4.0	.58	.39	.30	.44	.12	.05	.07	.00
22	.00	.23	1.5	2.8	.59	.35	.26	.36	.18	.04	.06	.00
23	.00	.28	1.2	2.5	.48	.31	.23	.31	.14	.03	.05	.00
24	.00	.25	.99	2.6	.43	.27	.20	.28	.11	.03	.05	.00
25	.00	.22	.86	2.6	.42	.25	.25	.24	.09	.04	.04	.00
26	.07	.25	.72	2.6	.41	.33	2.9	.20	.08	.03	.04	.00
27	.15	.21	.63	2.5	.39	1.2	3.4	.17	.08	.02	.03	.00
28	.20	.20	.55	2.5	.39	1.1	2.5	.16	.07	.03	.03	.00
29	4.0	.18	.48	2.3	---	.85	2.3	.15	.07	.04	.03	.00
30	3.8	.18	.51	1.8	---	.68	1.5	.13	.06	.03	.02	.00
31	2.4	---	1.6	1.4	---	.54	---	.12	---	.02	.02	---
TOTAL	10.62	32.28	15.84	61.28	14.43	28.58	18.57	35.47	13.18	1.37	2.37	.14
MEAN	.34	1.08	.51	1.98	.52	.92	.62	1.14	.44	.044	.076	.005
MAX	4.0	5.8	1.6	4.7	1.2	2.6	3.4	2.9	2.8	.08	.45	.02
MIN	.00	.18	.11	.63	.27	.25	.12	.12	.06	.02	.01	.00
CFSM	1.17	3.72	1.76	6.83	1.79	3.17	2.14	3.93	1.52	.15	.26	.02
IN.	1.36	4.13	2.02	7.83	1.84	3.65	2.37	4.53	1.68	.18	.30	.02

CAL YR 1977 TOTAL 173.91 MEAN .48 MAX 6.0 MIN .00 CFSM 1.66 IN 22.23
WTR YR 1978 TOTAL 234.13 MEAN .64 MAX 5.8 MIN .00 CFSM 2.21 IN 29.93

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

WATER-QUALITY RECORDS

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

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

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

REMARKS.--No flow from Oct. 1-25, 1977, Sept. 10-30, 1978. Malfunctions of water-quality monitor caused some loss of daily records during December, January and February.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 195 micromhos Nov. 9, 1977; minimum, 42 micromhos Nov. 17, 1976.
WATER TEMPERATURES: Maximum, 39.0°C July 9, 1977, July 22, 1978; minimum, 0.0°C Nov. 24, Dec. 3, 4, 1976.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 195 micromhos Nov. 9; minimum, 52 micromhos July 11.
WATER TEMPERATURES: Maximum, 39.0°C July 22; minimum recorded, 1.5°C Dec. 8, 9, 10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV 15...	1145	.72	150	3.6	10.5	880	2.9	200	22	K15	K9
JAN 03...	1200	.80	138	2.9	7.5	550	4.5	180	K4	K2	K7
FEB 13...	1230	.30	108	2.2	7.5	700	4.8	170	K9	<1	K2
MAR 28...	1030	1.2	115	2.3	14.5	500	5.2	--	K4	K4	K2
MAY 16...	0935	1.6	125	3.0	17.0	600	3.4	170	K16	K1	K9
JUN 20...	1020	.16	88	4.2	24.0	600	2.5	180	>80	K5	38
JUL 25...	1325	.04	62	6.6	34.5	500	--	120	K1100	K630	K150

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	ACIDITY (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)
NOV 15...	11	11	.3	15	2.7	1.1	4.9	48	.6	.2	0
JAN 03...	12	12	1.2	60	3.2	1.0	4.2	43	.5	.2	0
FEB 13...	12	12	1.2	60	3.3	1.0	4.2	42	.5	.2	0
MAR 28...	9	9	1.0	50	2.1	.9	3.5	45	.5	.2	0
MAY 16...	8	8	1.2	60	1.7	.8	3.1	47	.5	.1	0
JUN 20...	11	11	1.5	74	3.1	.8	3.4	40	.4	.2	0
JUL 25...	16	11	--	--	4.9	1.0	6.0	43	.6	.6	7

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)
NOV 15...	0	0	.0	25	7.9	.0	15	171	59	.23	.33
JAN 03...	0	0	.0	22	7.7	.0	16	161	57	.22	.35
FEB 13...	0	0	.0	22	7.7	.0	16	157	57	.21	.13
MAR 28...	0	0	.0	19	6.1	.0	12	125	46	.17	.40
MAY 16...	0	0	.0	22	7.0	.0	8.9	134	46	.18	.58
JUN 20...	0	0	.0	18	7.6	.0	14	162	51	.22	.07
JUL 25...	0	6	2.8	11	8.4	.1	32	148	69	.20	.02

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)
NOV 15...	.01	.00	.01	.00	1.5	.10	1.4	1.5	6.7	.02	--
JAN 03...	.00	.02	.02	.03	1.3	.20	1.1	1.3	5.8	.02	.06
FEB 13...	.01	.00	.01	.02	1.0	.06	.94	1.0	4.5	.01	.03
MAR 28...	.00	.02	.01	.03	1.3	.33	.97	1.3	5.8	.03	.09
MAY 16...	.02	.01	.03	.05	1.4	.20	1.2	1.4	6.3	.02	.06
JUN 20...	.00	.03	.01	.02	1.3	.00	1.3	1.3	5.8	.03	.09
JUL 25...	.00	.01	.01	.01	1.4	.30	1.1	1.4	6.2	.04	.12

DATE	PHOSPHORUS, DISSOLVED (MG/L AS P)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
NOV 15...	.01	--	--	1	--	1600	1	0	7	51	.6
JAN 03...	.01	--	--	6	--	1700	1	0	9	--	--
FEB 13...	.02	--	--	0	--	1500	0	0	2	92	.2
MAR 28...	.01	3	0	4	1500	1400	2	0	3	60	.5
MAY 16...	.01	3	2	1	1200	1300	5	4	1	78	.7
JUN 20...	.04	1	1	0	1800	1900	13	0	17	65	.5
JUL 25...	.03	0	0	0	2100	1600	2	2	0	--	.4

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	PCB, TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)
MAY 16...	.0	.00	.00	.0	.00	.00	.00	.00	.00
JUL 25...	.0	.00	.00	.0	.00	.00	.00	.00	.00

DATE	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)
MAY 16...	.00	.00	.00	.00	.00	.00	.00	.00	.00
JUL 25...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL TRITHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
MAY 16...	.00	.00	.00	0	.00	.00	.00	.00
JUL 25...	.00	.00	.00	0	.00	.00	.00	.00

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	112	110	95	89	139	133	---	---	96	93
2	---	---	113	109	96	93	---	---	---	---	101	95
3	---	---	111	108	93	88	135	133	---	---	112	98
4	---	---	110	105	88	84	132	126	---	---	130	114
5	---	---	107	103	82	76	129	124	---	---	132	128
6	---	---	133	97	76	72	127	122	---	---	131	126
7	---	---	166	113	72	71	131	124	---	---	129	121
8	---	---	190	168	71	70	133	126	---	---	125	119
9	---	---	195	190	72	71	150	123	112	110	120	113
10	---	---	191	180	72	71	150	145	113	109	142	113
11	---	---	180	170	71	69	149	146	---	---	146	140
12	---	---	169	161	71	68	---	---	---	---	144	138
13	---	---	162	154	75	71	---	---	109	101	141	134
14	---	---	156	149	119	73	---	---	102	97	136	125
15	---	---	149	142	132	119	---	---	99	94	131	123
16	---	---	143	138	---	---	---	---	96	91	132	119
17	---	---	140	134	---	---	---	---	91	88	128	117
18	---	---	139	133	---	---	---	---	91	89	120	110
19	---	---	132	120	---	---	---	---	102	91	113	105
20	---	---	120	111	---	---	---	---	106	102	107	102
21	---	---	112	108	---	---	---	---	107	103	104	98
22	---	---	109	106	---	---	---	---	108	103	103	96
23	---	---	108	100	---	---	---	---	107	103	101	93
24	---	---	109	106	---	---	---	---	105	101	94	90
25	---	---	109	105	---	---	---	---	106	98	92	85
26	87	64	106	93	---	---	---	---	105	102	86	76
27	63	59	94	89	---	---	---	---	103	99	112	79
28	70	56	89	87	---	---	---	---	100	96	119	109
29	155	93	90	84	124	117	---	---	---	---	120	109
30	156	119	90	90	144	126	---	---	---	---	117	111
31	118	111	---	---	143	138	---	---	---	---	112	106
MONTH	156	56	195	84	144	68	150	122	113	88	146	76

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	108	103	130	123	82	80	67	63	69	59	78	69
2	107	100	127	119	80	78	66	62	68	63	73	68
3	106	97	118	111	78	66	66	61	72	65	69	63
4	98	91	114	109	77	72	63	59	79	69	68	61
5	96	89	129	111	77	72	62	59	80	68	68	65
6	94	91	130	128	76	75	67	59	81	67	79	57
7	91	84	130	126	77	75	66	59	79	69	82	78
8	90	85	132	122	76	74	66	57	71	65	84	74
9	87	80	147	132	90	67	67	59	98	65	92	76
10	83	76	148	145	107	91	67	57	104	85	---	---
11	80	76	146	138	109	108	62	52	79	57	---	---
12	80	74	140	133	109	108	67	57	78	66	---	---
13	77	72	133	124	110	108	70	57	80	55	---	---
14	72	69	132	125	107	103	68	63	59	55	---	---
15	72	68	132	129	105	101	72	67	65	55	---	---
16	72	68	129	125	100	96	68	57	81	58	---	---
17	68	65	126	122	97	93	72	62	74	65	---	---
18	67	58	124	117	93	90	71	59	70	57	---	---
19	63	57	120	113	91	88	86	63	74	60	---	---
20	71	64	116	109	89	85	87	69	73	61	---	---
21	76	71	112	107	87	83	74	67	75	66	---	---
22	78	74	109	106	83	74	72	65	78	68	---	---
23	76	73	105	99	76	73	83	66	75	61	---	---
24	75	71	102	98	76	72	72	61	65	59	---	---
25	77	69	98	95	75	72	69	62	64	61	---	---
26	140	75	98	96	72	70	70	57	69	63	---	---
27	135	128	96	93	71	66	73	62	72	70	---	---
28	136	125	93	86	71	65	67	53	71	67	---	---
29	132	125	85	82	70	58	72	63	73	66	---	---
30	135	127	85	80	69	63	74	66	73	67	---	---
31	---	---	83	80	---	---	73	65	71	67	---	---
MONTH	146	57	148	80	110	58	87	52	104	55	92	57
YEAR	195	52										

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	19.0	16.0	17.0	14.5	9.5	6.0	---	---	7.5	6.0
2	---	---	20.5	17.0	15.5	11.5	---	---	---	---	8.5	4.5
3	---	---	22.0	19.0	12.5	9.5	8.0	6.0	---	---	7.5	6.5
4	---	---	22.5	20.0	12.5	10.0	7.0	4.5	---	---	9.5	7.0
5	---	---	23.0	20.5	9.5	4.0	7.5	5.0	---	---	10.0	6.0
6	---	---	21.0	20.0	5.5	2.5	10.5	8.0	---	---	10.5	7.0
7	---	---	20.0	19.5	9.0	3.5	12.0	10.5	---	---	11.5	8.0
8	---	---	20.0	18.5	5.0	1.5	14.5	11.0	---	---	9.5	8.0
9	---	---	19.5	17.5	4.5	1.5	14.5	8.0	7.5	5.0	9.5	7.5
10	---	---	19.5	17.5	5.0	1.5	7.5	5.0	7.0	4.5	10.5	8.5
11	---	---	17.0	13.5	7.5	3.0	6.0	3.5	---	---	13.5	9.0
12	---	---	14.0	12.0	11.0	6.0	---	---	---	---	15.0	11.5
13	---	---	11.5	10.0	12.5	8.5	---	---	7.5	7.0	14.5	11.5
14	---	---	11.0	8.5	14.0	9.0	---	---	9.5	7.0	16.0	13.0
15	---	---	11.5	8.5	13.5	12.5	---	---	9.5	5.5	18.5	13.0
16	---	---	14.0	10.0	---	---	---	---	6.0	5.0	17.5	13.0
17	---	---	16.5	13.0	---	---	---	---	9.5	6.0	14.5	11.0
18	---	---	15.0	10.5	---	---	---	---	8.5	6.0	14.5	9.0
19	---	---	11.5	9.0	---	---	---	---	8.5	7.0	16.0	8.5
20	---	---	11.0	8.0	---	---	---	---	8.5	6.5	17.0	11.0
21	---	---	13.0	9.0	---	---	---	---	10.0	5.5	17.5	11.5
22	---	---	14.5	11.0	---	---	---	---	8.0	4.0	19.5	13.5
23	---	---	14.5	14.0	---	---	---	---	8.0	3.0	20.0	11.0
24	---	---	16.0	13.5	---	---	---	---	10.0	5.0	20.5	12.0
25	---	---	14.5	13.5	---	---	---	---	12.0	6.0	14.0	12.0
26	20.5	19.0	13.0	7.0	---	---	---	---	11.5	7.5	16.0	13.0
27	20.5	19.0	8.0	5.5	---	---	---	---	10.5	5.5	16.5	14.0
28	22.0	19.5	12.5	7.0	---	---	---	---	7.5	6.0	19.0	13.0
29	19.5	17.0	13.5	10.5	7.5	4.0	---	---	---	---	20.5	13.0
30	18.0	16.5	14.0	12.0	10.5	8.0	---	---	---	---	19.0	14.0
31	17.5	15.5	---	---	11.5	9.0	---	---	---	---	19.0	12.0
MONTH	22.0	15.5	23.0	5.5	17.0	1.5	14.5	3.5	12.0	3.0	20.5	4.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	22.5	14.0	17.5	14.5	28.0	20.0	31.5	23.5	34.5	26.5	33.0	23.5
2	22.0	15.5	16.0	12.5	28.5	18.5	31.5	22.0	29.0	24.5	32.0	24.5
3	15.0	13.0	20.0	12.5	30.5	22.0	31.5	24.0	32.5	24.0	30.0	23.0
4	21.0	13.0	17.5	16.0	24.5	22.0	31.0	24.0	36.5	23.5	32.5	23.0
5	21.0	15.5	18.0	16.0	26.0	18.5	27.0	21.0	33.5	25.0	31.5	20.5
6	20.0	14.5	20.0	15.5	26.5	20.5	29.5	17.5	38.0	25.5	29.0	19.0
7	24.0	15.5	17.0	15.0	26.0	20.5	31.5	18.5	37.0	24.5	29.0	16.0
8	23.0	14.0	16.0	15.0	29.0	23.0	30.0	20.5	36.0	23.0	31.0	23.0
9	22.0	14.5	18.5	16.0	25.5	22.5	36.0	22.5	37.5	24.0	31.0	23.5
10	23.5	13.5	20.0	16.5	24.5	21.0	36.0	25.0	32.5	25.5	---	---
11	24.5	17.0	21.0	15.0	24.0	18.5	28.0	24.0	31.5	24.5	---	---
12	24.5	17.5	21.0	15.5	25.0	19.0	31.0	21.5	31.5	25.0	---	---
13	18.5	17.0	21.0	17.5	24.0	20.0	32.0	19.0	33.0	26.0	---	---
14	24.0	14.5	20.5	17.5	24.5	19.5	28.5	20.5	31.5	25.5	---	---
15	23.5	14.0	19.5	16.5	24.0	17.0	32.5	22.0	32.5	26.5	---	---
16	22.5	12.5	20.5	16.0	24.5	17.5	27.0	24.5	33.0	27.5	---	---
17	15.0	12.5	21.0	16.0	25.5	19.0	33.5	23.0	34.0	28.0	---	---
18	14.5	13.0	21.5	17.0	27.0	21.0	30.5	23.0	32.5	24.5	---	---
19	19.0	14.5	24.0	18.0	28.5	22.0	33.5	23.0	33.0	25.0	---	---
20	23.0	15.5	24.5	17.5	28.5	22.0	33.0	25.0	34.5	26.5	---	---
21	19.5	14.5	25.5	19.0	30.0	21.0	37.5	26.0	31.5	25.0	---	---
22	20.5	12.5	23.5	19.5	30.5	23.5	39.0	26.5	32.5	23.5	---	---
23	22.5	12.0	23.0	19.0	30.0	23.0	38.5	26.5	32.5	22.5	---	---
24	25.0	15.5	24.5	18.5	29.0	23.5	38.5	24.5	32.5	20.0	---	---
25	22.0	15.5	27.0	20.5	30.0	21.5	37.5	25.0	33.0	22.5	---	---
26	16.0	14.5	27.0	20.5	29.5	21.0	37.0	25.0	32.5	25.0	---	---
27	15.0	13.5	22.5	20.0	31.5	24.0	37.5	25.0	29.5	24.5	---	---
28	18.5	12.5	22.5	19.0	33.5	24.5	32.5	25.5	32.0	23.5	---	---
29	20.0	13.0	26.5	19.5	33.0	24.0	36.5	25.5	35.0	25.0	---	---
30	19.5	16.0	26.0	20.0	32.5	23.0	38.0	24.5	35.0	26.5	---	---
31	---	---	26.5	21.5	---	---	38.0	27.0	34.0	25.0	---	---
MONTH	25.0	12.0	27.0	12.5	33.5	17.0	39.0	17.5	38.0	20.0	33.0	16.0
YEAR	39.0	1.5										

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
MAR				
22...	1310	.35	22	.02
28...	1030	1.2	25	.08
MAY				
03...	1140	.64	32	.06
16...	0935	1.6	28	.12
JUN				
14...	1137	.56	19	.03
20...	1020	.16	13	.01
JUL				
25...	1325	.04	10	.00
SEP				
06...	1000	.01	6	.00

PAMLICO RIVER BASIN

02084571 VAN SWAMP NEAR HOKE, N. C.

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

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Water-discharge record good except those for period May 1-24, 1977, which are fair.

EXTREMES FOR THE CURRENT PERIOD.--May to September 1977; Peak discharge above base of 100 ft³/s (2.83 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m)	Gage height (ft)	Gage height (m)
May 27	0100	*195	*5.52	3.54	1.079
Sept. 9	2130	124	3.51	3.07	0.936

Minimum discharge, 0.04 ft³/s (0.001 m³/s) July 31, Aug. 1, 9, 10, 11, 12, 13, 14.

WATER YEAR 1978

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. 30	0300	117	3.31	3.00	0.914	Mar. 11	1400	103	2.92	2.82	0.860
Nov. 6	2330	*409	11.6	*4.45	1.356	Apr. 28	0100	135	3.82	3.17	0.966
Jan. 15	0030	100	2.83	2.77	0.844	May 6	0630	243	6.88	3.76	1.146
Jan. 20	1300	225	6.37	3.68	1.122	May 9	0830	287	8.13	3.94	1.201
Jan. 26	0900	199	5.64	3.56	1.085						

Minimum discharge, 0.01 ft³/s (0.0003 m³/s) Aug. 27, 28, 29, 30, Sept. 24-30; minimum gage height, 0.13 ft (0.040 m) Sept. 21-30.

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								3.9	131	1.2	.04	11
2								3.4	109	4.0	.07	8.6
3								3.0	94	3.6	.14	6.9
4								3.0	75	2.6	.28	5.4
5								2.8	56	1.9	.22	4.3
6								2.6	42	1.4	.22	3.7
7								2.4	35	1.0	.07	3.2
8								4.3	28	.78	.07	31
9								4.7	23	.58	.07	116
10								4.0	19	.50	.07	108
11								3.4	15	.28	.04	84
12								2.9	12	.34	.04	61
13								2.5	10	.28	.07	45
14								2.2	8.9	.22	.14	34
15								1.9	6.2	.07	.34	26
16								1.5	5.4	.07	1.2	20
17								1.3	4.5	.04	3.3	16
18								1.2	3.7	.04	27	13
19								1.0	3.0	.03	50	11
20								.86	2.4	.02	39	8.8
21								.72	1.9	.02	28	7.2
22								.57	1.5	.03	20	6.2
23								.57	1.9	.03	21	5.2
24								20	2.6	.03	46	4.5
25								147	2.5	.03	55	3.9
26								189	3.7	.22	48	3.4
27								191	3.2	.28	39	2.9
28								182	2.5	.22	30	2.5
29								173	1.8	.14	24	2.1
30								174	1.3	.07	18	1.8
31								153	---	.07	14	---
TOTAL								1283.72	706.0	20.09	465.38	656.6
MEAN								41.4	23.5	.65	15.0	21.9
MAX								191	131	4.0	55	116
MIN								.57	1.3	.02	.04	1.8
CFSM								1.80	1.02	.03	.65	.95
IN.								2.08	1.14	.03	.75	1.06

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

IONAL DATA

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	104	32	97	131	40	77	105	8.6	.58	.34	.03
2	1.3	97	30	94	117	43	69	93	7.2	.42	.50	.14
3	1.5	87	28	86	104	49	60	77	6.6	.50	.66	.34
4	1.5	76	27	78	93	74	53	79	7.9	.66	.66	.42
5	1.3	68	26	70	80	77	47	223	8.0	.50	.50	.28
6	1.2	153	26	64	70	73	41	233	7.2	.42	.34	.14
7	.90	385	25	71	60	67	37	227	6.6	.34	.28	.04
8	.78	339	23	73	53	64	32	250	6.4	.28	.22	.04
9	1.0	294	22	84	47	65	28	273	11	.28	.14	.03
10	2.1	258	21	87	43	89	24	264	21	.28	.07	.03
11	2.0	222	19	80	39	103	22	242	21	1.1	.07	.03
12	1.9	197	18	72	36	101	20	218	17	2.0	.07	.03
13	6.7	171	17	73	34	98	19	198	14	1.4	.04	.03
14	18	150	19	98	32	92	21	195	12	1.0	.04	.03
15	32	133	49	99	31	85	21	185	8.9	.78	.03	.03
16	30	115	59	95	31	77	19	164	7.1	.90	.03	.02
17	26	101	57	93	38	68	18	142	5.6	3.2	.03	.02
18	21	87	55	103	43	60	25	120	4.3	3.1	.03	.02
19	18	73	65	109	49	53	60	101	3.4	2.3	.03	.02
20	15	63	70	207	52	47	68	83	2.6	1.7	.03	.02
21	13	55	77	208	51	42	66	66	2.2	1.7	.03	.02
22	11	49	95	197	49	37	61	53	2.2	1.3	.04	.02
23	9.8	47	94	187	47	33	54	44	1.9	.90	.03	.02
24	8.6	48	88	177	45	29	48	36	1.4	.66	.02	.01
25	7.6	46	81	177	44	26	43	29	1.2	.66	.02	.01
26	15	45	75	199	43	28	78	23	.90	.66	.02	.01
27	37	43	68	194	41	76	132	19	.78	.58	.01	.01
28	39	40	61	185	39	96	139	16	.78	.42	.01	.01
29	98	37	54	173	---	95	129	14	.66	.42	.01	.01
30	115	34	51	159	---	91	116	12	.78	.34	.01	.01
31	111	---	88	145	---	84	---	10	---	.22	.02	---
TOTAL	648.68	3617	1520	3834	1542	2062	1627	3794	199.20	29.60	4.33	1.87
MEAN	20.9	121	49.0	124	55.1	66.5	54.2	122	6.64	.95	.14	.062
MAX	115	385	95	208	131	103	139	273	21	3.2	.66	.42
MIN	.78	34	17	64	31	26	18	10	.66	.22	.01	.01
CFSM	.91	5.26	2.13	5.39	2.40	2.89	2.36	5.30	.29	.04	.006	.003
IN.	1.05	5.85	2.46	6.20	2.49	3.33	2.63	6.14	.32	.05	.01	.00

WTR YR 1978 TOTAL 18879.68 MEAN 51.7 MAX 385 MIN .01 CFSM 2.25 IN 30.53

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1977 to September 1978.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1977 to September 1978.
WATER TEMPERATURES: May 1977 to September 1978.

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

REMARKS.--Interruptions in the daily record were due to malfunctions of the monitor.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 169 micromhos Nov. 8, 1977; minimum, 30 micromhos Aug. 17, 1977.
WATER TEMPERATURES: Maximum, 31.0°C July 21, Aug. 9, 11, 12, 1977; minimum, 5.5°C Feb. 7, 8, 11, 12, 1978.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 169 micromhos Nov. 8; minimum, 46 micromhos July 11.
WATER TEMPERATURES: Maximum, 28.5°C July 23, 24; minimum, 5.5°C Feb. 7, 8, 11, 12.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
MAR 21...	1215	42	99	2.7	10.0	80	9.1	--	K10	<2	K32
MAY 15...	1215	180	85	2.5	16.0	320	5.1	85	70	K4	K17
JUN 19...	1400	3.6	69	3.5	22.0	300	6.9	85	>80	K6	60
JUL 24...	1415	.69	52	4.5	27.5	100	--	87	K4	K3	K150

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	ACIDITY (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)
MAR 21...	6	6	.5	25	1.0	.8	3.4	53	.6	.6	0
MAY 15...	6	6	.7	35	1.1	.7	2.4	44	.4	.8	0
JUN 19...	7	7	.4	20	1.8	.7	3.5	48	.6	.7	0
JUL 24...	10	10	.4	20	2.7	.7	4.4	46	.6	1.2	0

DATE	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)
MAR 21...	0	0	.0	15	5.2	.0	6.9	54	34	.07	6.12
MAY 15...	0	0	.0	13	4.3	.0	5.5	87	29	.12	42.3
JUN 19...	0	0	.0	11	4.8	.0	10	80	35	.11	.78
JUL 24...	0	0	.0	9.9	5.9	.0	12	84	39	.11	.16

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

PAMLICO RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)
MAR 21...	.10	.00	.10	.09	.57	.08	.49	.67	3.0	.00	.00
MAY 15...	.07	.01	.08	.08	.95	.12	.83	1.0	4.6	.01	.03
JUN 19...	.00	.01	.01	.01	1.1	.28	.82	1.1	4.9	.02	.06
JUL 24...	.05	.01	.06	.06	1.3	.20	1.1	1.4	6.0	.03	.09

DATE	PHOSPHORUS, DISSOLVED (MG/L AS P)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
MAR 21...	.00	4	3	1	450	340	0	0	8	27	.2
MAY 15...	.00	0	0	1	800	660	2	1	1	27	.5
JUN 19...	.00	1	0	3	2000	1800	16	--	--	32	.3
JUL 24...	.02	3	0	11	3900	1900	4	0	4	27	.4

DATE	PCB, TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)
MAY 15...	.0	.00	.00	.0	.00	.00	.00	.00	.00
JUL 24...	.0	.00	.00	.0	.00	.00	.00	.00	.00

DATE	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)
MAY 15...	.00	.00	.00	.00	.00	.00	.00	.00	.00
JUL 24...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL TRITHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
MAY 15...	.00	.00	.00	0	.00	.00	.00	.00
JUL 24...	.00	.00	.00	0	.00	.08	.00	.00

PAMLICO RIVER BASIN

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), MAY TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	120	117	57	54	60	56	110	108
2	---	---	118	115	55	48	59	56	108	106
3	---	---	115	108	52	51	60	56	106	104
4	66	63	109	107	52	51	59	51	104	101
5	67	66	108	105	51	50	52	49	101	97
6	66	64	106	103	52	50	56	49	98	94
7	65	61	104	100	52	51	59	53	94	90
8	64	58	101	99	53	51	62	55	91	39
9	64	61	100	99	54	51	67	56	112	83
10	62	59	99	98	54	52	68	58	117	112
11	61	59	98	97	54	52	69	59	122	118
12	60	58	97	95	55	53	69	60	121	119
13	59	58	95	94	54	52	69	62	120	117
14	59	58	93	91	55	53	71	58	117	114
15	59	58	91	88	56	54	69	54	116	113
16	---	---	89	86	57	55	63	35	114	112
17	---	---	86	84	59	56	42	30	112	101
18	---	---	84	82	60	57	76	38	111	109
19	---	---	82	80	62	58	101	78	109	101
20	---	---	80	78	63	60	107	99	108	106
21	---	---	78	75	65	61	108	106	106	104
22	---	---	75	72	66	62	108	107	104	89
23	---	---	72	66	65	63	108	108	102	100
24	---	---	66	63	67	63	125	109	100	98
25	121	117	65	62	71	67	120	118	98	96
26	118	111	63	57	79	63	120	118	96	94
27	116	107	60	59	67	54	119	115	94	92
28	113	107	60	59	54	53	117	114	93	89
29	124	112	59	58	56	53	116	113	90	86
30	126	121	58	57	57	55	113	111	86	83
31	122	117	---	---	58	56	112	110	---	---
MONTH	126	58	120	57	79	48	125	30	122	39
YEAR	126	30								

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	83	81	132	129	---	---	124	122	107	106		
2	81	79	131	128	---	---	126	124	108	106		
3	79	74	130	127	---	---	128	126	108	106		
4	74	68	129	126	---	---	127	125	108	105		
5	68	65	126	115	---	---	126	124	108	96		
6	65	64	122	104	---	---	125	119	105	102		
7	65	64	168	112	---	---	120	117	104	101		
8	64	63	169	149	---	---	119	117	102	99		
9	63	60	151	134	---	---	120	112	100	98		
10	62	57	136	131	---	---	122	119	99	97		
11	59	57	134	131	---	---	123	122	99	95		
12	58	57	135	133	---	---	123	120	98	95		
13	64	56	134	131	---	---	121	112	97	93		
14	74	64	132	129	---	---	114	112	95	92		
15	91	74	133	131	---	---	117	113	93	90		
16	99	92	133	129	---	---	118	116	93	82		
17	101	99	130	127	---	---	117	109	90	85		
18	103	101	129	122	---	---	115	110	88	87		
19	104	103	127	123	---	---	116	108	88	87		
20	104	103	---	---	---	---	136	112	---	---		
21	104	102	---	---	106	92	132	119	---	---		
22	103	101	---	---	130	106	119	114	---	---		
23	102	100	---	---	132	129	115	113	---	---		
24	100	99	---	---	132	130	115	112	---	---		
25	99	98	---	---	130	127	114	107	---	---		
26	98	81	---	---	131	128	114	108	---	---		
27	98	88	---	---	131	129	113	109	---	---		
28	104	98	---	---	131	129	109	106	---	---		
29	112	96	---	---	130	127	108	105	---	---		
30	125	105	---	---	128	116	108	105	---	---		
31	131	126	---	---	123	114	108	104	---	---		
MONTH	131	56	169	104	132	92	136	104	108	82		

PAMLICO RIVER BASIN
02084571 VAN SWAMP NEAR HOKE, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	102	79	81	79	57	55	54	52	65	59
2	---	---	97	94	80	78	56	55	56	51	63	58
3	---	---	97	92	78	73	56	54	51	47	66	62
4	---	---	96	91	76	72	54	51	50	47	64	55
5	---	---	95	93	77	75	53	53	50	48	57	55
6	---	---	97	93	77	75	54	53	51	48	55	52
7	---	---	---	---	76	74	56	54	52	50	55	53
8	---	---	---	---	74	71	57	55	56	51	55	53
9	---	---	93	88	70	63	59	56	57	53	58	55
10	---	---	90	85	70	63	59	56	58	54	57	55
11	---	---	85	84	73	70	58	46	57	54	59	57
12	---	---	---	---	75	73	51	48	56	54	60	57
13	---	---	84	84	75	73	52	51	58	56	60	59
14	---	---	84	81	76	73	54	51	59	55	60	59
15	---	---	84	81	77	73	53	51	60	56	62	60
16	---	---	85	82	76	73	52	49	61	58	64	62
17	90	87	87	84	74	72	49	47	62	58	65	63
18	90	76	90	83	73	71	48	47	61	58	67	65
19	86	82	90	87	71	70	48	47	62	59	70	67
20	88	84	91	87	71	69	49	48	63	58	69	68
21	---	---	90	86	70	68	49	47	61	59	69	68
22	---	---	88	86	68	65	50	48	63	60	70	68
23	---	---	87	84	66	62	51	48	64	61	71	69
24	---	---	85	83	63	61	51	49	65	62	70	69
25	---	---	84	83	61	60	50	49	66	62	73	70
26	---	---	84	83	60	59	50	48	66	64	74	70
27	96	91	84	83	59	57	50	49	66	62	76	73
28	95	91	83	81	59	56	51	49	67	63	76	70
29	93	90	82	80	58	55	53	50	69	64	76	73
30	93	89	81	80	58	56	54	51	70	66	77	72
31	---	---	81	80	---	---	56	53	70	65	---	---
MONTH	96	76	102	79	81	55	59	46	70	47	77	52
YEAR	169	46										

TEMPERATURE (DEG. C) OF WATER, MAY TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	19.5	18.5	28.0	26.0	28.0	24.0	24.5	23.0
2	---	---	19.5	18.5	26.0	25.0	26.0	23.5	24.5	22.5
3	---	---	19.5	19.0	26.5	24.5	26.5	24.0	25.0	23.0
4	21.0	20.0	19.5	18.5	25.5	24.0	26.5	23.5	25.0	23.5
5	22.5	20.0	20.5	19.0	26.0	24.0	27.5	24.0	24.5	23.5
6	23.0	20.5	20.5	20.0	27.0	25.5	28.5	25.0	24.5	23.0
7	23.5	21.5	20.5	19.0	28.5	26.5	30.0	25.5	25.0	23.5
8	22.5	20.5	19.0	17.5	29.0	27.0	30.0	26.0	25.0	23.0
9	21.0	17.0	19.0	18.0	30.0	27.5	31.0	26.0	23.0	22.5
10	17.0	15.0	19.0	17.5	28.5	27.0	30.5	26.5	23.5	22.5
11	16.5	14.0	19.5	17.5	28.0	26.5	31.0	26.5	23.0	22.5
12	17.0	14.5	19.5	19.0	28.0	25.5	31.0	26.5	22.5	20.5
13	18.5	15.5	20.5	19.0	28.5	26.0	29.0	26.0	22.0	20.0
14	20.0	17.0	20.5	19.5	28.5	25.5	28.0	25.5	22.5	21.0
15	20.0	19.0	20.5	20.0	27.5	25.5	28.0	25.0	22.5	22.0
16	---	---	21.0	19.5	27.0	24.5	26.0	24.5	23.0	21.5
17	---	---	22.0	19.5	27.5	24.5	27.5	25.5	23.5	22.5
18	---	---	23.0	20.5	29.0	25.5	27.5	23.0	24.5	22.5
19	---	---	24.5	22.0	30.0	26.5	23.0	22.0	25.0	23.0
20	---	---	24.5	23.0	30.5	26.5	23.0	22.0	25.0	23.5
21	---	---	25.0	23.0	31.0	27.0	23.0	22.0	24.5	24.0
22	---	---	24.0	22.5	28.5	26.0	24.0	22.5	24.0	22.5
23	---	---	23.0	20.5	26.5	23.5	24.5	23.0	22.5	21.0
24	---	---	21.5	20.5	25.5	21.5	22.5	22.0	22.5	20.5
25	18.0	18.0	22.5	21.0	27.5	23.0	22.5	22.0	23.0	22.0
26	19.0	17.5	25.0	22.5	25.0	23.0	22.5	21.0	23.5	22.5
27	19.0	18.0	26.0	24.0	24.0	22.5	23.0	21.5	24.0	22.5
28	19.5	18.0	26.5	24.5	23.5	21.5	23.0	22.0	24.0	22.5
29	19.0	18.5	27.5	25.5	25.0	22.0	23.5	22.5	22.5	20.0
30	19.0	18.0	27.0	26.0	26.5	23.0	23.5	22.5	20.0	19.5
31	19.0	18.5	---	---	25.5	23.5	24.5	22.5	---	---
MONTH	23.5	14.0	27.5	17.5	31.0	21.5	31.0	21.0	25.0	19.5
YEAR	31.0	14.0								

PAMLICO RIVER BASIN

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.0	19.0	17.5	16.5	---	---	11.0	11.0	7.0	6.0		
2	22.5	20.5	18.0	17.0	---	---	11.0	10.0	6.5	6.0		
3	22.0	18.5	19.0	18.0	---	---	10.0	9.0	7.0	6.0		
4	18.5	16.5	19.0	18.5	---	---	9.5	8.5	7.0	6.0		
5	16.0	15.5	19.5	19.0	---	---	9.5	8.5	7.5	6.0		
6	16.5	15.5	19.5	19.0	---	---	10.5	9.5	7.0	6.5		
7	17.5	16.5	19.5	19.0	---	---	11.0	10.5	6.5	5.5		
8	17.5	16.5	19.5	19.0	---	---	12.5	11.0	7.0	5.5		
9	19.0	17.0	19.0	18.5	---	---	12.5	10.5	7.0	6.5		
10	19.0	16.5	19.0	18.5	---	---	10.0	8.5	7.0	6.0		
11	16.5	15.5	19.0	17.0	---	---	8.0	7.5	7.0	5.5		
12	17.5	16.5	17.0	15.5	---	---	8.5	7.0	7.0	5.5		
13	17.0	15.5	15.5	14.5	---	---	9.5	8.0	7.5	6.0		
14	16.0	15.5	14.5	13.5	---	---	9.5	9.0	8.0	7.5		
15	16.0	14.5	14.5	13.5	---	---	9.5	8.5	8.0	6.5		
16	16.5	15.5	15.0	14.0	---	---	8.5	7.5	7.5	6.5		
17	15.5	14.5	16.0	15.0	---	---	9.5	8.0	8.0	7.0		
18	15.0	13.0	15.5	14.5	---	---	10.0	9.5	8.0	7.0		
19	16.0	14.5	14.5	13.5	---	---	9.5	9.0	8.0	7.0		
20	15.5	14.5	---	---	---	---	10.0	9.5	---	---		
21	15.0	13.5	---	---	12.5	12.0	9.5	9.0	---	---		
22	15.5	13.5	---	---	12.5	12.0	9.0	8.0	---	---		
23	15.5	14.0	---	---	12.0	11.0	8.5	7.5	---	---		
24	16.0	15.0	---	---	12.5	11.5	8.5	7.5	---	---		
25	16.5	15.5	---	---	13.0	12.5	10.0	8.0	---	---		
26	19.0	16.5	---	---	12.5	10.5	10.5	9.5	---	---		
27	19.0	18.5	---	---	10.5	9.5	9.0	8.5	---	---		
28	19.0	18.5	---	---	9.5	8.5	8.5	7.5	---	---		
29	19.0	17.5	---	---	9.0	8.0	7.5	7.0	---	---		
30	17.5	17.0	---	---	10.0	9.0	7.0	6.5	---	---		
31	17.5	16.5	---	---	11.0	10.0	7.0	6.0	---	---		
MONTH	22.5	13.0	19.5	13.5	13.0	8.0	12.5	6.0	8.0	5.5		

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	14.0	13.0	22.0	19.5	25.0	23.5	27.0	25.0	25.0	24.0
2	---	---	13.0	12.0	21.5	20.0	24.5	22.5	25.5	24.5	25.0	24.0
3	---	---	13.5	11.5	22.5	20.5	24.5	23.0	25.5	24.0	24.0	23.0
4	---	---	14.0	12.0	22.0	20.0	24.5	23.0	26.0	24.0	24.0	22.5
5	---	---	14.0	13.0	21.0	19.0	23.0	22.0	25.5	24.5	23.5	22.5
6	---	---	13.5	13.0	21.0	20.0	22.5	20.0	26.5	24.5	22.5	21.0
7	---	---	---	---	21.0	20.0	22.5	20.0	26.5	25.0	23.0	20.5
8	---	---	---	---	23.0	21.0	23.0	20.5	26.5	24.5	24.5	22.0
9	---	---	15.0	14.0	23.5	22.0	24.5	22.0	26.5	24.5	24.5	22.5
10	---	---	14.5	14.0	23.0	21.5	25.5	23.0	26.0	24.5	23.5	22.5
11	---	---	14.0	14.0	21.5	19.5	24.5	23.0	25.0	24.5	23.0	22.0
12	---	---	---	---	22.0	19.0	23.0	21.5	25.5	24.0	22.5	21.5
13	---	---	16.5	16.0	21.5	20.0	22.0	20.5	26.0	24.5	22.5	22.0
14	---	---	16.5	16.0	21.0	19.5	22.0	20.5	26.5	24.0	22.0	20.5
15	---	---	16.5	15.5	20.5	18.5	23.0	20.5	27.0	24.5	21.0	19.5
16	---	---	16.0	15.0	20.5	18.5	22.5	22.0	27.5	25.0	22.5	20.5
17	13.0	12.5	16.0	15.0	21.5	19.5	25.0	22.5	28.0	25.5	22.5	20.5
18	13.0	12.5	16.0	15.0	22.5	20.5	25.0	24.5	27.0	24.5	23.5	22.0
19	14.0	13.0	16.5	15.5	23.0	21.0	25.0	24.5	26.5	24.5	24.0	20.0
20	14.5	13.5	17.0	15.5	23.0	22.0	26.5	25.0	27.0	25.0	23.0	22.0
21	---	---	18.0	16.0	23.0	22.0	27.0	25.0	25.5	24.0	21.5	20.0
22	---	---	17.5	16.5	24.0	23.0	27.5	25.5	25.0	23.0	21.5	20.5
23	---	---	18.0	16.5	24.0	23.0	28.5	26.0	24.0	22.5	22.0	21.0
24	---	---	19.0	17.0	24.0	23.0	28.5	26.5	24.0	22.0	21.0	20.5
25	---	---	19.5	18.5	23.5	22.5	27.0	25.5	24.0	22.0	20.5	19.5
26	---	---	20.0	19.0	23.5	22.0	26.5	24.5	24.5	23.5	20.0	19.0
27	13.5	12.5	19.5	18.5	25.0	22.5	27.0	24.5	24.5	23.5	18.5	17.5
28	14.0	12.0	18.5	17.5	26.0	23.5	27.0	25.0	25.0	23.5	19.0	17.5
29	15.5	13.5	19.5	17.5	26.5	24.5	27.0	24.5	25.5	24.5	19.0	17.5
30	15.0	14.0	20.5	19.0	25.5	23.5	27.5	25.0	26.0	25.0	17.5	16.5
31	---	---	21.0	19.5	---	---	27.5	25.5	25.5	25.0	---	---
MONTH	15.5	12.0	21.0	11.5	26.5	18.5	28.5	20.0	28.0	22.0	25.0	13.5
YEAR	28.5	5.5										

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
13...	1530	8.7	39	.92
NOV				
17...	1515	98	2	.53
DEC				
21...	1010	74	12	2.4
28...	1716	59	3	.48
FEB				
08...	1720	52	3	.42
MAR				
21...	1215	42	4	.45
APR				
27...	1130	127	32	11
MAY				
15...	1410	178	39	19
18...	0930	119	22	7.1
20...	1030	85	15	3.4
26...	0830	24	9	.58
28...	1740	15	14	.57
JUN				
02...	0935	7.3	18	.35
04...	1050	8.0	17	.37
06...	0900	7.3	17	.34
11...	0830	21	22	1.2
17...	1630	5.2	17	.24
19...	1200	3.4	24	.22
19...	1400	3.6	18	.17
21...	1330	2.4	31	.20
23...	1700	2.0	25	.13
26...	1230	1.2	24	.08
29...	1420	.93	34	.09
JUL				
07...	1130	.22	30	.02
11...	1530	2.2	52	.31
14...	1100	1.0	58	.16
16...	0820	.69	62	.12
18...	1025	3.2	31	.27
22...	1400	1.4	18	.07
24...	1415	.69	30	.06
25...	1100	2.0	23	.12
30...	1030	.22	15	.01
AUG				
04...	1300	.57	25	.04
07...	1800	.13	31	.01
10...	1430	.05	20	.00
12...	1030	.05	16	.00
17...	1630	.02	14	.00
19...	1430	.02	19	.00
24...	1345	.02	10	.00
26...	1730	.02	10	.00
31...	1615	.02	11	.00
SEP				
03...	1550	.57	7	.01
06...	1645	.13	30	.01
09...	1600	.02	15	.00
11...	1810	.02	3	.00
13...	1750	.02	2	.00
18...	1535	.02	8	.00
20...	1720	.02	8	.00
23...	1115	.01	4	.00
26...	1630	.01	9	.00

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.

AVERAGE DISCHARGE.--15 years, 126 ft³/s (3.568 m³/s), 12.14 in/yr (308 mm/yr).

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

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

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 26	0500	3630	103	11.65	3.551	May 5	0230	4290	121	12.95	3.947
Apr. 26	1530	*9620	272	*19.65	5.989	May 9	0930	2370	67.1	8.63	2.630

Minimum daily discharge, 1.7 ft³/s (0.048 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	23	65	65	148	81	112	219	59	34	24	124
2	1.8	22	89	60	141	84	101	172	55	29	44	169
3	2.0	21	61	52	141	159	90	140	52	28	36	61
4	2.1	31	48	46	128	251	85	774	51	51	77	98
5	5.8	71	52	44	111	229	83	2560	49	53	164	46
6	6.7	248	219	51	103	187	81	632	47	38	356	32
7	4.3	316	147	87	97	162	79	338	47	32	339	27
8	3.4	129	82	121	90	167	76	1340	59	28	456	24
9	3.6	70	64	1170	84	232	72	1800	77	26	209	21
10	3.0	44	58	398	85	1750	69	677	70	24	396	18
11	4.2	34	53	174	82	1150	67	351	55	25	258	18
12	8.7	28	48	111	79	487	66	245	47	28	101	17
13	13	24	45	408	79	311	65	323	43	30	65	16
14	31	22	79	918	90	251	65	1310	42	26	51	14
15	40	20	283	555	90	243	61	474	40	43	47	14
16	34	18	177	268	84	193	58	322	37	471	39	15
17	21	18	107	322	97	167	55	244	35	333	34	14
18	15	18	132	750	94	139	58	192	33	95	29	14
19	11	17	127	551	91	124	66	153	28	50	27	14
20	7.8	16	96	1480	88	118	70	131	26	37	24	14
21	6.0	16	172	712	83	113	63	117	31	30	23	13
22	4.7	16	144	364	93	106	58	102	59	26	22	11
23	4.5	16	92	253	94	99	54	94	48	23	19	14
24	4.8	20	74	214	89	96	51	86	37	22	18	14
25	4.7	24	96	1630	89	126	99	86	41	24	17	18
26	383	28	111	2750	85	289	6210	79	102	172	16	18
27	227	29	79	695	78	395	2860	73	183	90	16	16
28	64	30	65	362	74	238	831	71	69	60	20	14
29	38	44	56	254	---	172	500	69	48	47	24	13
30	30	62	52	197	---	141	304	66	40	39	18	10
31	24	---	64	167	---	120	---	63	---	28	83	---
TOTAL	1010.8	1475	3037	15229	2687	8380	12509	13303	1610	2042	3052	911
MEAN	32.6	49.2	98.0	491	96.0	270	417	429	53.7	65.9	98.5	30.4
MAX	383	316	283	2750	148	1750	6210	2560	183	471	456	169
MIN	1.7	16	45	44	74	81	51	63	26	22	16	10
CFSM	.23	.35	.70	3.48	.68	1.92	2.96	3.04	.38	.47	.70	.22
IN.	.27	.39	.80	4.02	.71	2.21	3.30	3.51	.42	.54	.81	.24

CAL YR 1977 TOTAL 23624.22 MEAN 64.7 MAX 818 MIN .08 CFSM .46 IN 6.23
WTR YR 1978 TOTAL 65245.80 MEAN 179 MAX 6210 MIN 1.7 CFSM 1.27 IN 17.21

02085220 LITTLE RIVER NEAR ORANGE FACTORY, N. C.

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

DRAINAGE AREA.--81.6 mi² (211 km²).

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

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

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 126 of this report.

AVERAGE DISCHARGE.--17 years, 71.8 ft³/s (2.033 m³/s), 11.95 in/yr (304 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.--Peak discharges above base of 1,600 ft³/s (45.3 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 26	0300	2470	70.0	6.31	1.923	May 5	0030	3520	99.7	7.35	2.240
Mar. 10	1000	1700	48.1	4.93	1.503	May 9	0700	1740	49.3	4.98	1.518
Apr. 26	1700	*5890	167	*9.80	2.987						

Minimum discharge, 0.53 ft³/s (0.015 m³/s) Oct. 1, gage height, 0.52 ft (0.158 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.62	6.6	67	39	80	41	66	109	33	13	64	257
2	1.0	5.1	66	34	78	44	63	85	31	13	28	96
3	.98	5.2	41	29	73	64	59	68	30	25	18	40
4	.90	5.8	32	26	65	131	57	828	29	26	150	32
5	.78	42	63	26	61	132	55	1820	28	18	76	17
6	.71	222	269	27	61	100	53	221	27	15	224	13
7	.69	170	84	68	60	86	51	118	29	13	205	12
8	.64	84	47	74	58	94	49	1040	29	12	197	11
9	.86	46	36	880	52	173	47	1140	35	11	128	10
10	.91	39	31	223	53	1270	46	263	33	11	276	10
11	.88	32	27	93	50	717	43	121	26	13	132	10
12	.92	23	28	68	47	268	41	81	23	12	51	9.8
13	1.2	18	23	279	48	174	40	246	21	12	30	9.8
14	10	17	41	690	55	141	38	717	19	12	23	9.5
15	34	16	276	371	54	155	36	178	18	27	22	9.9
16	11	16	99	153	51	116	35	116	18	305	22	9.3
17	5.7	15	58	252	55	95	34	81	18	160	17	9.4
18	3.8	14	90	490	54	76	38	61	18	36	16	8.7
19	2.9	12	86	348	51	60	44	50	17	20	15	8.4
20	2.6	12	57	978	48	55	48	46	16	15	15	8.1
21	2.2	12	120	426	45	53	43	42	16	13	14	8.1
22	1.8	12	89	210	47	53	39	40	19	12	13	8.2
23	1.7	24	53	133	47	52	35	40	24	11	13	14
24	1.4	24	42	113	47	51	32	41	19	11	12	12
25	1.3	22	61	1170	45	67	30	40	21	41	12	12
26	156	27	70	1720	42	214	3980	39	61	178	12	11
27	81	27	44	370	38	229	1870	38	73	40	13	9.8
28	23	24	34	187	37	128	426	39	24	25	13	8.8
29	13	59	33	138	---	96	213	37	18	16	12	8.8
30	10	46	29	108	---	79	137	37	15	14	9.7	6.1
31	9.0	---	36	91	---	68	---	36	---	12	23	---
TOTAL	381.49	1077.7	2132	9814	1502	5082	7748	7818	788	1142	1855.7	689.7
MEAN	12.3	35.9	68.8	317	53.6	164	258	252	26.3	36.8	59.9	23.0
MAX	156	222	276	1720	80	1270	3980	1820	73	305	276	257
MIN	.62	5.1	23	26	37	41	30	36	15	11	9.7	6.1
CFSM	.15	.44	.84	3.89	.66	2.01	3.16	3.09	.32	.45	.73	.28
IN.	.17	.49	.97	4.47	.68	2.32	3.53	3.56	.36	.52	.85	.31

CAL YR 1977 TOTAL 11968.49 MEAN 32.8 MAX 644 MIN .01 CFSM .40 IN 5.46
WTR YR 1978 TOTAL 40030.59 MEAN 110 MAX 3980 MIN .62 CFSM 1.35 IN 18.25

NEUSE RIVER BASIN

02085220 LITTLE RIVER NEAR ORANGE FACTORY, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
MAY				
31...	1345	38	7	.72
JUN				
06...	1335	30	6	.49
JUL				
21...	1305	13	42	1.5
21...	1330	13	40	1.4

02085500 FLAT RIVER AT BAHAMA, N. C.

LOCATION.--Lat 36°10'57", long 78°52'44", Durham County, Hydrologic Unit 03020201, on right bank 0.5 mi (0.8 km) upstream from Lake Michie, 1.2 mi (1.9 km) upstream from bridge on Secondary Road 1616, 1.2 mi (1.9 km) north of Bahama, and 1.5 mi (2.4 km) upstream from Dial Creek.

DRAINAGE AREA.--150 mi² (388 km²).

PERIOD OF RECORD.--July 1925 to current year.

REVISED RECORDS.--WSP 1333: 1926, 1928(M), 1938, 1946.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 346.85 ft (105.720 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 22, 1925, nonrecording gage at same site at datum 0.58 ft (0.177 m) lower.

REMARKS.--Records good. 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 466 of this report.

AVERAGE DISCHARGE.--53 years, 143 ft³/s (4.050 m³/s), 12.95 in/yr (329 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 20,000 ft³/s (566 m³/s) July 26, 1938 (gage height, not determined), computed on basis of records for nearby stations; minimum, 0.23 ft³/s (0.007 m³/s) Sept. 26, 28, 29, Oct. 1, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s (127 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 26	0630	5040	143	7.17	2.185	May 5	0100	6420	182	7.95	2.423
Apr. 26	1900	*11500	326	*10.25	3.124	May 9	1400	4780	135	7.01	1.137

Minimum discharge, 0.49 ft³/s (0.014 m³/s) Oct, 5, 6, 8, gage height, 0.76 ft (0.232 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	8.2	72	83	143	71	110	210	67	30	18	360
2	1.9	7.6	100	73	133	77	102	170	52	20	24	131
3	1.4	6.7	60	62	130	92	92	135	47	18	28	44
4	.72	7.0	44	53	118	183	87	991	46	16	62	29
5	.53	26	61	49	109	209	87	4000	45	17	92	22
6	.54	288	491	52	109	169	82	593	45	15	187	18
7	.63	408	148	145	103	145	80	318	53	14	291	16
8	.53	147	77	144	96	149	76	2000	51	13	509	14
9	.71	71	57	1850	91	324	73	3230	81	12	374	13
10	.68	46	49	412	91	2250	71	865	117	20	313	21
11	.59	32	40	196	88	1740	69	397	62	35	339	14
12	.58	25	33	141	83	512	67	261	47	20	266	12
13	.91	21	33	347	83	326	65	490	41	17	190	10
14	5.8	18	38	1400	93	260	64	1830	38	80	131	10
15	76	16	575	713	96	284	61	498	34	300	87	9.8
16	37	14	211	294	87	212	57	314	32	1200	65	9.3
17	16	14	120	388	88	180	56	229	31	1500	49	9.3
18	8.9	13	258	1190	89	154	57	174	30	150	40	8.5
19	6.1	13	242	501	86	134	63	140	28	100	33	8.5
20	4.3	12	137	1890	82	124	67	118	26	45	29	8.1
21	3.7	12	175	877	78	115	62	103	27	42	22	7.7
22	3.2	12	172	413	79	109	57	91	44	35	19	8.1
23	2.5	18	106	272	79	102	53	83	42	31	18	14
24	1.5	25	84	233	78	99	51	79	31	25	16	10
25	1.2	28	98	2210	78	102	68	75	34	23	14	8.9
26	172	27	131	3750	74	320	6780	70	112	30	12	8.1
27	182	29	86	691	68	402	4190	63	216	34	11	7.7
28	46	29	69	360	66	227	900	61	68	32	9.8	7.3
29	24	53	59	255	---	169	406	59	55	29	8.9	6.9
30	16	60	59	197	---	139	266	57	40	24	8.1	6.5
31	11	---	69	167	---	119	---	62	---	21	8.1	---
TOTAL	628.22	1486.5	3954	19408	2598	9498	14319	17766	1642	3948	3273.9	852.7
MEAN	20.3	49.6	128	626	92.8	306	477	573	54.7	127	106	28.4
MAX	182	408	575	3750	143	2250	6780	4000	216	1500	509	360
MIN	.53	6.7	33	49	66	71	51	57	26	12	8.1	6.5
CFSM	.14	.33	.85	4.17	.62	2.04	3.18	3.82	.37	.85	.71	.19
IN.	.16	.37	.98	4.81	.64	2.36	3.55	4.41	.41	.98	.81	.21

CAL YR 1977 TOTAL 22149.42 MEAN 60.7 MAX 985 MIN .53 CFSM .41 IN 5.49
WTR YR 1978 TOTAL 79374.32 MEAN 217 MAX 6780 MIN .53 CFSM 1.45 IN 19.68

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) National Geodetic Vertical Datum of 1929. Prior to June 2, 1928, nonrecording gage at site 10 ft (3 m) upstream at same datum. Mar. 25, 1949, to Sept. 28, 1950, auxiliary nonrecording gage, and Sept. 29, 1950, to Jan. 14, 1968, auxiliary water-stage recorder at bridge on U.S. Highway 15, 4 mi (6 km) upstream. Mar. 5, 1968 to Oct. 7, 1969, auxiliary water-stage recorder and Oct. 7, 1969, to June 30, 1977, nonrecording auxiliary gage on bridge on Secondary Road 1900, 3.7 mi (6.0 km) downstream.

REMARKS.--Records good. Slight diurnal fluctuation caused by water plants above station. Flow regulated by Lake Michie (see p. 352). An average of 27.7 ft³/s (0.78 m³/s) was diverted from Flat River, an upstream tributary, for Durham municipal water supply, and an average of 2.3 ft³/s (0.065 m³/s) from Knap of Reeds Creek, an upstream tributary for Butner municipal water supply. Sewage effluent from Durham, about 11.9 ft³/s (0.34 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 11.2 ft³/s (0.32 m³/s) was diverted into the Cape Fear River basin. Suspended-sediment records for the current year are published on page 129 of this report.

AVERAGE DISCHARGE.--51 years, 516 ft³/s (14.61 m³/s), 13.32 in/yr (338 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,600 ft³/s (1,040 m³/s) Sept. 18, 1945; maximum gage height, 31.02 ft (9.455 m) Sept. 18, 1945, from floodmark; minimum discharge, 3.1 ft³/s (0.088 m³/s) Sept. 30, 1932, gage height, 0.87 ft (0.265 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s (127 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 10	1500	4940	140	17.07	5.203	Apr. 27	2000	*17000	481	*25.27	7.702
Jan. 21	1600	6130	174	18.44	5.621	May 6	1300	7540	214	19.77	6.026
Jan. 27	1000	9630	273	21.37	6.514	May 10	1200	7990	226	20.15	6.142
Mar. 12	0400	6940	197	19.23	5.861						

Minimum discharge, 8.2 ft³/s (0.23 m³/s) July 10, gage height, 1.38 ft (0.421 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	45	130	253	539	254	384	1330	139	130	83	264
2	15	40	160	240	496	251	328	765	194	113	108	542
3	14	36	180	205	535	429	322	726	192	47	201	272
4	15	40	150	187	453	895	290	722	179	33	212	256
5	17	82	130	143	396	823	273	3450	137	70	481	247
6	17	489	300	163	387	718	273	6720	164	54	703	185
7	19	1330	507	317	361	570	267	3860	164	32	902	93
8	20	627	262	374	346	547	258	3460	186	20	1200	62
9	22	307	194	2950	291	942	244	5720	354	14	836	53
10	25	190	167	4730	302	2810	204	7680	190	9.0	756	45
11	18	132	139	3000	264	5670	233	4480	127	15	987	41
12	17	99	119	1120	261	5730	234	2230	120	23	528	41
13	32	78	97	1190	256	3360	244	1040	156	15	315	39
14	149	65	117	3350	308	1530	189	2440	97	17	250	36
15	195	62	756	4250	297	927	165	3530	58	51	230	34
16	138	59	728	2880	305	831	148	1990	44	485	212	34
17	78	57	369	1300	332	673	169	919	40	1500	206	33
18	49	54	444	2620	324	552	189	692	36	1000	194	32
19	36	50	512	3060	299	488	234	582	33	400	170	34
20	29	47	535	4250	283	425	186	583	31	200	79	32
21	26	45	1050	5890	266	403	146	554	24	160	58	31
22	22	46	1060	4690	288	373	124	526	80	145	51	29
23	18	49	539	2370	290	356	108	352	151	132	45	74
24	13	58	328	1060	276	342	142	319	66	91	41	47
25	15	66	347	1800	262	354	236	259	39	40	39	33
26	373	100	412	5500	251	953	3310	280	79	176	38	32
27	974	90	366	8470	258	2470	14100	220	287	501	41	31
28	322	80	271	4710	220	1730	12500	204	278	197	36	28
29	142	90	199	2420	---	835	5830	220	177	146	41	23
30	82	100	169	1150	---	544	2720	191	145	111	83	20
31	55	---	251	708	---	453	---	194	---	112	63	---
TOTAL	2962	4613	10988	75350	9146	37238	44050	56238	3962	6039.0	9189	2723
MEAN	95.5	154	354	2431	327	1201	1468	1814	132	195	296	90.8
MAX	974	1330	1060	8470	539	5730	14100	7680	354	1500	1200	542
MIN	13	36	97	143	220	251	108	191	24	9.0	36	20
CFSM	.18	.29	.67	4.62	.62	2.28	2.79	3.45	.25	.37	.56	.17
IN.	.21	.33	.78	5.33	.65	2.63	3.12	3.98	.28	.43	.65	.19

CAL YR 1977 TOTAL 87302.0 MEAN 239 MAX 3140 MIN 10 CFSM .45 IN 6.17
WTR YR 1978 TOTAL 262498.0 MEAN 719 MAX 14100 MIN 9.0 CFSM 1.37 IN 18.56

02087000 NEUSE RIVER NEAR NORTHSIDE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
MAY				
31...	1300	184	37	18
JUN				
06...	1240	179	51	25
JUL				
21...	0930	143	69	27
21...	1230	146	69	27
SEP				
21...	1550	32	6	.52

NEUSE RIVER BASIN

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) National Geodetic Vertical Datum of 1929.

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 24.6 ft³/s (0.70 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 131 of this report. Gage height telemeter at station.

AVERAGE DISCHARGE.--8 years, 858 ft³/s (24.30 m³/s), 15.13 in/yr (384 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)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 11	1230	5040	143	15.45	4.709	Mar. 13	1030	6590	187	17.79	5.422
Jan. 16	0100	4880	138	15.14	4.615	Apr. 29	0730	*12400	351	*24.07	7.337
Jan. 22	1900	6240	177	17.33	5.282	May 8	0830	6270	178	17.26	5.261
Jan. 28	2300	7930	225	19.38	5.907	May 11	1830	7250	205	18.49	5.636

Minimum discharge, 7.2 ft³/s (0.20 m³/s) Oct. 5, gage height, 1.90 ft (0.579 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	87	207	487	958	365	621	8910	254	178	181	98
2	21	75	214	441	789	411	524	6520	219	161	183	404
3	18	71	256	388	762	504	463	3110	247	147	241	416
4	10	71	207	324	739	1350	418	1160	229	104	305	223
5	8.7	70	171	287	644	1380	395	2820	219	96	444	224
6	22	676	241	276	596	1210	381	4400	226	112	614	182
7	30	2280	629	465	561	949	346	5760	272	98	1090	134
8	22	2040	438	572	528	806	329	6140	236	84	1320	77
9	19	891	262	2740	494	1070	321	5880	372	77	1370	59
10	19	435	214	4560	465	4030	311	6220	369	72	849	51
11	21	251	183	5000	448	5470	283	7020	223	96	1250	47
12	22	177	157	4170	408	6060	282	6710	172	89	970	42
13	30	140	136	2150	398	6520	285	5090	163	77	499	38
14	123	118	153	4170	430	5820	288	2900	171	85	345	41
15	223	98	823	4770	466	3520	235	3430	121	176	297	36
16	173	98	1300	4810	451	1480	215	3800	95	667	284	30
17	130	89	864	4070	480	1110	205	2390	85	1940	263	26
18	94	85	628	3270	509	903	248	1080	80	2010	243	27
19	68	79	782	3830	478	762	295	832	76	712	219	24
20	49	76	782	5780	454	694	299	760	72	309	185	20
21	45	79	1510	6090	422	630	244	732	68	248	134	21
22	38	74	2270	6200	434	597	209	696	88	230	112	24
23	33	80	1490	5960	460	560	192	579	170	213	107	41
24	26	82	825	4500	440	522	189	448	173	200	121	107
25	24	89	616	2260	424	556	236	398	110	291	109	67
26	440	113	707	4650	403	1200	5310	370	85	617	83	45
27	1260	129	640	5880	399	2990	9140	360	172	1120	77	42
28	756	110	513	7490	375	3670	11200	310	336	451	78	36
29	268	114	385	7620	---	2400	12100	288	251	252	52	32
30	149	145	324	6110	---	1120	10800	289	198	210	96	27
31	106	---	391	2990	---	772	---	274	---	192	91	---
TOTAL	4272.7	8922	18318	112310	14415	59431	56364	89676	5552	11314	12212	2641
MEAN	138	297	591	3623	515	1917	1879	2893	185	365	394	88.0
MAX	1260	2280	2270	7620	958	6520	12100	8910	372	2010	1370	416
MIN	8.7	70	136	276	375	365	189	274	68	72	52	20
CFSM	.18	.39	.77	4.71	.67	2.49	2.44	3.76	.24	.47	.51	.11
IN.	.21	.43	.88	5.43	.70	2.87	2.72	4.33	.27	.55	.59	.13

CAL YR 1977 TOTAL 133440.7 MEAN 366 MAX 4380 MIN 8.7 CFSM .48 IN 6.45
WTR YR 1978 TOTAL 395427.7 MEAN 1083 MAX 12100 MIN 8.7 CFSM 1.41 IN 19.10

02087183 NEUSE RIVER NEAR FALLS, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
MAY				
31...	1100	272	16	12
JUN				
06...	1110	226	25	15
JUL				
21...	1115	250	46	31
AUG				
29...	1500	46	26	3.2
SEP				
14...	1415	46	74	9.2

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) National Geodetic Vertical Datum of 1929. 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. 354), a downstream tributary, an average of 4.7 ft³/s (0.13 m³/s), and from the Neuse River upstream from station an average of 24.6 ft³/s (0.70 m³/s), most of which was returned as sewage effluent upstream from station.

AVERAGE DISCHARGE.--51 years, 1,181 ft³/s (33.45 m³/s), 14.07 in/yr (357 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,900 ft³/s (649 m³/s) Sept. 19, 1945, gage height, 22.12 ft (6.742 m); minimum, 44 ft³/s (1.25 m³/s) Sept. 15, 1932, gage height, 0.28 ft (0.085 m), site then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 23, 1919, reached a stage of 21.15 ft (6.447 m), from 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)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 21	1600	8490	240	12.49	3.807	Apr. 28	0830	*14400	408	*16.93	5.160
Jan. 30	1700	7390	209	11.33	3.453	May 9	1630	7760	220	11.73	3.575
Mar. 11	2030	7550	214	11.51	3.508						

Minimum discharge, 84 ft³/s (2.38 m³/s) Oct. 6, 7, gage height, 0.88 ft (0.268 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	307	372	780	3360	668	1060	12700	413	288	446	263
2	114	273	437	760	1330	691	897	11400	382	267	766	385
3	267	261	435	683	1200	907	752	9010	356	259	915	646
4	157	261	455	604	1110	1830	684	4480	412	247	730	541
5	112	277	423	550	1000	2080	639	3170	380	190	644	399
6	95	942	560	573	908	1780	614	3810	575	169	754	385
7	91	3600	654	1010	832	1520	580	4440	621	181	1100	323
8	102	3010	830	1020	782	1250	542	5870	580	161	1390	265
9	114	1970	607	2250	756	1240	519	7540	1640	140	1540	196
10	154	1090	499	4620	711	4430	505	7220	1160	131	1270	161
11	127	696	448	4460	683	7210	493	6410	662	261	1090	239
12	114	516	405	4710	647	6930	492	6600	442	401	1330	193
13	216	429	364	4830	619	6280	502	6760	374	217	924	158
14	629	373	374	5670	646	6460	530	6100	354	203	701	138
15	650	339	1000	5860	675	6310	474	3790	345	391	540	139
16	499	309	1530	5140	672	4050	414	3780	300	1230	477	134
17	369	305	1400	4960	753	1800	392	3780	240	2600	449	128
18	290	290	1080	5340	762	1420	443	2230	217	2360	423	119
19	242	269	1040	4680	778	1190	913	1330	205	1640	396	119
20	201	256	1030	6960	721	1050	902	1070	197	752	402	113
21	170	251	1460	8300	675	939	635	981	185	490	416	106
22	154	257	2640	7670	707	864	500	908	198	415	294	104
23	148	251	2300	6660	742	808	429	846	313	373	246	105
24	145	258	1460	6280	730	759	393	679	362	346	232	201
25	139	256	1040	5270	722	726	416	593	306	632	244	217
26	942	377	977	4890	745	1300	5350	537	235	959	232	181
27	2370	351	956	6000	685	2820	11800	517	278	1150	204	143
28	1640	328	848	5890	641	3910	14100	503	418	1060	192	127
29	866	302	710	6610	---	3710	12700	456	470	563	192	123
30	499	304	608	7290	---	2250	12700	440	357	411	173	111
31	373	---	682	6860	---	1340	---	432	---	350	219	---
TOTAL	12098	18708	27624	137180	24592	78522	71370	118382	12977	18837	18931	6462
MEAN	390	624	891	4425	878	2533	2379	3819	433	608	611	215
MAX	2370	3600	2640	8300	3360	7210	14100	12700	1640	2600	1540	646
MIN	91	251	364	550	619	668	392	432	185	131	173	104
CFSM	.34	.55	.78	3.88	.77	2.22	2.09	3.35	.38	.53	.54	.19
IN.	.39	.61	.90	4.48	.80	2.56	2.33	3.86	.42	.61	.62	.21

CAL YR 1977 TOTAL 239810 MEAN 657 MAX 6860 MIN 57 CFSM .58 IN 7.83
WTR YR 1978 TOTAL 545683 MEAN 1495 MAX 14100 MIN 91 CFSM 1.31 IN 17.81

NEUSE RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1944, 1956-58, 1964 to September 1978 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1973 to September 1978.
WATER TEMPERATURES: October 1943 to September 1944, October 1955 to September 1958, July 1973 to September 1978.

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, 42 micromhos Apr. 27, 1978.
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, 266 micromhos Oct. 7, 9; minimum daily, 42 micromhos Apr. 27.
WATER TEMPERATURES: Maximum daily, 29.5°C July 24, Aug. 18, 19, 29; minimum daily, 2.0°C Feb. 5, 6, 7.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
DEC										
21...	1400	1610	110	6.6	7.0	110	11.2	24	3	6.0
JAN										
09...	1600	2810	78	5.9	7.0	140	11.4	23	5	5.9
10...	1330	4870	71	6.2	5.0	300	11.7	20	10	5.1
11...	1430	4450	75	6.3	2.5	240	13.1	21	10	5.3
14...	1315	5820	67	6.3	2.0	200	12.2	17	7	4.2
16...	1130	5110	70	6.7	1.0	200	12.2	18	8	4.4
20...	1445	7260	58	6.7	--	50	--	15	0	3.8
30...	1531	7370	55	6.3	2.0	200	13.2	15	8	3.5
APR										
04...	1200	682	97	6.4	17.5	30	10.2	24	2	5.9
26...	1030	6170	58	5.4	--	400	--	14	2	3.5
26...	1415	7140	52	5.5	--	--	--	--	--	--
27...	0945	11500	47	5.6	12.0	--	9.8	--	--	--
29...	1115	12600	50	5.6	13.0	160	9.5	13	5	3.3
JUL										
06...	1000	167	148	6.7	24.0	8	6.8	28	0	7.2

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)
DEC										
21...	2.3	9.1	42	.8	2.6	26	0	21	10	12
JAN										
09...	1.9	7.0	38	.6	2.2	21	0	17	42	10
10...	1.7	5.2	33	.5	2.3	12	0	10	12	11
11...	1.9	5.2	32	.5	2.3	13	0	11	10	10
14...	1.6	3.5	27	.4	2.4	12	0	10	9.6	8.9
16...	1.8	5.2	35	.5	2.1	12	0	10	3.9	10
20...	1.4	4.2	34	.5	2.0	26	0	21	8.3	8.5
30...	1.5	3.7	32	.4	1.6	9	0	7	7.2	.5
APR										
04...	2.2	9.5	44	.8	2.0	27	0	22	17	14
26...	1.2	4.6	38	.5	2.0	14	0	11	89	7.2
26...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
29...	1.1	3.1	31	.4	1.9	9	0	7	36	8.9
JUL										
06...	2.5	16	52	1.3	3.4	43	0	35	14	11

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)
DEC										
21...	8.4	.1	13	91	70	.12	396	.66	.01	.67
JAN										
09...	7.0	.1	9.9	72	55	.10	546	.45	.03	.48
10...	5.8	.1	7.5	70	45	.10	920	.39	.03	.42
11...	6.2	.1	9.5	74	47	.10	889	.41	.02	.43
14...	5.2	.0	8.7	70	43	.10	1100	.47	.03	.50
16...	5.9	.0	9.0	65	47	.09	897	.46	.02	.48
20...	3.2	.1	8.4	48	47	.07	941	.43	.03	.46
30...	2.5	.0	7.3	64	27	.09	1270	.42	.03	.45
APR										
04...	8.5	.1	13	70	73	.10	129	.62	.02	.64
26...	3.4	.1	6.1	54	35	.07	900	.39	.04	.43
26...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
29...	3.5	.0	5.9	45	34	.06	1530	.27	.03	.30
JUL										
06...	14	.2	17	114	101	.16	51.4	.85	.03	.88

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)
DEC										
21...	.65	--	.13	.12	.15	1.1	.41	1.2	.67	.53
JAN										
09...	.53	--	.18	.18	.23	1.2	.47	1.4	.75	.65
10...	.38	--	.15	.14	.18	1.6	.47	1.7	1.1	.61
11...	.41	--	.09	.08	.10	1.2	.52	1.3	.70	.60
14...	.48	--	.19	.16	.21	1.0	.46	1.2	.58	.62
16...	.47	--	.10	.08	.10	.73	.39	.83	.36	.47
20...	.42	--	.13	.08	.10	.80	.29	.93	.56	.37
30...	.40	--	.13	.08	.10	.56	.33	.69	.28	.41
APR										
04...	.66	--	.15	.13	.17	.43	.43	.58	.02	.56
26...	.39	--	.17	.15	.19	1.6	.49	1.8	1.2	.64
26...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
29...	.29	--	.08	.04	.05	.66	.45	.74	.25	.49
JUL										
06...	.89	3.0	.04	.13	.17	.27	--	.31	--	--

DATE	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)
DEC									
21...	--	1.9	8.3	.40	1.2	.25	.20	.22	.67
JAN									
09...	--	1.9	8.3	.37	1.1	.10	.15	.06	.18
10...	--	2.1	9.4	.51	1.6	.05	.12	.04	.12
11...	--	1.7	7.7	.34	1.0	.04	.09	.02	.06
14...	--	1.7	7.5	.34	1.0	.07	.10	.02	.06
16...	--	1.3	5.8	.22	.67	.06	.08	.03	.09
20...	--	1.4	6.2	.26	.80	.06	.10	.02	.06
30...	--	1.1	5.0	.17	.52	.04	.08	.02	.06
APR									
04...	--	1.2	5.4	.37	1.1	.31	.30	.29	.89
26...	--	2.2	9.9	.56	1.7	.11	.12	.08	.25
26...	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--
29...	--	1.0	4.6	.16	.49	.06	.08	.03	.09
JUL									
06...	710	1.2	5.3	1.1	3.4	1.5	1.1	1.4	4.3

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	PHOS-PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)
DEC												
21...	--	20	18	2	--	17	12	5	--	2500	--	420
JAN												
09...	--	<10	<10	0	--	27	19	8	--	1000	--	200
10...	--	<10	<10	0	--	23	17	6	--	1000	--	260
11...	--	<10	<10	0	--	13	9	4	--	1000	--	230
14...	--	<10	<10	0	--	26	22	4	--	5000	--	240
16...	--	10	10	0	--	10	6	4	--	3200	--	170
20...	--	<10	<10	0	--	11	8	3	--	6200	--	150
30...	--	<10	<9	1	--	0	0	3	--	4300	--	200
APR												
04...	--	<10	<7	3	--	15	12	3	--	1100	--	450
26...	--	20	18	2	--	30	27	3	--	17000	--	290
26...	--	40	38	2	--	36	33	3	--	25000	--	260
27...	--	10	9	1	--	11	7	4	--	8500	--	190
29...	--	20	18	2	--	11	7	4	--	4500	--	400
JUL												
06...	160	10	10	0	10	5	2	3	50	600	400	200

DATE	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
DEC												
21...	--	26	11	15	--	30	20	10	--	8.6	2.2	.00
JAN												
09...	--	67	62	5	--	70	60	10	--	15	--	.10
10...	--	39	34	5	--	80	70	10	--	19	--	.00
11...	--	16	12	4	--	40	30	10	--	15	.1	.00
14...	--	15	--	--	--	30	20	10	--	6.1	26	.00
16...	--	9	6	3	--	30	30	0	--	3.6	.5	.00
20...	--	19	15	4	--	30	10	20	--	--	--	--
30...	--	0	0	5	--	20	20	0	--	13	.2	.00
APR												
04...	--	2	0	6	--	20	10	10	--	8.0	--	.00
26...	--	53	44	9	--	70	70	0	--	--	--	--
26...	--	54	49	5	--	--	--	10	--	--	--	--
27...	--	12	9	3	--	40	40	0	--	--	--	--
29...	--	12	7	5	--	30	20	10	--	7.1	.5	.10
JUL												
06...	8400	15	0	15	10	10	10	0	30	3.6	.7	.00

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	DEC 21,77	APR 4,78
TIME	1400	1200
TOTAL CELLS/ML	390	4000
DIVERSITY: DIVISION	1.3	1.3
.CLASS	1.6	1.3
..ORDER	1.6	2.1
...FAMILY	2.7	2.4
....GENUS	2.9	2.8

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)				
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...OOCYSTACEAE				
....ANKISTRODESMUS	86#	22	620#	15
....DICTYOSPHAERIUM	--	-	57	1
....KIRCHNERIELLA	--	-	57	1
....SELENASTRUM	--	-	72	2
...SCENEDESMACEAE				
....SCENEDESMUS	58	15	190	5
..VOLVOCALES				
...CHLAMYDOMONADACEAE				
....CHLAMYDOMONAS	--	-	140	4
...VOLVOCACEAE				
....EUDORINA	--	-	310	8
....PANDORINA	--	-	230	6
CHRYSOPHYTA				
.BACILLARIOPHYCEAE				
..CENTRALES				
...COSCINODISCACEAE				
....CYCLOTELLA	--	-	100	2
..PENNALES				
...FRAGILARIACEAE				
....FRAGILARIA	58	15	--	-
....SYNEDRA	19	5	*	0
...NAVICULACEAE				
....NAVICULA	29	7	--	-
....PINNULARIA	10	2	--	-
....STAURONEIS	--	-	*	0
...NITZSCHIACEAE				
....NITZSCHIA	77#	20	110	3
.CHRYSOPHYCEAE				
..CHRYSOMONADALES				
...CHROMULINACEAE				
....CHRYSOCOCCUS	19	5	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)				
.CYANOPHYCEAE				
..CHROCCOCCALES				
...CHROCCOCCACEAE				
....ANACYSTIS	--	-	1800#	44
..HORMOGONALES				
...NOSTOCACEAE				
....APHANIZOMENON	38	10	--	-
...OSCILLATORIACEAE				
....LYNGBYA	--	-	290	7
....OSCILLATORIA	--	-	*	0
....SPIRULINA	--	-	*	0
EUGLENOPHYTA (EUGLENOIDS)				
.CRYPTOPHYCEAE				
..CRYPTOMONIDALES				
...CRYPTOMONODACEAE				
....CRYPTOMONAS	--	-	*	0
.EUGLENOPHYCEAE				
..EUGLENALES				
...EUGLENACEAE				
....TRACHELOMONAS	--	-	*	0

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

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	241	143	159	121	124	112	88	46	115	144	118	170
2	209	149	166	122	83	118	94	53	125	144	94	167
3	169	159	169	120	105	104	90	60	120	134	104	144
4	182	168	166	120	107	114	94	67	125	142	101	139
5	220	162	162	126	114	103	101	69	110	141	103	144
6	240	100	143	116	101	99	106	58	101	160	107	130
7	266	75	120	114	100	91	104	50	96	153	100	138
8	208	78	105	111	103	90	106	51	106	164	93	144
9	266	84	115	97	100	93	106	58	94	163	79	173
10	219	97	125	74	104	74	106	54	94	157	78	158
11	214	110	138	78	104	60	107	52	98	108	99	166
12	209	122	129	80	108	59	107	53	104	111	87	153
13	209	142	150	74	104	59	109	59	115	141	101	170
14	123	147	142	66	104	62	109	76	120	151	94	176
15	168	147	100	69	107	68	110	69	141	132	107	180
16	173	151	105	72	107	74	123	56	144	83	113	184
17	203	154	109	72	113	80	110	78	137	79	121	175
18	202	154	110	72	106	85	100	78	144	72	121	185
19	235	154	103	70	110	90	90	80	146	79	126	196
20	251	159	109	66	110	81	90	89	157	90	128	206
21	254	162	106	61	107	88	106	84	161	105	133	196
22	246	162	97	65	138	90	120	86	161	121	148	206
23	250	159	95	65	137	93	110	84	137	120	141	204
24	251	157	125	68	121	95	110	90	142	119	154	167
25	246	157	127	70	125	92	110	91	147	96	156	172
26	95	152	128	66	122	78	54	90	148	94	153	193
27	96	159	125	63	122	72	42	110	144	86	152	175
28	123	154	126	57	118	67	48	110	132	71	159	188
29	132	161	129	57	---	70	46	110	152	118	161	187
30	132	164	128	74	---	73	47	117	154	118	170	187
31	128	---	126	190	---	78	---	120	---	119	166	---
MEAN	199	141	127	86	111	84	95	76	129	120	122	172

WTR YR 1978 MEAN 122 MAX 266 MIN 42

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

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

WTR YR 1978 MEAN 16.5 MAX 29.5 MIN 2.0

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC					
21...	1400	1610	94	409	59
JAN					
09...	1600	2810	298	2260	78
10...	1330	4870	413	5430	75
11...	1430	4450	502	6030	36
14...	1315	5820	206	3240	86
16...	1130	5110	179	2470	50
20...	1445	7260	204	4000	82
30...	1531	7370	123	2450	78
APR					
04...	1200	682	18	33	100
26...	1030	6170	769	12800	68
26...	1415	7140	1770	34100	25
27...	0945	11500	201	6240	82
29...	1115	12600	118	4010	64
JUL					
06...	1000	167	11	5.0	89

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT									
06...	--	94	190	6.2	16.0	6.6	19	1.4	40
NOV									
07...	--	3600	110	6.6	18.0	6.8	47	3.9	14000
DEC									
12...	--	405	110	--	6.0	9.2	23	2.8	<10
JAN									
11...	1305	4420	50	7.0	3.0	12.2	44	3.5	1100
FEB									
24...	1500	724	150	--	6.0	9.2	18	--	60
APR									
10...	1645	495	120	7.0	19.0	7.9	16	2.2	10
JUL									
06...	0945	167	80	6.5	23.0	6.5	14	.0	<10

02087570 NEUSE RIVER AT SMITHFIELD, N. C.

LOCATION.--Lat 35°30'46", long 78°21'00", Johnston County, Hydrologic Unit 03020201, on left bank 10 ft (3 m) downstream from bridge on U.S. Highway 70, at Smithfield, 2.1 mi (3.4 km) upstream from Swift Creek and 177.6 mi (285.8 km) upstream from mouth.

DRAINAGE AREA.--1,200 mi² (3,110 km²), approximately.

PERIOD OF RECORD.--October 1959 to current year. Prior to October 1970 medium and high water discharges only. Gage height records at different datum collected at this site since July 1911 are contained in reports of the National Weather Service, NOAA, U.S. Department of Commerce.

GAGE.--Water-stage recorder. Datum of gage is 99.26 ft (30.254 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 21, 1971, nonrecording gage on upstream side of bridge near center of span at same datum.

REMARKS.--Records good. Diversions for municipal water supply for cities of Durham and Butner (see sta 0208700). The city of Raleigh diverted from Swift Creek (see p. 354), a downstream tributary, an average of 4.7 ft³/s (0.13 m³/s), and from Neuse River upstream from station an average of 24.6 ft³/s (0.70 m³/s), most of which was returned as sewage effluent upstream from station. The city of Smithfield diverted an average of 2.5 ft³/s (0.071 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 140 of this report.

AVERAGE DISCHARGE.--6 years, 1,422 ft³/s (40.27 m³/s), 16.09 in/yr (409 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,300 ft³/s (433 m³/s) Feb. 5, 1973, Mar. 21, 1975, gage height, 23.65 ft (7.209 m); minimum, 61 ft³/s (1.73 m³/s) July 29, 1977, gage height, 2.47 ft (0.753 m); minimum gage height observed, 2.38 ft (0.725 m) Sept. 26, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1908 reached a stage of 27.1 ft (8.26 m), discharge, 19,900 ft³/s (564 m³/s) July 24, 1919, 26.8 ft (8.17 m), discharge, 19,400 ft³/s (549 m³/s); Oct. 3, 1929, 26.4 ft (8.05 m), discharge, 18,700 ft³/s (530 m³/s); Sept. 20, 1945, 25.9 ft (7.89 m), discharge, 17,900 ft³/s (507 m³/s), from stage information furnished by National Weather Service and Corps of Engineers, and discharges determined from ratings developed since 1959.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 15	2300	7460	211	17.60	5.364	Apr. 29	0500	*16200	459	*23.11	7.044
Jan. 22	1100	10000	283	19.50	5.944	May 10	2130	8940	253	18.75	5.715
Jan. 31	1000	8570	243	18.48	5.633	May 14	1130	8260	234	18.24	5.560
Mar. 12	2030	8780	249	18.63	5.678						

Minimum discharge, 88 ft³/s (2.49 m³/s) Oct. 8, gage height, 2.74 ft (0.835 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	383	426	905	6500	731	1240	11000	475	344	449	238
2	111	325	505	920	3200	760	1030	10000	454	304	713	351
3	156	303	492	806	1800	972	872	9200	408	291	1120	548
4	249	289	514	701	1420	1940	772	7700	445	285	891	666
5	128	302	496	613	1220	2450	730	4800	452	243	853	454
6	106	860	618	642	1070	2100	689	3800	608	196	780	406
7	96	3320	716	1080	966	1800	665	4770	1840	203	1100	370
8	95	4060	950	1220	878	1470	619	5550	924	197	1490	306
9	110	3200	816	1690	823	1350	588	7470	1820	172	1550	249
10	128	2000	607	3860	782	3590	567	8770	2340	155	1490	187
11	143	1140	516	4770	736	6800	561	8600	1350	207	1210	196
12	117	723	452	5000	710	8530	552	8000	660	467	1390	289
13	152	549	404	5320	673	8300	578	6500	486	321	1150	193
14	526	451	422	6260	690	7800	607	8200	421	219	819	162
15	846	397	1010	7230	710	7000	555	5800	412	338	627	152
16	637	355	1680	7260	725	6500	473	4300	386	771	543	155
17	475	334	1750	5500	785	3300	436	3800	321	2700	503	145
18	344	324	1420	6680	814	1800	507	3000	283	2580	469	137
19	271	294	1250	6670	849	1430	985	2000	265	2220	452	131
20	220	272	1240	7780	795	1180	1140	1400	257	1070	516	130
21	184	266	1520	9150	742	1060	858	1170	240	635	477	124
22	163	267	2560	9920	745	976	618	1050	240	507	379	120
23	152	264	2740	8200	807	909	511	983	291	450	295	119
24	143	264	1900	7300	801	853	449	848	397	407	265	160
25	139	265	1300	6600	776	801	434	700	380	547	267	210
26	413	323	1130	5700	807	1130	3430	640	289	945	275	222
27	2460	422	1000	7030	760	2340	8940	580	312	1090	267	170
28	2100	354	964	7480	707	3720	14000	560	391	1420	230	143
29	1400	325	821	7630	---	4090	15800	540	509	873	216	135
30	757	309	714	8160	---	3000	13500	520	434	532	210	127
31	500	---	833	8530	---	1800	---	500	---	431	207	---
TOTAL	13422	22940	31766	160607	32291	90482	72706	132751	18082	21120	21203	6095
MEAN	433	765	1025	5181	1153	2919	2424	4282	603	681	684	233
MAX	2460	4060	2740	9920	6500	8530	15800	11000	2340	2700	1550	666
MIN	95	264	404	613	673	731	434	500	240	155	207	119
CFSM	.36	.64	.85	4.32	.96	2.43	2.02	3.57	.50	.57	.57	.19
IN.	.42	.71	.98	4.98	1.00	2.80	2.25	4.12	.56	.65	.66	.22

CAL YR 1977 TOTAL 287006 MEAN 786 MAX 7310 MIN 65 CFSM .66 IN 8.90
WTR YR 1978 TOTAL 624365 MEAN 1711 MAX 15800 MIN 95 CFSM 1.43 IN 19.36

NEUSE RIVER BASIN

02087570 NEUSE RIVER AT SMITHFIELD, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
MAY				
31...	1400	512	20	28
JUN				
05...	1015	454	32	39
14...	1200	423	28	32
JUL				
20...	0955	628	40	68
21...	1550	592	53	85
AUG				
03...	1420	1170	201	635
29...	1345	215	11	6.4

02088000 MIDDLE CREEK NEAR CLAYTON, N. C.

LOCATION.--35°34'12", long 78°35'30", Johnston County, Hydrologic Unit 03020201, on right bank 300 ft (91 m) downstream from bridge on State Highway 50, 0.5 mi (0.8 km) upstream from Buffalo Branch, 3.7 mi (6.0 km) downstream from Wake-Johnston County line, and 9.5 mi (15.3 km) southwest of Clayton.

DRAINAGE AREA.--80.7 mi² (209 km²).

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

REVISED RECORDS.--WSP 952: 1940(M), 1941. WSP 1233: 1943(M), 1945, 1949.

GAGE.--Water-stage recorder. Datum of gage is 184.53 ft (56.245 m) National Geodetic Vertical Datum of 1929. Nov. 1-20, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 142 of this report.

AVERAGE DISCHARGE.--39 years, 92.3 ft³/s (2.614 m³/s), 15.53 in/yr (394 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,510 ft³/s (241 m³/s) Feb. 3, 1973, gage height, 13.42 ft (4.090 m), result of dam failure; no flow Oct. 11-13, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 15	1300	649	18.4	6.76	2.060	Apr. 27	0200	*4480	127	*12.30	3.749
Jan. 21	0900	926	26.2	7.97	2.429	May 9	2200	764	21.6	7.31	2.228
Mar. 11	1005	725	20.5	7.70	2.347						

Minimum discharge, 3.4 ft³/s (0.10 m³/s) Sept. 29, 30; minimum gage height, 1.39 ft (0.424 m) Oct. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	41	43	91	116	102	88	171	30	14	38	17
2	4.3	40	46	76	114	107	81	152	27	12	46	14
3	4.5	46	42	63	126	144	73	132	24	11	69	14
4	5.4	79	39	55	117	286	70	150	29	11	50	22
5	6.0	77	40	51	107	249	69	246	33	10	42	19
6	4.6	240	65	63	102	164	64	206	37	9.1	51	14
7	4.1	464	59	151	93	128	62	138	55	8.1	188	12
8	4.1	296	44	125	83	113	59	312	57	8.5	81	11
9	7.1	95	39	197	81	124	56	692	239	11	57	9.5
10	9.3	72	40	294	82	412	53	649	324	11	46	6.3
11	7.8	62	36	169	78	702	52	355	131	18	39	6.8
12	7.4	52	34	95	74	585	51	165	79	51	34	11
13	19	46	33	184	73	315	56	137	59	26	30	12
14	66	44	43	427	79	189	71	227	44	19	42	8.8
15	52	41	149	629	78	166	59	255	32	19	32	7.3
16	34	41	127	398	72	140	50	179	27	75	23	7.0
17	25	42	79	182	92	125	44	153	23	249	19	7.3
18	19	41	97	314	98	113	54	122	21	124	16	6.6
19	15	37	105	403	94	105	148	104	19	61	14	5.6
20	13	36	78	649	86	101	171	88	17	45	36	5.0
21	11	34	147	903	78	97	100	78	15	35	35	4.5
22	11	36	192	633	87	94	69	68	15	26	30	4.2
23	10	36	115	291	104	86	57	59	90	19	20	4.2
24	10	35	87	172	104	82	49	55	52	15	16	4.5
25	11	36	86	192	119	81	49	51	32	14	13	4.8
26	179	53	89	378	118	154	1330	46	23	70	13	5.0
27	379	52	72	508	100	225	2950	41	25	53	24	4.5
28	219	46	63	433	86	240	944	44	35	57	22	3.8
29	70	43	55	187	---	144	474	41	24	93	16	3.4
30	56	38	54	142	---	112	234	37	18	52	15	3.8
31	45	---	86	125	---	96	---	33	---	36	15	---
TOTAL	1312.7	2301	2284	8580	2641	5781	7687	5186	1632	1262.7	1172	258.9
MEAN	42.3	76.7	73.7	277	94.3	186	256	167	54.4	40.7	37.8	8.63
MAX	379	464	192	903	126	702	2950	692	324	249	188	22
MIN	4.1	34	33	51	72	81	44	33	15	8.1	13	3.4
CFSM	.52	.95	.91	3.43	1.17	2.31	3.17	2.07	.67	.50	.47	.11
IN.	.61	1.06	1.05	3.96	1.22	2.66	3.54	2.39	.75	.58	.54	.12

CAL YR 1977 TOTAL 22648.03 MEAN 62.0 MAX 683 MIN .11 CFSM .77 IN 10.44
WTR YR 1978 TOTAL 40098.30 MEAN 110 MAX 2950 MIN 3.4 CFSM 1.36 IN 18.48

02088000 MIDDLE CREEK NEAR CLAYTON, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
MAY				
31...	0900	34	16	1.5
JUN				
05...	0900	34	12	1.1
12...	1200	76	38	7.8
20...	0855	36	21	2.0
AUG				
28...	1320	21	9	.51

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. 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 144 of this report.

AVERAGE DISCHARGE.--14 years, 184 ft³/s (5.211 m³/s), 13.15 in/yr (334 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)
Nov. 9	2030	1010	28.6	10.52	3.206	Mar. 12	2200	1220	34.6	12.06	3.676
Jan. 22	0100	1950	55.2	13.43	4.093	Apr. 27	2330	*2990	84.7	*14.77	4.502

Minimum discharge, 4.0 ft³/s (0.11 m³/s) Oct. 5, 6, gage height, 3.04 ft (0.927 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	218	139	267	316	175	194	1070	56	97	71	17
2	9.7	138	164	238	278	191	163	628	52	59	59	17
3	9.7	109	121	200	273	260	138	445	47	44	61	23
4	4.6	102	98	166	261	500	123	412	44	38	146	41
5	4.1	101	94	143	245	497	116	543	43	35	244	37
6	4.2	314	169	161	241	406	106	579	138	31	271	31
7	4.6	901	171	334	224	347	100	547	336	28	273	26
8	4.5	940	119	348	200	299	91	532	292	25	280	21
9	4.7	993	102	373	191	285	81	604	421	22	251	18
10	6.8	951	94	394	195	602	74	609	717	19	296	15
11	8.9	664	82	323	186	948	69	495	717	68	218	15
12	12	392	73	266	174	1170	72	411	513	117	120	45
13	18	230	69	315	171	1180	81	342	308	85	101	38
14	48	160	82	626	186	968	109	423	168	57	91	21
15	86	128	294	729	187	675	98	422	102	91	67	17
16	114	108	328	772	175	472	78	400	78	251	56	15
17	102	102	253	765	198	364	64	403	61	489	48	13
18	78	94	257	737	211	299	120	372	53	572	44	11
19	50	83	291	693	217	255	313	284	47	499	38	10
20	35	73	254	1150	214	226	409	222	42	432	38	9.4
21	30	69	354	1770	195	206	458	183	37	223	36	8.6
22	24	67	474	1860	189	191	332	152	45	98	39	8.1
23	21	68	400	1440	185	175	246	130	52	66	46	8.1
24	19	71	333	966	192	165	171	114	47	51	37	8.6
25	17	69	306	662	195	153	124	102	48	47	31	8.1
26	76	77	283	681	185	247	663	90	39	161	27	7.9
27	345	87	233	739	165	408	2420	82	175	239	26	12
28	490	91	192	693	150	358	2810	79	212	230	24	14
29	573	80	165	637	---	311	2570	75	180	279	24	11
30	543	75	156	544	---	278	1970	69	136	176	21	9.6
31	353	---	251	413	---	231	---	63	---	98	18	---
TOTAL	3096.4	7555	6392	19405	5799	12842	14363	10882	5203	4727	3102	536.4
MEAN	99.9	252	206	626	207	414	479	351	173	152	100	17.9
MAX	573	993	474	1860	316	1180	2810	1070	717	572	296	45
MIN	4.1	67	69	143	150	153	64	63	37	19	18	7.9
CFSM	.53	1.33	1.08	3.30	1.09	2.18	2.52	1.85	.91	.80	.53	.09
IN.	.61	1.48	1.25	3.80	1.14	2.51	2.81	2.13	1.02	.93	.61	.11

CAL YR 1977 TOTAL 60246.8 MEAN 165 MAX 1600 MIN 4.1 CFSM .87 IN 11.80
WTR YR 1978 TOTAL 93902.8 MEAN 257 MAX 2810 MIN 4.1 CFSM 1.35 IN 18.39

02088470 LITTLE RIVER NEAR KENLY, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
MAY				
31...	1515	34	11	1.0
JUN				
05...	1130	18	16	.78
JUL				
20...	1405	175	51	24
AUG				
29...	0853	24	8	.52

02088500 LITTLE RIVER NEAR PRINCETON, N. C.

LOCATION.--Lat 35°30'40", long 78°09'36", Johnston County, Hydrologic Unit 03020201, on left bank 600 ft (183 m) downstream from bridge on Secondary Road 2320, 0.8 mi (1.3 km) upstream from Little Creek, and 3 mi (5 km) north of Princeton.

DRAINAGE AREA.--229 mi² (593 km²).

PERIOD OF RECORD.--February 1930 to current year. Monthly discharge only for some periods, published in WSP 1303.

REVISED RECORD.--WSP 822: Drainage area. WSP 1233: 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 107.75 ft (32.842 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 17, 1934, nonrecording gage at same site and datum.

REMARKS.--Records good. 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 146 of this report.

AVERAGE DISCHARGE.--48 years, 252 ft³/s (7.137 m³/s), 14.94 in/yr (379 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)
Nov. 7	2000	1600	45.3	8.65	2.637	Mar. 13	0800	1530	43.3	8.40	2.560
Jan. 22	1600	2130	60.3	10.34	3.152	Apr. 28	1900	*3000	85.0	*12.00	3.658

Minimum discharge, 7.2 ft³/s (0.20 m³/s) Oct. 8, gage height, 1.12 ft (0.341 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	246	118	426	424	211	260	1980	80	117	91	16
2	12	160	211	370	353	244	220	1030	72	88	99	16
3	8.8	130	185	295	348	323	191	544	67	68	98	17
4	8.4	121	142	236	331	709	174	469	63	59	132	29
5	8.0	120	128	203	309	786	166	822	59	52	226	37
6	7.6	414	176	208	302	619	157	770	74	48	299	33
7	7.6	1410	232	459	285	478	150	674	301	43	333	26
8	8.0	1390	177	551	250	399	143	630	372	40	308	21
9	11	1150	139	632	235	372	134	761	344	35	276	18
10	13	1080	129	667	236	836	127	843	790	32	280	15
11	15	860	117	511	231	1360	123	656	907	58	252	13
12	24	516	108	375	216	1470	124	472	667	158	144	24
13	38	313	105	427	210	1520	132	380	374	114	110	48
14	71	220	117	910	221	1420	157	530	193	86	104	26
15	113	176	358	1090	229	1060	152	544	129	81	90	17
16	132	154	516	1030	217	681	135	472	105	202	74	15
17	118	143	407	1010	235	489	121	424	89	515	63	13
18	103	134	340	1030	259	383	195	399	78	636	57	11
19	78	122	457	1040	268	319	858	300	69	569	49	11
20	58	112	382	1670	267	278	746	219	63	471	44	9.8
21	44	107	476	2040	244	251	692	178	57	292	63	9.0
22	40	106	710	2120	235	233	501	148	52	125	52	8.4
23	34	107	634	2040	233	216	341	129	68	91	52	7.8
24	30	109	477	1660	237	204	240	117	64	74	46	8.4
25	27	109	419	1080	243	192	183	108	66	71	36	8.5
26	38	114	401	1040	233	344	956	101	61	119	30	8.3
27	288	120	330	1110	210	878	2320	94	115	224	27	8.4
28	440	130	261	1000	193	732	2870	90	287	200	27	13
29	550	127	222	846	---	513	2840	88	212	256	24	14
30	559	113	207	730	---	396	2540	97	144	200	22	12
31	413	---	350	571	---	317	---	95	---	121	18	---
TOTAL	3313.4	10113	9031	27377	7254	18233	17948	14164	6022	5245	3526	513.6
MEAN	107	337	291	883	259	588	598	457	201	169	114	17.1
MAX	559	1410	710	2120	424	1520	2870	1980	907	636	333	48
MIN	7.6	106	105	203	193	192	121	88	52	32	18	7.8
CFSM	.47	1.47	1.27	3.86	1.13	2.57	2.61	2.00	.88	.74	.50	.08
IN.	.54	1.64	1.47	4.45	1.18	2.96	2.92	2.30	.98	.85	.57	.08

CAL YR 1977 TOTAL 81504.9 MEAN 223 MAX 2190 MIN 5.7 CFSM .97 IN 13.24
WTR YR 1978 TOTAL 122740.0 MEAN 336 MAX 2870 MIN 7.6 CFSM 1.47 IN 19.94

02088500 LITTLE RIVER NEAR PRINCETON, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
MAY				
31...	1445	92	12	3.0
JUN				
05...	1100	58	8	1.3
14...	1750	171	37	17
20...	1055	310	51	43
AUG				
29...	1020	24	7	.45

02089000 NEUSE RIVER NEAR GOLDSBORO, N. C.

LOCATION.--Lat 35°20'14", long 77°59'51", Wayne County, Hydrologic Unit 03020202, on left bank at downstream side of bridge on Secondary Road 1915, 0.2 mi (0.3 km) upstream from Stony Creek, 1.5 mi (2.4 km) downstream from Seaboard Coast Line Railroad bridge, 3.2 mi (5.1 km) south of Wayne County courthouse in Goldsboro, 4.3 mi (6.9 km) downstream from Little River, and 135 mi (217 km) upstream from mouth.

DRAINAGE AREA.--2,390 mi² (6,190 km²), approximately.

PERIOD OF RECORD.--February 1930 to current year.

REVISED RECORDS.--WSP 822: Drainage area. WSP 1333: 1931, 1935.

GAGE.--Water-stage recorder. Datum of gage is 42.95 ft (13.091 m) National Geodetic Vertical Datum of 1929. Prior to July 24, 1931, nonrecording gage at railroad bridge, 1.5 mi (2.4 km) upstream at datum 2.00 ft (0.610 m) higher. July 24, 1931, to Aug. 31, 1948, water-stage recorder at site 2.3 mi (3.7 km) upstream at datum 1.71 ft (0.521 m) higher than present datum.

REMARKS.--Records excellent. Diversions for municipal water supply for cities of Durham and Butner (see sta 02087000). National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--48 years, 2,517 ft³/s (71.28 m³/s), 14.30 in/yr (363 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, 17,400 ft³/s (493 m³/s) May 3, gage height, 22.74 ft (6.931 m); minimum, 176 ft³/s (4.98 m³/s) Oct. 9, 10, 11, gage height, 2.45 ft (0.747 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	208	1540	983	2710	10500	1960	5900	13400	845	858	991	334
2	206	1160	1020	2980	10000	1970	5010	15500	795	746	927	322
3	195	939	1230	2960	9660	2260	3240	16800	758	667	1010	373
4	195	801	1260	2700	9410	2950	2500	17400	732	623	1610	484
5	235	758	1210	2360	8930	3820	2070	16900	703	597	1590	649
6	285	3270	1210	2130	7820	4520	1860	16300	993	571	1680	631
7	218	5570	1270	2240	5260	4830	1750	15500	1730	517	1810	528
8	187	5920	1430	2770	3660	4740	1650	14200	2920	481	1850	489
9	188	6250	1500	3400	3070	4310	1540	12800	3500	465	2100	445
10	184	6450	1470	3700	2670	4580	1450	11400	3400	445	2250	389
11	185	6200	1290	4250	2430	5290	1370	10200	3900	535	2300	341
12	212	5000	1140	4620	2250	6070	1340	9410	4130	547	2010	298
13	339	3300	1040	4920	2130	6870	1450	9210	3260	596	1780	311
14	451	2300	1070	5550	2050	7720	1570	9430	2020	716	1730	354
15	581	1800	1520	6200	2010	8640	1650	9870	1330	669	1360	313
16	1040	1500	2210	6810	2020	9580	1580	10100	977	796	1090	275
17	1120	1300	3080	7430	2050	10200	1430	10100	839	951	916	267
18	965	1200	3430	8120	2110	10200	1650	9870	745	2340	848	266
19	824	1120	3290	8720	2310	9840	2200	9430	673	3200	720	256
20	689	1050	3050	9700	2370	9160	3310	8780	622	3230	653	234
21	576	981	3350	10500	2330	7010	3890	7520	588	2460	776	221
22	494	923	3590	11100	2230	4450	3880	5750	572	1430	815	211
23	424	941	4220	12000	2140	2960	3030	3290	714	957	692	197
24	368	945	4680	12800	2140	2450	2350	2270	581	763	572	191
25	334	946	4810	13500	2140	2220	1850	1800	612	858	477	182
26	351	977	4480	14200	2110	2240	3110	1500	670	1260	425	199
27	387	978	3430	14100	2070	4370	5400	1250	813	1280	433	254
28	1790	1050	2940	13500	2010	5240	6830	1090	1230	1420	436	266
29	2760	1060	2530	12900	---	5900	7690	1000	1180	1760	409	235
30	2810	1030	2290	12100	---	6160	10200	927	957	1750	368	209
31	2040	---	2430	11300	---	6060	---	880	---	1310	355	---
TOTAL	20841	67259	72453	232270	109880	168610	92750	273877	42789	34798	34983	9724
MEAN	672	2242	2337	7493	3924	5439	3092	8835	1426	1123	1128	324
MAX	2810	6450	4810	14200	10500	10200	10200	17400	4130	3230	2300	649
MIN	184	758	983	2130	2010	1960	1340	880	572	445	355	182
CFSM	.28	.94	.98	3.14	1.64	2.28	1.29	3.70	.60	.47	.47	.14
IN.	.32	1.05	1.13	3.62	1.71	2.62	1.44	4.26	.67	.54	.54	.15

CAL YR 1977 TOTAL 888514 MEAN 2434 MAX 16700 MIN 100 CFSM 1.02 IN 13.83
WTR YR 1978 TOTAL 1160234 MEAN 3179 MAX 17400 MIN 182 CFSM 1.33 IN 18.06

02089500 NEUSE RIVER AT KINSTON, N. C.

LOCATION.--Lat 35°15'29", long 77°35'09", Lenoir County, Hydrologic Unit 03020202, on left bank at Kinston, 600 ft (183 m) downstream from bridge on State Highway 11, and 90 mi (145 km) upstream from mouth.

DRAINAGE AREA.--2,690 mi² (6,970 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1930 to current year.

REVISED RECORDS.--WSP 822: Drainage area. WSP 1333: 1931-32.

GAGE.--Water-stage recorder. Datum of gage is 10.90 ft (3.322 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 25, 1934, nonrecording gage at highway bridge 1 mi (1.6 km) downstream at datum 0.80 ft (0.244 m) lower.

REMARKS.--Water-discharge record good. Diversions for municipal water supply for cities of Durham and Butner (see sta 02087000).

AVERAGE DISCHARGE.--48 years, 2,889 ft³/s (81.82 m³/s), 14.58 in/yr (370 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, 18,200 ft³/s (515 m³/s) May 7, gage height, 20.15 ft (6.142 m); minimum, 308 ft³/s (8.72 m³/s) Oct. 5, 6, gage height, 2.64 ft (0.805 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	349	2570	1400	3260	13400	2510	6180	7480	1340	1540	2030	538
2	337	2010	1360	3290	12600	2510	6290	8620	1260	1320	1930	584
3	321	1520	1340	3390	11800	2540	6230	10800	1190	1110	1740	542
4	314	1210	1460	3440	11100	2890	5900	12400	1120	965	1570	564
5	308	1050	1540	3340	10500	3310	4610	15400	1060	853	1830	644
6	313	1210	1530	3140	10000	3740	3440	17400	1010	782	1980	739
7	372	3020	1520	3010	9490	4210	2850	18100	1410	733	2020	787
8	357	4850	1520	2980	8730	4690	2440	18000	2560	683	2140	715
9	338	6180	1620	3150	7390	5040	2220	17700	3160	635	2160	662
10	334	6490	1700	3560	5560	5390	2060	17000	3690	600	2250	621
11	331	6670	1730	3940	4320	5570	1930	15500	4030	589	2400	568
12	319	6750	1620	4220	3700	5790	1830	13500	4150	784	2500	523
13	396	6730	1490	4610	3160	6010	1840	11900	4290	928	2400	477
14	570	6600	1420	5020	2900	6300	1980	10700	4340	766	2150	453
15	709	6040	1650	5420	2700	6740	2030	10000	3590	886	2000	495
16	770	4260	2070	5780	2580	7340	2040	9740	2430	1530	1750	474
17	967	2740	2420	6160	2550	8070	2020	9780	1720	2080	1400	441
18	1180	2080	2960	6670	2570	8870	2010	9950	1350	1590	1150	422
19	1110	1700	3460	7280	2610	9510	2800	10100	1140	1970	1060	410
20	982	1530	3780	8410	2740	9880	3210	9950	981	2630	951	398
21	858	1430	3850	9400	2830	9910	3550	9620	869	3030	884	388
22	752	1360	3990	10200	2840	9570	3960	9100	798	3100	919	377
23	662	1350	4300	10700	2770	8690	4310	8300	795	2230	976	365
24	589	1350	4520	11100	2640	6650	4350	7010	980	1480	886	357
25	529	1330	4790	11800	2560	4880	3890	4670	859	1750	783	349
26	566	1350	5070	13000	2530	3800	3890	3130	796	2060	696	342
27	704	1380	5230	14200	2490	3580	4910	2230	907	2200	650	338
28	686	1360	5050	15000	2450	3910	5650	1840	1460	1920	634	372
29	1280	1380	4490	15100	---	4660	6210	1630	1860	1770	628	397
30	2370	1410	3810	14800	---	5370	6750	1520	1850	1930	609	384
31	2660	---	3400	14200	---	5880	---	1440	---	2040	560	---
TOTAL	22333	88910	86090	229570	151510	177810	111380	304510	56995	46484	45636	14726
MEAN	720	2964	2777	7405	5411	5736	3713	9823	1900	1499	1472	491
MAX	2660	6750	5230	15100	13400	9910	6750	18100	4340	3100	2500	787
MIN	308	1050	1340	2980	2450	2510	1830	1440	795	589	560	338
CFSM	.27	1.10	1.03	2.75	2.01	2.13	1.38	3.65	.71	.56	.55	.18
IN.	.31	1.23	1.19	3.17	2.10	2.46	1.54	4.21	.79	.64	.63	.20

CAL YR 1977 TOTAL 780529 MEAN 2138 MAX 9660 MIN 198 CFSM .80 IN 10.79
WTR YR 1978 TOTAL 1335954 MEAN 3660 MAX 18100 MIN 308 CFSM 1.36 IN 18.47

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 185 micromhos Nov. 30, 1973; minimum daily, 43 micromhos Mar. 28, 1975.
WATER TEMPERATURES: Maximum daily, 33.5°C July 3, 1956; minimum daily, 0.0°C Feb. 7, 1978.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 171 micromhos Mar. 9; minimum daily, 45 micromhos May 4, 5.
WATER TEMPERATURES: Maximum daily, 26.5°C July 9, 31, Aug. 17, 20, 30, 31; minimum daily, 0.0°C Feb. 7.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT										
26...	1200	613	123	6.3	17.5	8	--	8.6	K1300	1200
NOV										
14...	1100	6600	80	6.2	10.5	6	--	6.8	430	520
DEC										
21...	1200	3850	88	6.7	9.0	15	--	10.8	170	1200
JAN										
25...	1315	12000	57	5.4	3.0	40	--	11.7	140	K3000
30...	1230	14800	62	5.9	2.0	40	--	11.6	--	88
FEB										
28...	0915	2450	89	7.5	3.5	15	--	12.0	160	100
MAR										
28...	0935	3820	81	6.1	10.0	50	--	8.9	3200	K12000
APR										
25...	1115	3870	73	6.8	16.0	20	--	8.2	--	--
MAY										
23...	1410	8250	67	6.1	16.0	15	--	6.7	K40	1400
JUN										
13...	1015	4290	70	6.1	25.5	--	30	5.4	330	240
JUL										
18...	1300	1530	80	6.9	27.0	--	8.0	8.0	--	1500
AUG										
03...	1115	1780	80	6.9	25.5	--	--	6.4	--	--
SEP										
06...	1115	737	117	7.1	25.0	--	15	10.0	380	240

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)
OCT										
26...	26	7	7.0	2.1	11	44	.9	3.4	23	0
NOV										
14...	19	6	4.5	1.8	6.1	37	.6	3.3	15	0
DEC										
21...	19	6	4.8	1.8	7.3	41	.7	2.5	16	0
JAN										
25...	14	11	3.3	1.4	4.6	37	.5	2.3	4	0
30...	15	10	3.4	1.5	4.5	36	.5	2.1	6	0
FEB										
28...	18	5	4.4	1.8	8.6	47	.9	2.0	16	0
MAR										
28...	17	5	4.3	1.5	5.9	40	.6	2.1	14	0
APR										
25...	18	6	4.4	1.6	5.9	39	.6	2.2	14	0
MAY										
23...	19	6	4.5	1.8	4.8	32	.5	2.5	16	0
JUN										
13...	16	5	3.9	1.4	5.0	37	.6	2.4	13	0
JUL										
18...	22	8	5.8	1.9	6.5	35	.6	3.0	18	0
AUG										
03...	20	8	5.4	1.6	5.1	32	.5	2.8	15	0
SEP										
06...	26	0	6.6	2.3	12	47	1.0	3.0	33	0

DATE	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)
OCT										
26...	19	18	15	11	.1	11	71	72	.10	118
NOV										
14...	12	15	14	8.8	.1	10	79	57	.11	1410
DEC										
21...	13	5.1	11	8.5	.1	11	71	55	.10	738
JAN										
25...	3	25	9.9	6.3	.1	6.6	54	37	.07	1750
30...	5	12	10	5.1	.0	7.0	60	37	.08	2400
FEB										
28...	13	.8	11	10	.8	14	69	60	.09	456
MAR										
28...	11	18	11	6.5	.1	6.8	64	45	.09	660
APR										
25...	11	3.6	10	7.5	.1	7.3	67	46	.09	700
MAY										
23...	13	20	8.9	6.4	.1	8.1	69	46	.09	1540
JUN										
13...	11	17	7.5	5.4	.1	8.0	70	40	.10	811
JUL										
18...	15	3.6	9.5	7.4	.1	8.6	62	52	.08	256
AUG										
03...	12	3.0	8.8	7.0	.1	8.9	76	48	.10	365
SEP										
06...	27	4.2	11	10	.2	8.5	79	70	.11	157

NEUSE RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG, SUSP, TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC DIS, (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)
OCT										
26...	1.1	.10	--	--	--	.57	--	--	.35	.22
NOV										
14...	.23	.04	--	--	--	.56	--	--	.15	.10
DEC										
21...	.61	.07	--	--	--	.56	--	--	.18	.09
JAN										
25...	.64	.04	.53	.57	.00	.57	1.2	5.4	.10	.05
30...	.62	.01	--	--	--	.53	--	--	.05	.04
FEB										
28...	1.1	.09	--	--	--	.49	--	--	.15	.09
MAR										
28...	.75	.11	.68	.79	.16	.63	1.5	6.8	.22	.10
APR										
25...	.57	.08	.56	.64	.14	.50	1.2	5.4	.16	.10
MAY										
23...	.43	.04	.60	.64	.13	.51	1.1	4.7	.14	.09
JUN										
13...	.55	.09	.71	.80	.20	.60	1.4	6.0	.25	.16
JUL										
18...	.71	.09	.76	.85	.36	.49	1.6	6.9	.29	.13
AUG										
03...	.66	.07	1.0	1.1	.57	.53	1.8	7.8	.27	.13
SEP										
06...	.11	.02	1.1	1.1	.24	.86	1.2	5.4	.30	.52

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV, (UG/L AS CR)
OCT											
26...	--	--	--	--	--	--	--	--	--	--	--
NOV											
14...	1	0	1	0	0	0	0	0	0	<10	<9
DEC											
21...	--	--	--	--	--	--	--	--	--	--	--
JAN											
25...	0	0	0	0	0	0	1	0	1	10	9
30...	1	1	0	0	0	0	0	0	0	<10	<9
FEB											
28...	--	--	--	--	--	--	--	--	--	--	--
MAR											
28...	--	--	--	--	--	--	--	--	--	--	--
APR											
25...	--	--	--	--	--	--	--	--	--	--	--
MAY											
23...	1	1	0	0	0	0	1	0	2	10	9
JUN											
13...	--	--	--	--	--	--	--	--	--	--	--
JUL											
18...	--	--	--	--	--	--	--	--	--	--	--
AUG											
03...	1	0	1	0	0	0	9	6	3	20	17
SEP											
06...	--	--	--	--	--	--	--	--	--	--	--

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
OCT 26...	--	--	--	--	--	--	--	--	--	--	--
NOV 14...	1	0	0	3	7	3	4	1100	--	640	6
DEC 21...	--	--	--	--	--	--	--	--	--	--	--
JAN 25...	2	5	0	6	10	7	3	1600	--	250	10
30...	1	0	0	0	40	36	4	1400	--	240	3
FEB 28...	--	--	--	--	--	--	--	--	--	--	--
MAR 28...	--	--	--	--	--	--	--	--	--	--	--
APR 25...	--	--	--	--	--	--	--	--	--	--	--
MAY 23...	1	0	0	0	11	4	7	1600	--	550	16
JUN 13...	--	--	--	--	--	--	--	--	--	--	--
JUL 18...	--	--	--	--	--	--	--	--	--	--	--
AUG 03...	3	2	0	2	4	2	2	1800	1400	420	47
SEP 06...	--	--	--	--	--	--	--	--	--	--	--

DATE	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)
OCT 26...	--	--	--	--	--	--	--	--	--	--	--
NOV 14...	6	0	60	0	60	<.5	.0	<.5	0	0	0
DEC 21...	--	--	--	--	--	--	--	--	--	--	--
JAN 25...	8	2	40	10	30	<.5	.0	<.5	0	0	0
30...	0	6	30	10	20	<.5	.0	<.5	0	0	0
FEB 28...	--	--	--	--	--	--	--	--	--	--	--
MAR 28...	--	--	--	--	--	--	--	--	--	--	--
APR 25...	--	--	--	--	--	--	--	--	--	--	--
MAY 23...	4	12	50	10	40	<.5	.0	<.5	0	0	0
JUN 13...	--	--	--	--	--	--	--	--	--	--	--
JUL 18...	--	--	--	--	--	--	--	--	--	--	--
AUG 03...	29	18	80	40	40	<.5	.0	<.5	0	0	0
SEP 06...	--	--	--	--	--	--	--	--	--	--	--

NEUSE RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M
OCT											
26...	--	--	--	--	--	--	12	--	--	--	--
NOV											
14...	0	0	0	10	0	10	--	9.9	2.8	--	--
DEC											
21...	--	--	--	--	--	--	8.4	--	--	--	--
JAN											
25...	0	0	0	40	20	20	--	7.6	--	--	--
30...	0	0	0	20	0	20	--	14	.7	--	--
FEB											
28...	--	--	--	--	--	--	5.2	--	--	--	--
MAR											
28...	--	--	--	--	--	--	12	--	--	--	--
APR											
25...	--	--	--	--	--	--	7.9	--	--	--	--
MAY											
23...	1	1	0	20	10	10	--	9.7	--	--	--
JUN											
13...	--	--	--	--	--	--	7.3	--	--	--	--
JUL											
18...	--	--	--	--	--	--	7.2	--	--	--	--
AUG											
03...	0	0	0	20	0	20	--	9.5	1.4	24.6	21.8
SEP											
06...	--	--	--	--	--	--	7.2	--	--	--	--

DATE	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	LENGTH OF EXPO-SURE (DAYS)
AUG			
03...	35.8	2.78	15

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ATRAZINE, TOTAL (UG/L)	ATRAZINE, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL (UG/L)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL (UG/L)	P,P' DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL (UG/L)
NOV 14...	1100	ND	ND	--	ND	ND	ND	ND	.5	ND
FEB 28...	0915	ND	--	ND	--	ND	--	ND	--	ND

DATE	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL (UG/L)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN TOTAL (UG/L)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL (UG/L)
NOV 14...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 28...	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOTAL (UG/L)
NOV 14...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 28...	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	SIMAZINE TOTAL COULSON COND. (UG/L)	SIMAZINE IN BOTTOM MATERIAL (UG/KG DRY SOLIDS)	TOXAPHENE, TOTAL (UG/L)
NOV 14...	ND	ND	ND	ND	ND	ND	ND	--	ND	ND
FEB 28...	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOTTOM MATERIAL (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOTTOM MATERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 14...	ND	ND	ND	--	ND	--	ND	--	ND
FEB 28...	--	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 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	NOV 14,77		MAR 28,78		MAY 23,78		SEP 6,78	
TIME	1100		0935		1410		1115	
TOTAL CELLS/ML	1000		700		1200		23000	
DIVERSITY: DIVISION	1.3		1.2		1.5		1.2	
.CLASS	1.4		1.2		1.5		1.2	
..ORDER	1.9		2.2		2.4		2.0	
...FAMILY	2.4		2.9		2.7		2.2	
....GENUS	2.7		2.9		3.1		2.5	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...COELASTRACEAE								
....COELASTRUM	69	7	--	-	--	-	350	2
...OOCYSTACEAE								
....ANKISTRODESMUS	34	3	55	8	270#	22	*	0
....DICTYOSPHAERIUM	17	2	--	-	110	9	350	2
....KIRCHNERIELLA	11	1	--	-	--	-	--	-
....OOCYSTIS	11	1	--	-	--	-	--	-
....SELENASTRUM	17	2	--	-	--	-	--	-
...SCENEDESMACEAE								
....ACTINASTRUM	46	4	--	-	--	-	--	-
....CRUCIGENIA	--	-	--	-	54	4	--	-
....SCENEDESMUS	140	13	96	14	54	4	1100	5
..TETRASPORALES								
...PALMELLACEAE								
....SPHAEROCYSTIS	--	-	--	-	110	9	1100	5
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	110#	16	27	2	--	-
..ZYGNEMATALES								
...DESMIDIACEAE								
....CLOSTERIUM	--	-	--	-	14	1	--	-
....COSMARIUM	--	-	--	-	--	-	*	0
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	17	2	--	-	41	3	590	3
....MELOSIRA	--	-	200#	29	95	8	1100	5
....STEPHANODISCUS	--	-	--	-	--	-	530	2
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	27	4	--	-	--	-
...FRAGILARIACEAE								
....ASTERIONELLA	--	-	--	-	*	0	940	4
....FRAGILARIA	--	-	--	-	--	-	*	0
....SYNEDRA	--	-	96	14	14	1	530	2
...GOMPHONEMATACEAE								
....GOMPHONEMA	6	1	--	-	--	-	--	-
...MERIDIONACEAE								
....MERIDION	--	-	27	4	--	-	--	-
...NAVICULACEAE								
....NAVICULA	6	1	--	-	--	-	180	1
...NITZSCHIACEAE								
....NITZSCHIA	--	-	41	6	--	-	150	1

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	NOV 14,77 1100		MAR 28,78 0935		MAY 23,78 1410		SEP 6,78 1115	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROCCOCCALES								
...CHROCCOCCACEAE								
....ANACYSTIS	480#	46	--	-	160	13	13000#	55
..HORMOGONALES								
...NOSTOCACEAE								
....APHANIZOMENON	140	13	--	-	--	-	--	-
...OSCILLATORIACEAE								
....LYNGBYA	--	-	--	-	270#	22	700	3
....OSCILLATORIA	--	-	--	-	--	-	2500	11
EUGLENOPHYTA (EUGLENOIDS)								
.CRYPTOPHYCEAE								
..CRYPTOMONIDALES								
...CRYPTOMONODACEAE								
....CRYPTOMONAS	23	2	--	-	--	-	--	-
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....TRACHELOMONAS	29	3	41	6	14	1	--	-

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

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	95	100	87	60	122	77	60	91	83	81	113
2	128	100	97	87	60	90	78	56	92	88	69	113
3	128	97	98	84	60	90	75	50	94	94	74	114
4	133	97	97	82	60	102	82	45	96	98	77	112
5	132	101	99	83	61	86	81	45	96	102	85	114
6	134	100	96	85	62	84	91	46	104	107	88	115
7	142	95	100	86	67	81	91	47	102	109	73	129
8	145	69	102	87	70	83	89	49	92	102	75	133
9	149	75	100	86	73	171	90	50	83	113	72	129
10	149	77	97	83	76	82	94	53	72	115	75	122
11	143	76	98	82	80	79	96	55	66	115	80	131
12	153	81	97	81	81	76	98	57	71	115	78	134
13	142	80	101	82	84	75	96	58	67	92	75	128
14	128	83	106	77	83	70	94	59	65	94	76	131
15	122	75	102	77	84	65	96	60	69	103	74	125
16	122	81	91	76	82	64	96	60	76	104	81	132
17	146	85	92	74	83	63	95	59	80	74	86	132
18	132	88	88	71	82	61	96	58	84	80	84	134
19	120	89	85	69	83	61	90	59	90	84	87	131
20	106	91	88	64	86	62	84	61	94	82	87	137
21	110	91	89	63	86	64	86	64	98	72	90	135
22	114	93	82	63	86	67	82	65	102	69	92	129
23	120	93	84	65	85	75	77	68	96	73	96	131
24	122	92	83	61	85	77	81	78	100	78	98	131
25	128	90	82	60	86	84	82	77	89	74	96	132
26	129	91	81	58	87	85	77	77	95	74	98	139
27	123	92	84	56	86	86	77	117	102	70	100	137
28	123	95	81	56	96	82	75	84	102	76	101	138
29	128	94	81	57	---	74	63	86	92	84	100	141
30	90	94	84	58	---	81	62	89	82	89	106	147
31	92	---	85	59	---	77	---	92	---	81	106	---
MEAN	128	89	92	73	78	81	85	64	88	90	86	129

WTR YR 1978 MEAN 90 MAX 171 MIN 45

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.5	15.5	13.0	5.0	3.5	5.5	14.5	15.0	24.5	25.0	26.0	26.0
2	23.0	16.5	12.5	5.0	3.0	5.0	16.0	14.0	24.5	25.0	24.5	25.5
3	22.0	17.5	11.0	4.5	2.0	5.0	15.0	13.5	24.5	24.0	25.0	25.0
4	18.0	18.5	11.5	4.5	1.5	4.0	15.0	14.5	25.5	24.5	24.5	24.0
5	17.0	19.0	11.5	4.0	1.5	4.0	17.0	14.5	23.5	24.0	25.0	24.0
6	17.0	20.0	12.5	5.0	3.0	4.0	18.0	15.0	24.0	22.0	25.5	24.0
7	18.0	19.5	9.5	6.0	.0	5.0	18.0	15.0	24.0	22.0	25.0	23.0
8	19.0	18.5	9.5	6.5	1.0	5.5	18.0	15.0	24.0	23.5	25.0	24.0
9	20.0	18.5	8.0	8.0	1.5	5.0	18.5	16.5	24.0	26.5	25.0	24.5
10	17.5	18.5	6.5	5.5	2.0	5.0	18.5	16.5	23.5	25.0	24.5	25.0
11	17.0	16.5	5.0	4.5	2.0	5.0	19.5	16.5	23.0	26.0	24.5	24.5
12	18.5	15.0	4.5	4.0	3.0	7.0	19.0	17.0	23.5	22.0	24.0	24.0
13	15.0	12.5	4.5	5.0	7.0	7.5	20.0	18.0	24.0	22.0	25.0	24.0
14	14.0	11.0	6.5	4.5	6.0	9.0	18.0	17.0	22.5	23.0	25.5	22.0
15	12.0	10.0	8.5	4.0	6.0	10.0	18.0	16.5	22.0	23.0	25.5	22.0
16	14.0	10.5	8.5	3.5	5.0	11.5	17.5	16.5	22.0	24.5	26.0	23.0
17	13.5	13.0	9.0	4.0	4.5	11.0	17.0	17.0	23.0	22.0	26.5	23.5
18	11.5	13.0	10.0	5.0	5.0	10.0	16.5	17.0	24.0	23.5	26.0	24.0
19	13.0	12.0	9.5	5.0	4.0	10.0	16.0	17.0	24.0	23.5	26.0	24.5
20	13.0	11.0	9.0	5.0	4.0	11.0	16.0	17.5	24.5	24.5	26.5	24.5
21	13.0	11.5	10.5	5.0	3.5	12.0	16.0	18.5	25.0	24.0	25.5	23.5
22	13.0	12.0	9.0	5.0	4.0	13.0	15.0	19.0	25.5	24.5	25.5	23.5
23	13.5	14.0	8.0	4.5	3.0	13.0	15.5	19.5	25.5	25.5	25.0	24.5
24	14.0	13.0	8.0	4.0	3.5	14.0	16.0	20.0	25.0	25.5	24.5	22.0
25	15.0	13.0	7.0	5.5	4.5	14.5	16.5	21.0	25.5	24.5	24.5	22.0
26	17.5	11.5	8.0	6.5	5.5	15.0	16.5	22.0	25.0	25.0	25.0	20.5
27	17.5	9.5	5.5	5.0	4.5	14.0	15.0	22.5	25.5	25.0	26.0	19.5
28	18.0	9.5	5.0	5.0	5.0	13.0	13.0	22.5	25.0	26.0	25.5	19.5
29	18.0	10.5	4.0	4.0	---	13.0	15.5	22.0	25.0	25.5	25.0	19.0
30	16.0	11.0	4.5	3.5	---	13.5	15.0	22.5	25.0	26.0	26.5	19.0
31	15.0	---	5.0	3.5	---	13.5	---	24.0	---	26.5	26.5	---
MEAN	16.5	14.0	8.0	5.0	3.5	9.5	16.5	18.0	24.0	24.5	25.5	23.0

WTR YR 1978 MEAN 15.5 MAX 26.5 MIN .0

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
26...	1200	613	35	58	65
NOV					
14...	1100	6600	14	249	88
DEC					
21...	1200	3850	29	301	98
JAN					
25...	1315	12000	39	1260	70
30...	1230	14800	60	2400	47
FEB					
28...	0915	2450	20	132	92
MAR					
28...	0935	3820	56	578	99
APR					
25...	1115	3870	23	240	99
MAY					
23...	1410	8250	26	579	42
JUN					
13...	1015	4290	53	614	84
JUL					
18...	1300	1530	47	194	80
AUG					
03...	1115	1780	40	192	95
SEP					
06...	1115	737	30	60	88

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER YEAR OCTOBER 1977 to SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT									
14...	1130	591	--	--	13.0	6.8	18	1.5	9400
NOV									
02...	1300	2580	--	--	16.0	8.0	31	1.8	2800
DEC									
01...	1045	1410	--	--	12.0	8.0	26	.6	250
JAN									
04...	1445	3440	--	--	5.0	10.8	24	2.0	110
FEB									
07...	1430	9440	--	--	2.0	3.0	25	.6	20
MAR									
02...	1340	2510	--	--	5.0	12.8	11	1.2	100
APR									
17...	1540	2010	--	7.2	16.0	7.5	29	1.8	60
MAY									
08...	1550	18000	--	6.2	17.0	6.8	33	1.4	60
JUN									
02...	1145	1260	180	7.2	25.0	8.8	26	1.0	110
JUL									
05...	1510	894	160	7.5	25.0	7.5	28	3.1	150

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) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good. Since September 1976, some regulation at low flow by Buckhorn Reservoir 1 mile (1.6 km) upstream (see page 354) Suspended-sediment records for the current year are published on page 160 of this report.

AVERAGE DISCHARGE.--14 years, 154 ft³/s (4.361 m³/s), 13.41 in/yr (341 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)
Nov. 8	0100	2070	58.6	11.73	3.575	Mar. 12	1030	1250	35.4	9.49	2.893
Jan. 21	Unknown	2030	57.5	11.64	3.548	Apr. 27	1330	*3960	112	*14.52	4.426

Minimum discharge, 2.2 ft³/s (0.062 m³/s) Oct. 5, gage height, 1.58 ft (0.482 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	85	103	198	208	143	176	446	35	68	33	22
2	8.0	68	118	176	204	156	149	299	30	45	32	20
3	12	61	104	147	198	227	129	230	31	36	44	27
4	5.7	56	89	120	197	439	119	265	28	32	79	36
5	2.9	62	90	100	180	499	117	439	28	25	84	26
6	3.4	428	147	200	191	417	102	529	62	21	91	19
7	3.2	1560	133	330	159	308	101	470	75	19	104	15
8	3.2	1950	106	250	146	245	89	374	78	17	170	12
9	8.6	1180	99	220	145	229	82	426	265	17	128	11
10	10	569	79	500	149	541	81	430	483	13	73	7.6
11	8.3	281	74	309	149	1010	83	333	438	49	55	33
12	11	196	69	224	141	1210	76	219	240	71	43	93
13	29	136	66	255	139	893	84	188	111	55	38	60
14	70	109	82	586	151	561	98	245	66	44	213	34
15	90	98	186	744	152	386	90	276	47	55	140	23
16	85	91	241	653	145	292	75	261	38	120	75	18
17	59	89	187	500	154	231	67	239	33	378	50	15
18	35	79	182	380	174	193	116	181	30	443	36	12
19	32	69	236	592	177	176	319	141	25	313	28	11
20	25	64	206	1300	169	156	546	114	22	122	56	7.1
21	20	62	224	1970	152	145	720	97	21	68	179	6.2
22	19	62	373	1540	167	139	449	77	29	47	87	5.8
23	16	64	353	932	145	131	227	68	29	36	50	5.5
24	15	65	264	527	150	122	150	64	43	28	33	5.6
25	14	67	215	417	155	118	118	57	31	112	25	6.2
26	55	91	196	585	156	266	1170	51	35	284	20	6.2
27	331	68	164	677	136	583	3770	46	271	155	19	5.6
28	504	81	137	617	125	585	2930	45	378	85	28	5.8
29	446	73	118	466	---	426	1710	43	218	62	23	4.1
30	231	70	134	325	---	281	846	41	116	48	16	3.4
31	122	---	185	247	---	210	---	39	---	36	14	---
TOTAL	2279.9	7934	4960	16087	4514	11318	14789	6733	3331	2904	2066	556.1
MEAN	73.5	264	160	519	161	365	493	217	111	93.7	66.6	18.5
MAX	504	1950	373	1970	208	1210	3770	529	483	443	213	93
MIN	2.9	56	66	100	125	118	67	39	21	13	14	3.4
CFSM	.47	1.69	1.03	3.33	1.03	2.34	3.16	1.39	.71	.60	.43	.12
IN.	.54	1.89	1.18	3.84	1.08	2.70	3.53	1.61	.79	.69	.49	.13

CAL YR 1977 TOTAL 47202.66 MEAN 129 MAX 1950 MIN .05 CFSM .83 IN 11.26
WTR YR 1978 TOTAL 77472.00 MEAN 212 MAX 3770 MIN 2.9 CFSM 1.36 IN 18.47

02090380 CONTENTNEA CREEK NEAR LUCAMA, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
MAY				
31...	1545	42	23	2.6
JUN				
05...	1340	30	23	2.3
13...	1710	101	74	20
JUL				
20...	1320	69	33	6.1
AUG				
28...	0946	29	14	1.1

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 mi² (5.7 km²), 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 162 of this report.

AVERAGE DISCHARGE.--10 years, 2.43 ft³/s (0.0688 m³/s), 15.00 in/yr (381 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 652 ft³/s (18.5 m³/s) Aug. 5, 1974, gage height, 5.78 ft (1.762 m); minimum, 0.24 ft³/s (0.007 m³/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 ft³/s (0.71 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 6	1330	*466	13.2	*5.27	1.606	May 4	0015	138	3.91	4.06	1.237
Jan. 20	0515	45	1.27	2.84	0.866	May 14	0015	46	1.27	2.83	0.863
Jan. 26	0630	44	1.25	2.81	0.856	June 27	0900	46	1.30	2.85	0.869
Mar. 10	0545	41	1.16	2.76	0.841	July 25	2130	95	2.69	3.49	1.064
Mar. 26	2315	226	6.40	4.56	1.390	Aug. 6	0045	28	0.79	2.41	0.735
Apr. 26	1145	178	5.04	4.31	1.314						

Minimum discharge, 0.30 ft³/s (0.008 m³/s) Oct. 2, gage height, 0.90 ft (0.274 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	.53	1.6	4.0	3.5	3.3	4.1	4.2	.71	1.0	1.9	.67
2	.37	.54	1.4	3.1	3.8	2.5	3.6	3.6	.68	1.0	2.0	.67
3	.38	.75	1.3	2.5	3.7	8.4	3.0	3.0	1.1	1.0	1.9	.77
4	.37	.69	1.3	2.2	3.4	7.8	2.9	18	2.1	.91	1.8	.71
5	.38	.98	1.5	2.1	3.3	4.8	2.7	42	1.6	.82	3.4	.62
6	.38	116	1.4	3.3	3.4	4.0	2.5	8.7	1.7	.76	9.2	.58
7	.38	22	1.2	4.2	2.9	3.4	2.4	5.5	1.7	.71	3.5	.57
8	.40	6.9	1.2	3.3	2.7	3.6	2.1	5.7	1.4	.68	1.8	.55
9	.57	4.4	1.2	4.6	2.8	3.8	2.0	6.8	2.2	.66	1.2	.54
10	.46	3.2	1.2	3.1	2.6	23	2.0	4.7	1.1	.65	1.2	.57
11	.41	2.3	1.1	2.4	2.5	8.6	1.8	3.3	.84	1.5	1.7	.62
12	.48	2.0	1.1	2.3	2.5	6.0	2.6	2.7	.77	.93	1.1	.58
13	1.4	1.7	1.2	7.1	2.5	4.9	3.4	6.6	.75	.73	.94	.55
14	2.3	1.6	3.1	6.7	2.5	4.6	2.6	14	.68	.82	.89	.51
15	.85	1.6	4.7	4.4	2.3	4.3	1.9	5.1	.69	5.3	.80	.53
16	.56	1.5	2.5	3.3	2.6	3.7	1.7	4.4	.67	11	.75	.56
17	.51	1.5	2.1	5.6	3.2	3.3	1.7	3.2	.65	2.3	.71	.51
18	.48	1.4	2.0	6.6	3.1	2.9	11	2.9	.64	1.1	.70	.50
19	.46	1.4	1.8	12	4.1	2.7	9.0	2.1	.63	.86	.65	.48
20	.44	1.4	1.6	28	3.1	2.6	5.2	1.8	.63	.80	1.5	.50
21	.44	1.4	7.0	9.3	2.8	2.5	3.4	1.5	.66	.75	2.4	.51
22	.45	1.3	4.4	6.1	2.9	2.4	2.6	1.3	5.1	.68	.83	.49
23	.44	1.6	3.0	5.1	2.7	2.3	2.2	1.2	.98	.64	.71	.53
24	.45	1.5	2.5	4.6	2.7	2.3	2.0	1.1	3.6	.93	.66	.53
25	.45	1.5	3.1	10	2.5	2.1	2.7	1.0	.99	20	.64	.53
26	1.3	1.7	2.6	23	2.3	27	70	.92	4.8	15	.88	.50
27	.78	1.4	2.1	8.1	2.2	64	26	.91	15	2.6	1.1	.48
28	.61	1.3	1.9	5.9	2.2	13	9.5	.95	12	1.8	.82	.49
29	.77	1.3	1.8	4.8	---	7.3	5.9	.90	2.7	1.4	.69	.46
30	.59	1.4	3.1	4.1	---	5.5	4.7	.82	1.4	.96	.64	.47
31	.54	---	5.4	3.9	---	4.6	---	.76	---	.83	.62	---
TOTAL	18.77	186.79	71.4	195.7	80.8	241.2	197.2	159.66	68.47	79.12	47.63	16.58
MEAN	.61	6.23	2.30	6.31	2.89	7.78	6.57	5.15	2.28	2.55	1.54	.55
MAX	2.3	116	7.0	28	4.1	64	70	42	15	20	9.2	.77
MIN	.37	.53	1.1	2.1	2.2	2.1	1.7	.76	.63	.64	.62	.46
CFSM	.28	2.83	1.05	2.87	1.31	3.54	2.99	2.34	1.04	1.16	.70	.25
IN.	.32	3.16	1.21	3.31	1.37	4.08	3.33	2.70	1.16	1.34	.81	.28

CAL YR 1977 TOTAL 792.97 MEAN 2.17 MAX 116 MIN .37 CFSM .99 IN 13.40
WTR YR 1978 TOTAL 1363.32 MEAN 3.74 MAX 116 MIN .37 CFSM 1.70 IN 23.04

02090625 TURNER SWAMP NEAR EUREKA, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
JAN				
25...	1555	14	71	2.7
APR				
26...	1330	130	164	58
MAY				
05...	1459	26	31	2.2

02091000 NAHUNTA SWAMP NEAR SHINE, N. C.

LOCATION.--Lat 35°29'20", long 77°48'22", Greene County, Hydrologic Unit 03020203, on right bank 10 ft (3 m) downstream from bridge on Secondary Road 1058, 2 mi (3.2 km) upstream from Appletree Swamp, 3.5 mi (5.6 km) north of Shine, and 8 mi (12.9 km) northwest of Snow Hill.

DRAINAGE AREA.--77.6 mi² (201 km²).

PERIOD OF RECORD.--April 1954 to current year. Monthly discharges only for some periods, published in WSP 1723.

GAGE.--Water-stage recorder. Datum of gage is 50.74 ft (15.466 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 1, 1955, nonrecording gage at same site and datum.

REMARKS.--Records good. Suspended sediment records for the current year are published on page 164 of this report.

AVERAGE DISCHARGE.--24 years, 88.9 ft³/s (2.518 m³/s), 15.56 in/yr (395 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)
Nov. 7	0530	*2880	81.6	*12.15	3.703	Apr. 27	0730	1120	31.7	9.50	2.896
Jan. 21	0200	928	26.3	8.01	2.441	May 6	0030	717	20.3	7.18	2.188
Jan. 26	1230	765	21.7	7.38	2.249	June 7	0300	1060	30.0	8.49	2.588
Mar. 28	0630	1010	28.6	8.29	2.527	June 28	1130	608	17.2	6.67	2.033

Minimum discharge, 8.3 ft³/s (0.24 m³/s) Sept. 30, gage height, 1.34 ft (0.408 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	37	66	156	132	98	141	150	32	63	27	15
2	13	36	63	127	135	90	120	128	30	50	45	14
3	15	38	58	105	143	171	103	109	31	45	37	26
4	13	41	55	90	129	312	96	159	33	40	38	32
5	12	41	58	84	120	202	90	662	47	33	30	18
6	12	676	64	95	119	153	82	581	304	29	50	14
7	12	2490	55	162	106	130	76	236	718	25	67	13
8	12	1560	48	133	99	124	69	186	162	22	47	12
9	16	820	49	197	98	129	64	231	182	20	31	12
10	21	240	48	156	97	471	61	190	157	23	28	11
11	16	159	45	113	90	504	59	131	84	116	89	17
12	16	125	44	96	88	299	71	103	60	105	47	13
13	49	106	44	161	87	202	93	100	48	42	40	12
14	89	94	66	279	90	170	102	140	40	32	38	11
15	78	89	234	199	84	159	72	300	35	31	29	10
16	47	83	130	143	81	139	61	180	32	252	24	11
17	41	81	96	147	103	123	56	130	29	167	22	10
18	36	75	93	288	98	107	142	106	27	67	21	9.9
19	31	69	90	234	126	99	267	87	25	45	18	9.5
20	27	65	76	849	108	94	183	73	22	35	18	9.3
21	25	64	279	848	96	90	121	64	21	31	73	9.4
22	24	63	231	453	96	87	95	57	132	27	42	9.3
23	23	75	146	244	90	81	79	52	69	24	25	9.2
24	23	74	116	193	91	78	70	52	124	22	20	9.8
25	23	69	125	288	86	74	72	48	63	118	17	9.8
26	39	79	120	702	81	140	608	44	37	133	21	9.8
27	50	69	96	537	75	731	1060	40	188	60	39	9.3
28	41	63	85	272	73	917	732	40	519	38	24	9.2
29	48	61	79	198	---	468	339	39	328	35	19	8.7
30	43	60	87	163	---	223	187	37	101	29	16	8.4
31	38	---	186	146	---	167	---	34	---	24	15	---
TOTAL	945	7602	3032	7858	2821	6832	5371	4489	3680	1783	1057	372.6
MEAN	30.5	253	97.8	253	101	220	179	145	123	57.5	34.1	12.4
MAX	89	2490	279	849	143	917	1060	662	718	252	89	32
MIN	12	36	44	84	73	74	56	34	21	20	15	8.4
CFSM	.39	3.26	1.26	3.26	1.30	2.84	2.31	1.87	1.59	.74	.44	.16
IN.	.45	3.64	1.45	3.77	1.35	3.28	2.57	2.15	1.76	.85	.51	.18

CAL YR 1977 TOTAL 32042.0 MEAN 87.8 MAX 2490 MIN 4.5 CFSM 1.13 IN 15.36
WTR YR 1978 TOTAL 45842.6 MEAN 126 MAX 2490 MIN 8.4 CFSM 1.62 IN 21.98

02091000 NAHUNTA SWAMP NEAR SHINE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
JUN				
05...	1245	25	8	.54
20...	1530	23	26	1.6
JUL				
20...	1230	32	10	.86
AUG				
09...	1235	30	10	.81
SEP				
06...	1158	14	6	.23

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) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Nov. 26, 1934, nonrecording gage at site 200 ft (61 m) downstream at same datum.

REMARKS.--Records good. Suspended sediment for the current year are published on page 166 of this report.

AVERAGE DISCHARGE.--49 years (water years 1929-78), 768 ft³/s (21.75 m³/s), 14.31 in/yr (363 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, 5,250 ft³/s (149 m³/s) May 2, gage height, 14.79 ft (4.508 m); minimum, 62 ft³/s (1.76 m³/s) Sept. 30, gage height, 2.99 ft (0.911 m); minimum gage height, 2.91 ft (0.887 m) Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	498	484	1050	2650	769	2750	4290	206	1110	630	162
2	76	518	478	1060	2390	768	2590	5030	202	1130	495	156
3	72	482	471	1060	2130	795	2330	4950	198	1060	443	152
4	70	416	473	1060	1870	925	1960	4330	196	696	336	159
5	69	327	494	1050	1590	1060	1470	4220	193	418	274	171
6	66	637	515	1020	1360	1210	1140	3600	233	240	294	156
7	65	1470	510	1020	1200	1370	922	3100	676	211	326	146
8	65	2220	500	1010	1090	1550	774	2760	856	203	444	138
9	68	3020	504	1090	1020	1690	702	2610	874	196	460	131
10	75	3750	518	1210	944	1890	617	2480	815	188	460	122
11	77	4220	505	1300	920	2020	556	2270	759	191	505	114
12	77	4120	467	1370	877	2120	519	2060	709	306	556	108
13	97	3670	431	1470	840	2210	525	1870	685	381	463	103
14	168	3210	409	1620	816	2340	586	1820	678	352	351	103
15	213	2720	688	1720	795	2520	611	1820	643	340	230	121
16	219	2230	815	1750	778	2610	588	1850	502	387	214	142
17	214	1620	886	1760	779	2580	546	1910	314	717	322	144
18	213	1100	930	1890	791	2440	605	2020	212	731	461	130
19	212	842	986	2090	821	2210	960	1980	199	755	436	115
20	206	683	1020	2600	854	1940	1090	1750	189	780	265	103
21	197	602	1190	2970	875	1600	1190	1420	170	792	210	94
22	181	530	1390	3220	882	1280	1270	1040	169	754	207	88
23	158	506	1540	3380	875	1060	1340	811	216	572	208	82
24	143	505	1560	3580	859	921	1410	644	225	373	236	78
25	131	504	1560	3920	838	815	1500	545	238	373	285	74
26	183	515	1570	4460	816	777	2120	430	248	549	218	73
27	256	525	1530	4620	793	1030	2440	337	472	722	203	71
28	214	515	1410	4280	773	1350	2620	244	708	801	201	68
29	229	498	1250	3640	---	2030	2930	224	889	913	206	65
30	373	488	1100	3220	---	2460	3420	216	1000	995	200	62
31	454	---	1060	2920	---	2720	---	210	---	903	183	---
TOTAL	4919	42941	27244	68410	31226	51060	42081	62861	13674	18139	10322	3431
MEAN	159	1431	879	2207	1115	1647	1403	2028	456	585	333	114
MAX	454	4220	1570	4620	2650	2720	3420	5030	1000	1130	630	171
MIN	65	327	409	1010	773	768	519	210	169	188	183	62
CFSM	.22	1.96	1.21	3.03	1.53	2.26	1.93	2.78	.63	.80	.46	.16
IN.	.25	2.19	1.39	3.49	1.59	2.61	2.15	3.21	.70	.93	.53	.18

CAL YR 1977 TOTAL 236278 MEAN 647 MAX 4220 MIN 36 CFSM .89 IN 12.06
WTR YR 1978 TOTAL 376308 MEAN 1031 MAX 5030 MIN 62 CFSM 1.41 IN 19.20

02091500 CONTENTNEA CREEK AT HOOKERTON, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
DEC				
28...	1436	1340	10	36
JAN				
25...	1425	4090	26	287
MAY				
05...	1030	4280	51	589

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 except those for period of no gage-height record, May 4 to June 2, which are poor. Suspended sediment records for the current year are published on page 168 of this report.

AVERAGE DISCHARGE.--22 years, 118 ft³/s (3.342 m³/s), 17.18 in/yr (436 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)
Nov. 7	1830	1150	32.6	14.20	4.328	Mar. 29	1400	825	23.4	13.24	4.036
Dec. 22	0930	672	19.0	12.70	3.871	Apr. 27	0600	*1540	43.6	*15.09	4.599
Jan. 20	2230	1190	33.7	14.33	4.368	May 5	Unknown	Unknown		Unknown	
Jan. 27	0030	807	22.9	13.18	4.017						

Minimum discharge, 0.03 ft³/s (0.001 m³/s) Sept. 29, 30; minimum gage height, 6.39 ft (1.948 m) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	119	50	365	174	82	236	334	8.0	71	15	2.3
2	1.7	82	52	346	149	98	153	196	7.0	33	12	6.2
3	1.8	69	49	273	141	136	113	150	6.0	21	15	4.0
4	1.8	69	46	195	131	378	90	200	12	15	25	3.1
5	1.5	68	45	144	120	461	76	900	10	11	18	2.2
6	1.4	254	49	128	112	427	66	800	9.0	8.7	18	1.8
7	1.3	1040	49	231	116	306	58	500	12	6.8	11	1.5
8	1.5	1090	43	305	98	209	51	600	14	5.6	8.8	.97
9	2.0	925	39	372	86	176	44	400	40	4.7	7.3	1.0
10	4.1	646	38	479	84	364	39	300	30	3.9	8.0	.81
11	3.2	353	35	431	79	629	36	200	20	10	70	.77
12	2.8	187	32	296	74	603	35	150	14	80	20	.81
13	8.9	124	31	213	71	540	41	120	11	10	8.7	.77
14	37	95	37	329	71	369	63	500	8.3	7.2	6.9	.53
15	88	79	253	420	70	252	59	200	6.5	5.8	4.8	.36
16	65	70	420	394	67	196	46	140	5.5	28	3.7	.30
17	47	64	346	297	83	157	36	100	4.9	95	2.8	.26
18	33	59	253	399	102	124	57	80	4.4	32	2.4	.23
19	25	53	253	485	126	103	368	70	4.0	14	2.1	.20
20	19	49	242	993	150	87	519	60	3.8	8.6	1.8	.16
21	15	45	360	1110	140	77	477	50	3.4	6.6	5.7	.14
22	13	42	648	962	122	70	309	40	16	5.2	14	.10
23	11	47	562	756	111	64	159	30	21	4.2	26	.09
24	9.7	54	449	494	106	58	103	24	12	3.4	7.1	.09
25	9.0	53	317	389	104	53	92	20	15	6.5	4.0	.08
26	47	57	271	704	100	82	670	18	8.6	23	2.7	.07
27	329	58	222	782	89	508	1470	16	24	34	2.1	.05
28	218	52	169	720	76	753	1300	14	302	26	2.6	.04
29	449	48	131	608	---	807	1000	12	590	13	3.0	.03
30	472	45	117	382	---	709	639	10	266	7.9	2.3	.03
31	231	---	234	234	---	437	---	9.0	---	5.7	1.8	---
TOTAL	2151.6	5996	5842	14236	2952	9315	8405	6243.0	1488.4	606.8	322.6	28.99
MEAN	69.4	200	188	459	105	300	280	201	49.6	19.6	10.4	.97
MAX	472	1090	648	1110	174	807	1470	900	590	95	70	6.2
MIN	1.3	42	31	128	67	53	35	9.0	3.4	3.4	1.8	.03
CFSM	.74	2.14	2.02	4.92	1.13	3.22	3.00	2.15	.53	.21	.11	.01
IN.	.86	2.39	2.33	5.68	1.18	3.71	3.35	2.49	.59	.24	.13	.01

CAL YR 1977 TOTAL 38806.34 MEAN 106 MAX 1210 MIN .01 CFSM 1.14 IN 15.47
WTR YR 1978 TOTAL 57587.39 MEAN 158 MAX 1470 MIN .03 CFSM 1.69 IN 22.96

02091700 LITTLE CONTENTNEA CREEK NEAR FARMVILLE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
03...	1020	1.7	4	.02
NOV				
14...	1005	95	8	2.1
DEC				
27...	1310	221	11	6.6
JAN				
20...	1030	981	74	196
20...	1710	1150	66	205
21...	1320	1110	25	75
23...	1235	760	10	21
FEB				
06...	1108	113	8	2.4
MAR				
20...	0954	88	50	12
APR				
26...	1220	699	362	683
MAY				
01...	1202	343	16	15
JUN				
12...	1100	15	37	1.5
JUL				
28...	1022	28	25	1.9
SEP				
08...	1000	1.2	10	.03

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 September, October, November 1976 and for period November 1977 to September 1978 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 JANUARY 1976 TO OCTOBER 1977

DATE	TRITIUM IN WATER MOLE-CULES (TU)	TRITIUM WATER MOLE-CULES COUNT ERROR (TU)
JAN		
08...	38.6	2.0
FEB		
04...	32.3	1.7
MAR		
02...	46.8	2.3
APR		
01...	45.5	2.1
MAY		
04...	48.3	2.4
JUN		
01...	44.1	2.4
JUL		
01...	41.4	2.2
AUG		
05...	50.7	2.6
DEC		
04...	39.1	2.0
JAN 1977		
04...	35.8	1.9
FEB		
01...	38.4	2.0
MAR		
07...	36.1	1.8
APR		
04...	31.4	1.6
MAY		
14...	40.5	1.9
JUN		
04...	51.2	2.6
JUL		
01...	52.0	2.7
AUG		
02...	53.3	2.7
SEP		
02...	44.8	2.4
OCT		
03...	41.4	1.9

02091970 CREEPING SWAMP NEAR VANCEBORO, N. C.

LOCATION.--Lat 35°23'30", long 77°13'46", Craven County, Hydrologic Unit 03020202, on left bank at downstream side of bridge on State Highway 43, 1.0 mi (1.6 km) upstream from mouth, and 7.9 mi (12.7 km) northwest of Vanceboro.

DRAINAGE AREA.--27 mi² (70 km²), approximately.

PERIOD OF RECORD.--March 1971 to current year.

GAGE.--Water-stage recorder and concrete control with a parabolic shaped sharp-crested weir. Datum of gage is National Geodetic Vertical Datum of 1929 (Soil Conservation Service benchmark). Prior to Oct. 1, 1972, at datum, 16.60 ft (5.060 m) higher.

REMARKS.--Records good.

AVERAGE DISCHARGE.--7 years, 36.8 ft³/s (1.042 m³/s), 18.51 in/yr (470 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)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 7	1400	*1360	38.5	*23.83	7.263	Jan. 27	0500	334	9.46	21.70	6.614
Jan. 21	0100	784	22.2	22.75	6.934	Apr. 27	0300	1090	30.9	23.35	7.117

No flow July 6-15, Sept. 16-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.22	111	19	127	59	22	52	106	1.0	.50	1.8	.09
2	.14	77	19	133	52	23	39	74	.80	.30	18	.06
3	.08	59	18	104	51	28	30	55	.60	.18	24	.06
4	.05	52	17	77	50	49	24	56	8.8	.05	10	.22
5	.04	50	16	60	47	56	21	122	14	.02	6.3	.84
6	.03	267	15	53	39	56	18	156	7.7	.00	4.4	.90
7	.02	1240	14	73	34	51	16	143	18	.00	2.5	.65
8	.02	939	13	80	32	44	14	97	57	.00	1.3	.33
9	.03	479	13	128	31	41	12	111	38	.00	.79	.15
10	.04	271	12	148	30	94	11	146	42	.00	.50	.07
11	.03	152	11	125	28	156	9.6	126	35	.00	.34	.05
12	.04	101	10	99	27	160	9.2	85	26	.00	.23	.04
13	.61	71	10	84	23	119	13	59	19	.00	.26	.03
14	9.0	55	11	132	20	84	21	44	14	.00	1.7	.01
15	27	45	30	148	19	64	20	33	11	.00	8.4	.01
16	28	37	42	130	19	52	17	25	8.5	.05	5.4	.00
17	35	32	45	101	23	41	14	20	6.5	5.9	2.4	.00
18	33	28	62	112	26	33	32	17	5.0	5.9	1.2	.00
19	26	24	96	126	31	27	93	14	4.0	2.7	.69	.00
20	20	21	103	557	34	23	128	12	3.0	1.2	.39	.00
21	15	19	121	676	34	21	123	9.1	2.5	.82	2.6	.00
22	13	17	152	400	34	19	89	7.8	2.0	.55	4.8	.00
23	10	17	144	234	32	16	62	6.0	1.5	.36	2.2	.00
24	8.4	17	114	147	29	15	45	5.0	1.2	.24	.98	.00
25	6.8	17	90	137	26	14	34	4.0	1.0	1.2	.62	.00
26	14	18	78	282	23	22	445	3.6	.80	15	.42	.00
27	47	19	65	319	21	99	978	2.8	.70	7.1	.33	.00
28	51	18	55	243	19	133	575	2.2	.60	2.9	.36	.00
29	86	18	47	154	---	136	309	1.8	.90	1.4	.31	.00
30	135	18	44	102	---	100	173	1.5	.70	.97	.20	.00
31	150	---	94	75	---	69	---	1.2	---	.74	.12	---
TOTAL	715.55	4289	1580	5366	893	1867	3426.8	1546.0	331.80	48.08	103.54	3.51
MEAN	23.1	143	51.0	173	31.9	60.2	114	49.9	11.1	1.55	3.34	.12
MAX	150	1240	152	676	59	160	978	156	57	15	24	.90
MIN	.02	17	10	53	19	14	9.2	1.2	.60	.00	.12	.00
CFSM	.86	5.30	1.89	6.41	1.18	2.23	4.22	1.85	.41	.06	.12	.004
IN.	.99	5.91	2.18	7.39	1.23	2.57	4.72	2.13	.46	.07	.14	.00

CAL YR 1977 TOTAL 13452.90 MEAN 36.9 MAX 1240 MIN .00 CFSM 1.37 IN 18.53
WTR YR 1978 TOTAL 20170.28 MEAN 55.3 MAX 1240 MIN .00 CFSM 2.05 IN 27.79

02092000 SWIFT CREEK NEAR VANCEBORO, N. C.

LOCATION.--Lat 35°20'42", long 77°11'45". Craven County, Hydrologic Unit 03020202, on left bank at downstream side of bridge on Secondary Road 1478, 2.5 mi (4.0 km) upstream from bridge on State Highway 118, 2.5 mi (4.0 km) downstream from Clayroot Swamp, and 3.5 mi (5.6 km) northwest of Vanceboro.

DRAINAGE AREA.--182 mi^2 (471 km^2).

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

GAGE.--Water-stage recorder. Datum of gage is 2.07 ft (0.631 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Jan. 17, 1951, nonrecording gage and Jan. 17, 1951, to Sept. 30, 1964, water-stage recorder at same site at datum 6.00 ft (1.829 m) higher.

REMARKS.--Records fair. During 1964, the channel was canalized from a point 12.2 mi (19.6 km) upstream to a point 2.5 mi (4.0 km) downstream from the gage. Suspended sediment records for the current year are published on page 172 of this report.

AVERAGE DISCHARGE.--28 years, 208 ft^3/s (5.891 m^3/s), 15.52 in/yr (394 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,060 ft^3/s (172 m^3/s) Sept. 22, 1955, gage height, 19.67 ft (6.000 m), present datum; no flow Aug. 8-29, Oct. 4 to Nov. 9, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1909 reached a stage of 22 ft (6.7 m), present datum, and flood in 1928 reached a stage of 17.7 ft (5.39 m), present datum, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,860 ft^3/s (109 m^3/s) Apr. 28, gage height 15.62 ft (4.761 m); minimum, 7.4 ft^3/s (0.21 m^3/s) Sept. 23, 24, gage height, 3.83 ft (1.167 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	482	102	769	650	163	347	1580	52	13	30	18
2	12	369	104	780	468	186	268	888	45	10	112	20
3	11	298	102	662	405	206	215	462	42	9.2	120	26
4	10	277	97	510	369	251	180	292	82	98	97	32
5	10	268	92	387	334	500	162	1190	103	44	83	32
6	9.6	720	91	312	302	438	143	1790	99	67	75	25
7	9.3	2440	89	445	268	357	131	2010	100	45	57	19
8	9.3	2970	82	539	238	298	119	1970	192	29	48	16
9	11	2800	75	706	219	276	107	1700	195	18	41	14
10	12	2400	71	826	203	460	98	1550	228	13	33	13
11	15	1800	66	765	190	796	92	1240	192	9.8	29	12
12	15	1240	62	605	177	860	87	715	137	13	29	11
13	22	775	60	526	169	744	100	332	104	16	31	9.6
14	106	458	61	730	165	572	162	292	80	13	95	10
15	264	300	215	812	162	432	165	254	60	9.5	74	11
16	262	232	397	728	155	336	142	248	46	28	62	10
17	214	190	389	597	178	276	121	202	37	371	47	9.0
18	178	162	369	782	214	231	140	179	31	276	35	8.4
19	147	140	465	904	244	197	455	168	26	155	29	7.9
20	121	123	480	1960	266	176	662	145	22	97	23	7.9
21	103	114	530	2570	257	161	626	125	19	80	30	8.8
22	84	106	766	2490	238	151	467	111	18	72	36	8.4
23	72	102	816	2230	225	140	334	96	20	52	30	7.7
24	62	100	707	1750	212	132	254	88	20	36	23	7.9
25	54	99	587	1400	200	122	206	105	17	34	18	8.7
26	90	100	512	1900	182	141	1230	97	15	118	16	8.6
27	312	108	420	2100	168	536	3210	82	13	111	16	13
28	373	112	336	2000	155	819	3760	72	13	75	16	12
29	395	107	280	1810	---	819	2890	69	15	33	18	9.8
30	515	100	251	1390	---	668	2400	71	15	37	18	11
31	554	---	541	964	---	482	---	60	---	28	18	---
TOTAL	4065.2	19492	9215	34949	7013	11926	19273	18183	2038	2010.5	1389	407.7
MEAN	131	650	297	1127	250	385	642	587	67.9	64.9	44.8	13.6
MAX	554	2970	816	2570	650	860	3760	2010	228	371	120	32
MIN	9.3	99	60	312	155	122	87	60	13	9.2	16	7.7
CFSM	.72	3.57	1.63	6.19	1.37	2.12	3.53	3.23	.37	.36	.25	.08
IN.	.83	3.98	1.88	7.14	1.43	2.44	3.94	3.72	.42	.41	.28	.08

CAL YR 1977 TOTAL 80324.5 MEAN 220 MAX 2970 MIN 7.7 CFSM 1.21 IN 16.42
WTR YR 1978 TOTAL 129961.4 MEAN 356 MAX 3760 MIN 7.7 CFSM 1.96 IN 26.56

02092000 SWIFT CREEK NEAR VANCEBORO, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
11...	1645	16	15	.65
NOV				
22...	0935	101	16	4.4
DEC				
20...	1515	474	24	31
FEB				
07...	1502	268	8	5.8
MAR				
23...	0930	133	219	79
MAY				
01...	1650	1340	26	94
02...	1410	837	25	56
05...	1650	1490	303	1220
JUN				
12...	1445	124	43	14
JUL				
12...	1320	17	13	.60
27...	1520	96	59	15
SEP				
07...	1400	18	16	.78

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) National Geodetic Vertical Datum of 1929. Prior to Mar. 21, 1951, nonrecording gage on bridge 50 ft (15 m) upstream at same datum.

REMARKS.--Records good. Suspended sediment records for the current year are published on page 174 of this report.

AVERAGE DISCHARGE.--27 years, 200 ft³/s (5.664 m³/s), 16.17 in/yr (411 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, 3,350 ft³/s (94.9 m³/s) Apr. 29, gage height, 15.18 ft (4.627 m); minimum, 2.4 ft³/s (0.068 m³/s) Sept. 27, 28, 29, 30, gage height, 2.32 ft (0.707 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	231	104	347	572	130	366	1700	34	28	111	26
2	5.3	210	106	412	461	165	285	1080	31	31	84	42
3	5.0	169	104	449	393	198	200	773	29	34	101	28
4	4.4	138	97	430	336	237	146	462	29	34	139	27
5	4.0	124	90	366	300	266	120	481	30	38	163	22
6	3.7	171	86	291	274	290	105	501	32	38	167	18
7	3.5	330	80	270	250	296	94	545	35	32	163	16
8	3.3	447	69	283	227	280	83	563	38	26	158	14
9	3.5	645	61	347	204	251	74	601	43	20	134	12
10	3.5	735	57	410	195	241	66	783	54	15	100	10
11	3.2	635	55	433	186	259	67	982	62	14	70	9.0
12	3.6	494	52	424	173	302	82	1020	66	13	56	8.0
13	12	358	49	403	159	344	83	885	60	12	56	7.0
14	39	235	50	417	145	356	136	686	44	14	78	6.2
15	85	163	72	439	136	332	213	518	32	12	82	5.6
16	109	127	114	457	132	281	242	369	24	15	73	5.2
17	125	108	152	453	142	230	239	234	19	15	52	4.6
18	132	97	176	457	158	188	218	183	16	14	42	4.4
19	115	88	196	483	172	160	280	163	14	15	31	4.1
20	89	80	204	906	181	139	471	148	13	14	25	3.6
21	66	73	218	1360	183	119	668	131	11	13	23	3.4
22	50	68	255	1600	178	108	901	119	10	11	28	3.3
23	40	67	292	1490	168	101	918	110	9.6	8.3	47	3.1
24	32	72	323	1060	156	94	760	91	19	7.4	48	3.1
25	28	80	338	885	143	88	588	75	21	28	43	2.9
26	70	87	328	1020	131	92	459	63	16	158	32	2.7
27	159	95	297	1300	121	208	823	55	15	329	25	2.6
28	187	102	264	1490	115	333	1920	48	23	439	21	2.6
29	218	103	231	1340	---	409	3200	44	28	439	23	2.5
30	231	101	203	1030	---	437	2900	40	28	357	25	2.5
31	236	---	264	748	---	418	---	37	---	203	24	---
TOTAL	2071.6	6433	4987	21800	5991	7352	16707	13490	885.6	2426.7	2224	301.4
MEAN	66.8	214	161	703	214	237	557	435	29.5	78.3	71.7	10.0
MAX	236	735	338	1600	572	437	3200	1700	66	439	167	42
MIN	3.2	67	49	270	115	88	66	37	9.6	7.4	21	2.5
CFSM	.40	1.27	.96	4.19	1.27	1.41	3.32	2.59	.18	.47	.43	.06
IN.	.46	1.42	1.10	4.83	1.33	1.63	3.70	2.99	.20	.54	.49	.07

CAL YR 1977 TOTAL 62921.9 MEAN 172 MAX 1300 MIN 3.2 CFSM 1.02 IN 13.93
WTR YR 1978 TOTAL 84669.3 MEAN 232 MAX 3200 MIN 2.5 CFSM 1.38 IN 18.75

02092500 TRENT RIVER NEAR TRENTON, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
JAN				
20...	1230	854	18	42
FEB				
09...	1200	204	3	1.7
MAY				
04...	1530	450	8	9.7

02093229 HEWLETTS CREEK AT SECONDARY ROAD 1102 NEAR WILMINGTON, N. C.

LOCATION.--Lat 34°11'28", long 77°53'32", New Hanover County, Hydrologic Unit 03030005, on right bank 50 ft (15 m) upstream from culvert on Secondary Road 1102 and 3.8 mi (6.1 km) southeast of Wilmington.

DRAINAGE AREA.--1.2 mi² (3.1 km²).

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

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

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 176 of this report. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 312 ft³/s (8.84 m³/s) Nov. 6, 1977, gage height, 3.71 ft (1.131 m); no flow for part of July 26, 1977.

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

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 6	0415	*312	8.84	3.71	1.131	July 2	1100	221	6.26	3.25	0.991
Jan. 19	1600	154	4.36	2.87	0.875	July 11	1600	260	7.36	3.45	1.052
Jan. 25	1130	219	6.20	3.24	0.988	July 16	1515	109	3.09	2.57	0.783
Apr. 13	1245	107	3.03	2.56	0.780	July 25	1730	289	8.18	3.60	1.097

Minimum discharge, 0.31 ft³/s (0.009 m³/s) Oct. 12, gage height, 1.31 ft (0.399 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.5	4.2	4.3	4.3	2.6	2.3	3.9	1.3	1.5	3.5	2.0
2	1.5	1.3	3.4	3.6	6.2	2.0	2.0	3.4	1.3	27	3.5	2.3
3	1.3	1.5	2.7	3.0	4.8	6.0	2.0	2.9	1.3	5.5	3.5	2.0
4	1.3	1.5	2.6	2.6	4.1	3.2	2.0	6.4	1.3	4.7	3.2	2.0
5	1.2	2.0	4.7	2.3	3.7	2.6	2.0	3.5	1.3	8.7	9.3	4.7
6	1.0	86	7.3	2.3	3.5	2.3	1.7	2.9	1.3	3.5	6.8	2.0
7	1.0	14	3.2	3.2	3.2	2.3	1.7	2.3	1.7	2.9	4.7	2.0
8	.86	6.8	2.5	3.6	2.9	2.3	1.7	2.6	2.3	2.3	3.9	1.7
9	.86	4.7	2.3	10	2.9	2.3	1.5	13	2.0	2.0	3.2	1.7
10	.86	3.6	2.1	4.0	2.6	4.3	1.7	6.4	1.3	2.0	2.9	1.7
11	.73	3.4	1.8	3.5	2.6	2.6	1.7	3.9	1.3	35	5.5	1.7
12	2.1	2.8	1.7	3.2	2.6	2.3	2.0	3.2	1.3	10	18	1.5
13	7.8	2.6	1.7	9.8	2.6	2.3	9.3	5.1	1.3	5.1	7.7	2.9
14	3.0	2.6	2.3	5.5	2.6	2.3	2.9	5.1	1.3	3.9	5.5	2.0
15	2.1	2.6	2.8	4.0	2.3	2.3	2.3	3.9	1.2	3.2	4.7	1.5
16	1.5	2.4	2.4	3.4	3.2	2.3	2.0	3.2	1.2	25	3.9	1.5
17	1.3	2.3	2.3	6.6	3.2	2.0	2.3	2.9	.86	12	3.2	1.5
18	1.2	2.0	2.4	5.5	2.6	2.0	2.6	2.6	.86	6.4	3.2	1.3
19	.93	1.8	2.3	31	2.3	2.0	3.9	2.6	.86	4.7	2.9	1.3
20	.86	1.7	2.1	26	2.0	2.0	2.9	2.3	.86	3.5	2.6	1.2
21	.86	1.7	3.1	8.7	2.0	2.0	2.3	2.3	.86	3.2	2.6	1.2
22	.86	1.9	3.1	6.2	1.7	2.0	2.0	1.7	.86	2.9	2.3	1.3
23	.86	2.6	2.6	5.2	1.7	2.2	2.0	1.7	.86	2.6	2.3	1.3
24	.86	2.2	2.5	4.4	1.7	2.3	1.7	1.7	.86	2.3	2.0	1.3
25	.86	2.3	2.4	38	1.7	2.3	2.3	1.7	.86	39	1.7	1.2
26	10	2.6	2.4	20	1.7	12	4.7	1.7	.86	21	2.3	1.3
27	2.4	2.4	2.1	9.1	1.7	6.0	2.9	1.5	1.0	8.7	2.6	1.3
28	2.2	2.5	2.0	6.9	2.0	3.5	2.6	1.5	1.0	6.8	2.3	1.3
29	2.3	2.6	2.0	5.6	---	3.2	2.0	1.5	1.0	5.5	2.3	1.2
30	1.9	3.0	2.9	5.1	---	2.6	1.7	1.5	1.0	5.1	2.0	1.2
31	1.5	---	8.0	4.7	---	2.3	---	1.3	---	4.3	2.0	---
TOTAL	57.50	170.9	89.9	251.3	78.4	92.4	74.7	100.2	35.30	270.3	126.1	51.1
MEAN	1.85	5.70	2.90	8.11	2.80	2.98	2.49	3.23	1.18	8.72	4.07	1.70
MAX	10	86	8.0	38	6.2	12	9.3	13	2.3	39	18	4.7
MIN	.73	1.3	1.7	2.3	1.7	2.0	1.5	1.3	.86	1.5	1.7	1.2
CFSM	1.54	4.75	2.42	6.76	2.33	2.48	2.08	2.69	.98	7.27	3.39	1.42
IN.	1.78	5.29	2.78	7.78	2.43	2.86	2.31	3.10	1.09	8.37	3.91	1.58

CAL YR 1977 TOTAL 1009.54 MEAN 2.77 MAX 86 MIN .07 CFSM 2.31 IN 31.27
WTR YR 1978 TOTAL 1398.10 MEAN 3.83 MAX 86 MIN .73 CFSM 3.19 IN 43.31

02093229 HEWLETTS CREEK AT SECONDARY ROAD 1102 NEAR WILMINGTON, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 12...	0925	.70	9	.02
NOV 18...	0850	2.0	5	.03
JAN 06...	0945	2.3	8	.05
FEB 07...	1120	3.2	7	.06
MAR 23...	0830	1.9	12	.06
MAY 02...	1340	3.3	8	.07
JUN 21...	1545	.85	4	.01
JUL 26...	1525	13	9	.32
AUG 28...	1220	2.2	2	.01

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) National Geodetic Vertical Datum of 1929. 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 178 of this report.

AVERAGE DISCHARGE.--23 years, 22.8 ft³/s (0.646 m³/s), 15.56 in/yr (395 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,950 ft³/s (112 m³/s) Oct. 10, 1959, gage height, 10.94 ft (3.335 m), from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of contracted-opening measurement of peak flow; maximum gage height, 11.68 ft (3.560 m) July 16, 1978; 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. 26	1530	652	18.5	8.74	2.664	July 16	1200	*2350	66.6	*11.68	3.560
Jan. 26	0600	1550	43.9	10.67	3.252	Aug. 4	0930	463	13.1	7.91	2.411
Mar. 10	2000	373	10.6	7.39	2.252	Aug. 6	1730	555	15.7	8.34	2.542
May 4	2400	1360	38.5	10.38	3.164	Sept. 3	1630	530	15.0	8.23	2.508
July 11	1300	727	20.6	9.02	2.749						

Minimum discharge, 6.2 ft³/s (0.176 m³/s) Oct. 4, 8, gage height, 2.85 ft (0.867 m); minimum daily, 7.0 ft³/s (0.198 m³/s) Oct. 4, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	14	27	15	24	18	21	25	14	11	12	31
2	11	14	20	14	24	17	19	22	14	15	15	19
3	7.9	15	17	12	22	23	19	19	14	71	27	238
4	7.0	28	15	12	21	23	19	274	14	22	277	64
5	7.2	23	39	12	20	20	18	536	12	16	194	31
6	7.2	31	53	16	20	20	18	75	12	15	428	22
7	7.4	29	24	18	19	20	18	45	13	13	184	20
8	7.0	23	19	99	18	21	17	109	21	12	93	18
9	12	20	18	162	18	23	16	81	47	11	189	16
10	9.9	18	15	46	18	231	15	44	24	10	86	16
11	9.3	16	13	26	18	139	16	33	16	375	44	16
12	8.8	15	12	21	17	49	18	29	15	55	38	15
13	11	14	13	33	18	34	16	47	13	28	27	15
14	16	14	16	64	19	34	15	47	12	38	22	14
15	11	12	16	46	19	30	15	33	12	40	21	14
16	11	10	14	28	18	25	13	30	12	1070	19	15
17	11	11	15	69	18	22	14	26	12	155	18	13
18	9.9	11	31	118	18	21	15	22	11	48	16	12
19	9.3	9.5	25	64	18	20	18	21	11	34	16	13
20	9.5	9.9	20	105	18	19	16	19	11	25	14	13
21	9.2	9.3	19	94	18	19	14	18	12	20	14	13
22	9.2	10	16	40	18	18	14	17	16	17	14	32
23	8.4	18	15	30	16	17	13	17	21	15	13	50
24	8.8	14	14	26	17	17	14	18	14	13	13	19
25	9.2	13	19	287	16	20	29	17	28	14	13	17
26	310	16	15	818	16	83	219	16	44	14	40	15
27	82	12	14	119	15	48	154	15	28	13	18	15
28	30	14	13	55	16	32	55	14	15	30	15	14
29	21	19	12	38	---	26	35	14	13	16	14	13
30	17	17	14	30	---	23	29	15	12	13	14	13
31	15	---	18	26	---	21	---	14	---	12	15	---
TOTAL	710.6	479.7	591	2543	517	1133	912	1712	513	2241	1923	816
MEAN	22.9	16.0	19.1	82.0	18.5	36.5	30.4	55.2	17.1	72.3	62.0	27.2
MAX	310	31	53	818	24	231	219	536	47	1070	428	238
MIN	7.0	9.3	12	12	15	17	13	14	11	10	12	12
CFSM	1.15	.80	.96	4.12	.93	1.83	1.53	2.77	.86	3.63	3.12	1.37
IN.	1.33	.90	1.10	4.75	.97	2.12	1.70	3.20	.96	4.19	3.59	1.53

CAL YR 1977 TOTAL 5659.4 MEAN 15.5 MAX 452 MIN 1.7 CFSM .78 IN 10.58
WTR YR 1978 TOTAL 14091.3 MEAN 38.6 MAX 1070 MIN 7.0 CFSM 1.94 IN 26.34

CAPE FEAR RIVER BASIN

02093800 REEDY FORK NEAR OAK RIDGE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
FEB				
03...	1200	22	44	2.6
MAR				
21...	1015	22	37	2.2
APR				
18...	1215	14	13	.49
27...	1150	156	300	126
JUN				
09...	1515	39	125	13
13...	1135	13	24	.84
JUL				
24...	1355	15	62	2.5
AUG				
08...	0900	95	201	52
09...	1305	118	268	85
10...	1112	82	220	49
SEP				
19...	1035	13	11	.39

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) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated since 1923 by Lake Brandt 14 mi (23 km) upstream (see p. 354), since 1957 by Lake Higgins on Brush Creek, a tributary to Lake Brandt, (see p. 354), 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 17.7 ft³/s (0.50 m³/s) and an average of 18.0 ft³/s (0.51 m³/s) from Lake Townsend for municipal water supply. Cone Mills diverted from Richland Lake an average of 2.6 ft³/s (0.074 m³/s) during the year. Suspended-sediment records for the current year are published on page 180 of this report.

AVERAGE DISCHARGE.--50 years, 100 ft³/s (2.832 m³/s), 10.21 in/yr (259 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, 3,300 ft³/s (93.5 m³/s) May 5, gage height, 11.25 ft (3.429 m); minimum, 4.1 ft³/s (0.116 m³/s) Oct. 5, 6, gage height, 0.61 ft (0.186 m); minimum daily, 4.2 ft³/s (0.119 m³/s) Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	8.1	45	54	243	20	25	343	12	7.9	13	64
2	5.2	7.7	24	59	474	19	21	48	11	7.7	11	51
3	5.8	8.2	14	55	383	34	18	24	10	14	10	21
4	5.0	10	12	44	83	51	19	928	10	15	45	18
5	4.3	15	74	37	36	41	21	3090	9.9	23	757	118
6	4.2	37	83	41	34	33	20	2030	36	22	1130	100
7	4.4	32	32	56	290	30	20	719	52	19	1070	75
8	4.7	20	17	316	51	32	19	1190	116	14	997	57
9	4.9	12	13	1170	27	41	19	669	106	12	504	45
10	5.4	9.6	13	725	25	828	18	551	44	10	618	32
11	5.4	8.2	10	565	31	759	19	407	25	28	461	21
12	5.3	7.5	9.5	384	44	624	27	98	24	347	464	16
13	5.4	7.0	9.2	352	55	483	20	69	29	409	267	13
14	7.5	6.6	15	419	419	492	19	368	23	332	37	11
15	7.2	6.3	28	96	95	119	18	361	16	77	19	10
16	6.1	6.3	18	41	64	47	16	115	14	915	16	11
17	6.2	6.6	20	289	28	42	15	71	14	2720	14	11
18	5.9	6.9	438	607	26	41	66	33	13	1330	14	10
19	5.6	6.5	541	659	26	40	61	25	11	425	13	9.5
20	5.4	6.2	381	1330	25	40	20	20	9.8	306	12	9.1
21	5.3	6.2	82	1220	285	39	17	18	9.3	288	11	9.1
22	5.2	6.4	27	1120	55	42	16	17	9.8	68	10	9.0
23	5.4	7.4	23	950	20	38	13	17	11	18	9.6	10
24	5.5	7.7	29	198	18	37	13	16	10	12	9.2	13
25	5.6	7.8	52	1220	23	38	102	16	41	58	8.8	46
26	175	8.8	65	2700	26	144	2250	14	14	23	8.5	31
27	46	8.4	59	2220	19	493	2080	12	12	13	9.7	19
28	18	8.1	54	1390	17	441	1340	12	10	15	9.2	14
29	12	13	47	771	---	117	582	11	9.0	14	9.3	11
30	9.9	19	42	540	---	34	456	11	8.3	11	120	9.6
31	8.7	---	50	325	---	31	---	11	---	10	27	---
TOTAL	405.4	320.5	2326.7	19953	2922	5270	7350	11314	720.1	7563.6	6704.3	874.3
MEAN	13.1	10.7	75.1	644	104	170	245	365	24.0	244	216	29.1
MAX	175	37	541	2700	474	828	2250	3090	116	2720	1130	118
MIN	4.2	6.2	9.2	37	17	19	13	11	8.3	7.7	8.5	9.0

CAL YR 1977 TOTAL 13555.5 MEAN 37.1 MAX 820 MIN 1.5
WTR YR 1978 TOTAL 65723.9 MEAN 180 MAX 3090 MIN 4.2

02094500 REEDY FORK NEAR GIBSONVILLE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
DEC				
19...	0955	581	116	182
FEB				
03...	1515	420	29	33
MAR				
21...	1425	39	36	3.8
APR				
18...	1420	36	14	1.4
JUN				
13...	1530	30	32	2.6
JUL				
24...	0953	13	12	.42
AUG				
08...	1215	1020	66	182
31...	1202	22	11	.65
SEP				
19...	1205	9.8	9	.24

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) National Geodetic Vertical Datum of 1929 (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 182 of this report.

AVERAGE DISCHARGE.--50 years, 53.6 ft³/s (1.518 m³/s), 19.67 in/yr (500 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,890 ft³/s (195 m³/s) May 4, 1978, gage height, 16.92 ft (5.157 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 1,200 ft³/s (34 m³/s), revised, 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. 26	1000	2140	60.6	11.27	3.435	Apr. 26	1030	2630	74.5	11.98	3.652
Jan. 17	0130	1310	37.1	8.87	2.704	May 4	2130	*6890	195	*16.92	5.157
Jan. 26	0030	3400	96.3	12.96	3.950	July 11	0700	2350	66.6	11.59	3.533
Mar. 10	0900	1870	53.0	10.67	3.252	July 16	1100	3800	108	13.47	4.106

Minimum discharge, 16 ft³/s (0.45 m³/s) Nov. 21; minimum gage height, 2.01 ft (0.613 m) Oct. 6, 7, 8; minimum daily, 22 ft³/s (0.62 m³/s) Nov. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	30	113	36	45	64	77	89	37	28	103	84
2	60	29	48	35	57	51	75	72	33	88	33	35
3	29	35	40	35	47	186	68	49	31	108	45	375
4	26	62	42	33	42	110	76	1760	30	35	150	59
5	27	57	354	34	38	78	71	1020	30	32	98	37
6	25	99	131	120	41	66	60	184	83	32	300	35
7	28	52	52	67	39	61	59	152	148	29	79	33
8	26	38	42	457	38	91	54	531	214	29	46	32
9	70	33	51	425	39	78	54	388	335	27	49	31
10	33	32	38	77	39	1060	53	132	88	28	274	29
11	28	30	35	53	37	192	47	78	51	842	55	31
12	30	29	35	157	36	96	57	61	39	80	44	31
13	77	27	35	352	44	76	45	167	36	41	37	30
14	81	28	102	153	44	119	41	90	34	140	35	29
15	34	27	73	74	38	79	35	64	33	106	34	30
16	43	25	43	167	39	66	33	62	34	1740	34	30
17	35	30	138	405	40	59	39	50	34	170	32	28
18	31	27	413	84	37	55	40	46	30	95	31	28
19	30	25	88	206	42	53	75	43	32	47	30	29
20	30	22	85	377	38	53	44	42	32	41	30	28
21	29	24	68	137	37	52	39	38	94	37	30	29
22	28	34	47	72	52	51	34	37	76	33	30	53
23	26	50	41	54	41	49	36	37	55	31	30	53
24	29	26	43	46	39	48	38	38	179	34	29	32
25	29	42	91	953	37	74	288	37	63	42	29	32
26	792	46	39	1360	35	352	1390	36	59	36	77	31
27	69	27	37	130	35	93	489	34	41	34	35	28
28	41	99	34	83	45	67	142	33	32	105	34	29
29	33	59	34	66	---	60	113	36	31	37	31	30
30	28	127	48	60	---	63	102	35	30	32	44	29
31	29	---	51	55	---	63	---	39	---	41	33	---
TOTAL	1909	1271	2491	6363	1141	3665	3774	5480	2044	4200	1941	1390
MEAN	61.6	42.4	80.4	205	40.8	118	126	177	68.1	135	62.6	46.3
MAX	792	127	413	1360	57	1060	1390	1760	335	1740	300	375
MIN	25	22	34	33	35	48	33	33	30	27	29	28

CAL YR 1977 TOTAL 20352 MEAN 55.8 MAX 2200 MIN 17
WTR YR 1978 TOTAL 35669 MEAN 97.7 MAX 1760 MIN 22

02095500 NORTH BUFFALO CREEK NEAR GREENSBORO, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
26...	1325	1610	174	756	78
DEC					
19...	1205	81	49	11	--
MAR					
21...	1307	56	16	2.4	--
MAY					
08...	1202	561	138	209	--
JUN					
13...	1406	43	14	1.6	--
AUG					
08...	1025	37	18	1.8	--
08...	1245	44	20	2.4	--

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 mi² (1,551 km²).

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) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Some diurnal fluctuation and occasional regulation. City of Burlington diverted from two reservoirs on Stony Creek (see p. 354) an average of 16.2 ft³/s (0.46 m³/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 184 of this report.

AVERAGE DISCHARGE.--50 years, 569 ft³/s (16.11 m³/s), 12.90 in/yr (328 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,000 ft³/s (1,050 m³/s) Sept. 18, 1945, gage height, 31.10 ft (9.479 m), from floodmark; minimum 3 ft³/s (0.085 m³/s) Sept. 5, 1930, gage height, 0.92 ft (0.280 m); minimum daily, 5 ft³/s (0.14 m³/s) Sept. 6, 1930.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 9	0800	8320	236	16.50	5.029
Jan. 26	1200	16300	462	22.60	6.888
Mar. 10	2300	9150	259	17.46	5.322
Apr. 26	2000	*19200	544	*24.10	7.346
May 5	0500	18400	521	23.72	7.230
May 9	0330	8940	253	17.21	5.246
July 17	1030	6130	174	13.82	4.212

Minimum discharge, 89 ft³/s (2.52 m³/s) Oct. 1, 7, gage height, 1.64 ft (0.500 m); minimum daily, 96 ft³/s (2.72 m³/s) Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97	283	965	379	900	353	442	1440	216	177	213	925
2	102	230	660	351	886	392	411	916	210	162	212	833
3	165	208	452	325	915	480	374	619	200	259	420	555
4	123	217	383	292	677	1030	345	2820	191	345	790	920
5	107	348	813	266	456	822	358	14500	185	260	1310	415
6	105	432	2390	326	425	637	331	7210	205	262	3320	388
7	99	664	867	781	492	569	316	3000	531	240	3710	330
8	96	452	540	1750	498	581	305	5180	534	197	2810	266
9	106	376	437	7140	348	814	294	6680	1300	176	2370	226
10	162	321	382	2790	351	6060	284	2910	1040	169	2480	197
11	138	266	308	1780	344	6580	279	1780	506	489	1640	183
12	115	233	263	1330	340	2910	282	1180	372	1100	1240	176
13	149	209	242	1630	343	2100	291	1780	297	616	914	173
14	302	192	293	3350	555	1610	269	2920	253	546	485	164
15	284	180	733	2130	586	1470	246	1360	223	592	327	159
16	193	180	486	1110	383	910	236	1020	209	2990	278	154
17	173	181	381	1470	356	683	224	702	198	5560	250	155
18	157	187	1390	4230	348	549	237	547	188	3220	229	152
19	137	180	1760	2400	346	481	315	460	182	1860	209	145
20	136	167	1170	4650	345	441	326	397	175	1200	192	147
21	125	162	1010	4090	448	415	279	359	180	875	182	145
22	117	169	597	2500	507	404	259	322	329	522	170	151
23	112	208	447	2020	375	380	239	293	441	266	167	217
24	110	249	383	1320	361	368	228	285	412	217	161	202
25	108	215	435	4920	372	388	329	277	534	218	159	170
26	2530	276	514	14000	382	696	11700	261	330	401	168	185
27	2520	262	385	8140	334	1650	11800	251	314	354	463	173
28	728	236	341	4800	296	1110	5770	234	267	315	270	165
29	577	469	305	2710	---	863	2920	225	226	306	239	141
30	480	373	293	1640	---	596	1830	220	208	249	267	141
31	387	---	362	1190	---	506	---	228	---	217	305	---
TOTAL	10740	8125	19987	85810	12969	36848	41519	60376	10448	24360	25950	8353
MEAN	346	271	645	2768	463	1189	1384	1948	348	786	837	278
MAX	2530	664	2390	14000	915	6580	11800	14500	1300	5560	3710	925
MIN	96	162	242	266	296	353	224	220	175	162	159	141
CFSM	.58	.45	1.08	4.62	.77	1.99	2.31	3.25	.58	1.31	1.40	.46
IN.	.67	.50	1.24	5.33	.81	2.29	2.58	3.75	.65	1.51	1.61	.52

CAL YR 1977 TOTAL 124152 MEAN 340 MAX 4640 MIN 59 CFSM .57 IN 7.71
WTR YR 1978 TOTAL 345485 MEAN 947 MAX 14500 MIN 96 CFSM 1.58 IN 21.46

CAPE FEAR RIVER BASIN

02096500 HAW RIVER AT HAW RIVER, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
27...	0925	3140	334	2830	90
DEC					
13...	1205	231	12	7.5	--
JAN					
18...	0920	4710	390	4960	--
MAY					
08...	1525	6450	120	2090	--
JUN					
14...	1242	250	22	15	--
JUL					
19...	1310	1800	79	384	--
AUG					
08...	1010	2810	316	2400	--
09...	0915	2440	83	547	--
SEP					
01...	1028	1070	176	508	--

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 fair except those for periods of no gage-height record, Jan. 5-18, Jan. 26 to Feb. 27, May 14 to June 14, which are poor. Suspended-sediment records for the current year are published on page 186 of this report.

AVERAGE DISCHARGE.--21 years, 112 ft³/s (3.172 m³/s), 13.11 in/yr (333 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)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 26	1115	2420	68.5	14.51	4.423	Apr. 26	1315	4920	139	21.09	6.428
Jan. 26	0700	5210	148	21.73	6.623	May 5	0145	*5650	160	*22.68	6.913
Mar. 10	1100	2970	84.1	16.23	4.947	May 9	0545	2420	68.5	14.49	4.417

Minimum discharge, 9.9 ft³/s (0.28 m³/s) Sept. 21, gage height, 1.46 ft (0.445 m); minimum daily, 10 ft³/s (0.28 m³/s) Sept. 19, 20, 21, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	54	363	72	100	108	91	180	56	21	501	28
2	14	50	200	64	140	107	81	155	52	20	109	23
3	50	49	120	56	120	171	74	132	50	28	62	47
4	23	53	89	50	100	349	69	1190	47	31	76	126
5	15	66	257	50	90	249	69	3160	47	23	124	41
6	14	104	546	120	90	197	65	541	100	20	229	29
7	13	167	191	300	100	174	61	296	180	18	237	22
8	12	100	120	800	90	162	58	1030	300	16	130	19
9	14	70	98	2000	80	204	54	1760	450	15	82	17
10	18	59	85	500	75	2230	51	559	250	14	496	15
11	18	50	70	250	75	1210	50	280	120	253	180	15
12	15	45	64	350	75	453	51	199	80	60	90	14
13	17	42	63	500	75	291	49	341	60	29	62	14
14	54	41	73	800	90	251	46	600	50	24	48	13
15	55	40	193	300	130	267	42	350	42	72	42	13
16	36	40	113	200	90	198	39	200	38	863	38	13
17	33	38	98	500	80	167	38	140	36	317	34	12
18	28	38	339	1000	80	144	40	120	33	101	29	11
19	25	34	291	480	80	133	48	95	30	57	26	10
20	23	31	169	1330	76	125	58	85	28	40	23	10
21	22	31	143	813	90	116	47	75	27	31	21	10
22	21	34	128	356	130	108	40	70	43	25	20	11
23	20	43	97	243	100	97	36	65	63	21	19	21
24	19	48	86	201	90	89	35	62	48	19	17	14
25	19	43	131	1610	88	87	83	60	46	18	16	13
26	1580	90	117	3800	85	253	3050	58	39	20	15	13
27	522	70	81	800	80	283	1300	56	57	19	17	12
28	180	59	69	400	82	164	533	54	38	19	16	11
29	111	161	65	200	---	127	292	54	28	20	16	12
30	81	128	62	140	---	111	208	56	24	17	24	10
31	67	---	79	110	---	98	---	58	---	34	25	---
TOTAL	3131	1878	4640	18395	2581	8723	6758	12081	2462	2265	2824	619
MEAN	101	62.6	150	593	92.2	281	225	390	82.1	73.1	91.1	20.6
MAX	1580	167	546	3800	140	2230	3050	3160	450	863	501	126
MIN	12	31	62	50	75	87	35	54	24	14	15	10
CFSM	.87	.54	1.29	5.11	.80	2.42	1.94	3.36	.71	.63	.79	.18
IN.	1.00	.60	1.49	5.90	.83	2.80	2.17	3.87	.79	.73	.91	.20

CAL YR 1977 TOTAL 30836.60 MEAN 84.5 MAX 2350 MIN .90 CFSM .73 IN 9.89
WTR YR 1978 TOTAL 66357.00 MEAN 182 MAX 3800 MIN 10 CFSM 1.57 IN 21.28

CAPE FEAR RIVER BASIN

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

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
OCT							
26...	1700	2000	641	3460	--	--	--
NOV							
07...	1620	144	39	15	--	--	--
DEC							
13...	1013	65	6	1.1	--	--	--
JAN							
25...	1045	1660	975	4370	9	15	20
25...	1600	2700	544	3970	--	--	--
26...	1130	4610	362	4510	--	--	--
26...	1317	4220	162	1850	20	27	45
FEB							
28...	1140	80	7	1.5	--	--	--
APR							
06...	1043	64	10	1.7	--	--	--
26...	1330	4440	347	4160	--	--	--
26...	1630	4040	220	2400	--	--	--
27...	1000	1330	146	524	--	--	--
MAY							
08...	1352	1300	157	551	--	--	--
08...	1616	1250	172	580	--	--	--
JUN							
14...	0925	49	47	6.2	--	--	--
JUL							
18...	1113	102	69	19	--	--	--
AUG							
08...	1055	140	108	41	--	--	--
09...	0828	81	74	16	--	--	--
SEP							
01...	1310	30	14	1.1	--	--	--
19...	1412	11	16	.48	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT						
26...	--	--	--	--	--	89
NOV						
07...	--	--	--	--	--	--
DEC						
13...	--	--	--	--	--	--
JAN						
25...	31	41	59	79	97	--
25...	--	--	--	--	--	--
26...	--	--	--	--	--	--
26...	59	68	77	84	93	--
FEB						
28...	--	--	--	--	--	--
APR						
06...	--	--	--	--	--	--
26...	--	--	--	--	--	--
26...	--	--	--	--	--	--
27...	--	--	--	--	--	--
MAY						
08...	--	--	--	--	--	--
08...	--	--	--	--	--	--
JUN						
14...	--	--	--	--	--	--
JUL						
18...	--	--	--	--	--	--
AUG						
08...	--	--	--	--	--	--
09...	--	--	--	--	--	--
SEP						
01...	--	--	--	--	--	--
19...	--	--	--	--	--	--

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) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Considerable regulation for short periods at low flow caused by powerplant above station. Gage height telemeter at station. Suspended-sediment records for the current year are published on page 467 of this report.

AVERAGE DISCHARGE.--5 years, 1,367 ft³/s (38.71 m³/s), 14.46 in/yr (367 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,800 ft³/s (1,297 m³/s) Mar. 14, 1975, gage height, 17.67 ft (5.386 m); minimum, 1.6 ft³/s (0.045 m³/s) Sept. 19, 20, 1978, gage height, 2.00 ft (0.610 m); minimum daily, 29 ft³/s (0.82 m³/s) Aug. 5, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 15,000 ft³/s (425 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 9	1245	20800	589	13.01	3.965	May 5	1645	28000	793	14.66	4.468
Jan. 26	1645	30400	861	15.09	4.599	May 9	1215	19900	564	12.77	3.892
Mar. 11	0215	19200	544	12.57	3.831	May 14	0315	15300	433	11.40	3.475
Apr. 27	0530	*31700	898	*15.32	4.670						

Minimum discharge, 1.6 ft³/s (0.045 m³/s) Sept. 19, 20, gage height, 2.00 ft (0.610 m); minimum daily, 53 ft³/s (1.5 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	590	1380	811	1740	907	984	2420	467	259	1910	688
2	221	465	1850	750	1470	1010	897	1900	421	263	1500	1720
3	341	432	1100	667	1580	1270	811	1320	387	250	640	1490
4	306	502	818	594	1460	2910	753	2330	409	434	1270	1620
5	256	563	734	533	1100	2520	720	24100	405	464	1710	935
6	183	814	4090	535	972	1860	714	13900	506	355	4090	597
7	67	1520	2420	1280	866	1530	675	5110	1400	338	5580	512
8	142	1220	1250	1640	998	1360	613	7950	1450	305	4770	420
9	143	849	913	16900	828	1700	610	16300	1760	259	3380	341
10	218	689	782	7790	763	12700	600	7770	2370	243	3470	291
11	119	562	662	3380	739	16000	573	3740	1250	304	3430	266
12	256	455	557	2400	720	6250	568	2530	777	1430	1860	267
13	128	408	495	3330	720	4130	570	3050	609	879	1450	284
14	666	385	505	9280	748	3030	566	10600	504	725	1040	246
15	952	358	1410	6470	1160	2900	500	4120	434	697	621	223
16	578	300	1520	3150	874	2180	489	2610	388	3490	488	122
17	363	321	955	2650	829	1680	470	1860	328	7040	417	191
18	347	328	1460	9820	796	1370	455	1460	334	4770	380	225
19	246	264	3320	5820	768	1190	499	1190	362	2640	310	211
20	253	297	2110	12400	757	1070	644	1010	306	1690	302	158
21	208	347	2220	9300	726	968	626	889	288	1230	302	150
22	126	278	1610	5050	1020	925	511	800	314	930	227	190
23	182	309	1080	3500	924	866	489	709	774	538	236	122
24	234	311	868	2660	815	815	461	660	772	375	227	290
25	94	414	856	9520	1050	819	577	630	659	270	224	314
26	6010	404	1200	27400	1530	1720	16500	595	792	538	221	219
27	7780	549	952	18000	1170	3120	26600	535	599	938	451	219
28	2130	486	747	7390	894	2290	10600	517	564	686	516	215
29	1210	588	647	4640	---	1760	5190	496	439	591	367	187
30	930	1000	595	2940	---	1330	3160	464	369	521	322	95
31	738	---	671	2150	---	1090	---	456	---	358	515	---
TOTAL	25480	16007	39777	182750	28017	83270	77425	122021	20437	33810	42226	12808
MEAN	822	534	1283	5895	1001	2686	2581	3936	681	1091	1362	427
MAX	7780	1520	4090	27400	1740	16000	26600	24100	2370	7040	5580	1720
MIN	53	264	495	533	720	815	455	456	288	243	221	95
CFSM	.64	.42	1.00	4.59	.78	2.09	2.01	3.07	.53	.85	1.06	.33
IN.	.74	.46	1.15	5.29	.81	2.41	2.24	3.54	.59	.98	1.22	.37

CAL YR 1977 TOTAL 278881 MEAN 764 MAX 10900 MIN 29 CFSM .60 IN 8.08
WTR YR 1978 TOTAL 684028 MEAN 1874 MAX 27400 MIN 53 CFSM 1.46 IN 19.82

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 , 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) National Geodetic Vertical Datum of 1929 (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 Mar. 28 to May 1, 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.

AVERAGE DISCHARGE.--13 years, 1,552 ft³/s (43.95 m³/s), 12.40 in/yr (315 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 discharge, 12,000 ft³/s (340 m³/s) Jan. 27. Maximum gage height, 15.78 ft (4.810 m) Jan. 26. Minimum daily discharge, 114 ft³/s (3.23 m³/s) Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	147	1870	1080	1320	8820	1310	1700	8500	675	394	690	564
2	114	1190	2110	1350	8400	1440	1400	8200	661	372	1480	940
3	180	762	1470	1160	7900	1550	1200	7630	632	353	1160	1210
4	364	867	1030	1050	7260	2700	1100	7010	647	423	1000	1400
5	339	760	898	893	6090	3720	980	8200	633	521	1230	1440
6	296	859	2550	855	3610	3740	970	9730	712	429	1820	1410
7	213	1360	4080	1200	1460	3380	920	8680	1160	406	2710	1140
8	161	1710	2180	2490	1340	2200	830	9160	1860	381	3220	890
9	161	1680	1290	7260	1230	2450	760	10300	1560	331	3270	616
10	156	1550	1020	9220	985	3230	730	10700	2620	310	3320	557
11	181	1270	891	8230	959	7540	700	9580	2420	307	3410	480
12	159	1020	747	7330	939	8260	680	8430	2120	926	3420	400
13	179	803	674	7200	897	8070	660	8360	1650	1090	3190	360
14	282	625	666	8270	926	7640	640	9390	1210	805	2890	325
15	759	573	1680	8970	1180	7360	620	9000	846	793	2480	315
16	835	494	2560	7900	1250	6440	580	8460	610	2040	2000	275
17	675	445	1860	7180	1050	6210	570	8020	520	4940	1490	220
18	489	397	1980	8380	1090	5540	540	7520	472	5620	900	236
19	365	378	3850	8630	1100	4500	630	6920	432	4880	700	242
20	263	353	3310	9110	1050	3320	700	6170	410	4000	550	229
21	250	369	2950	9780	993	1790	740	5870	381	2130	420	305
22	236	386	3150	8900	1080	1420	650	5050	340	1150	370	377
23	178	494	2200	8890	1300	1320	600	4340	852	786	320	290
24	175	384	1870	8320	1240	1240	550	3620	931	547	290	614
25	199	573	1490	8590	1430	1140	570	2560	879	357	280	651
26	4000	444	1680	10700	2040	1800	4000	1820	896	360	360	509
27	4490	579	1640	11800	2130	3460	9200	1100	853	720	380	280
28	4360	604	1190	11800	1550	3100	9000	824	815	780	409	325
29	3830	575	1020	11300	---	2600	8900	775	749	658	523	275
30	3220	989	912	10000	---	2300	8800	718	554	576	462	198
31	2560	---	1010	9350	---	2000	---	678	---	448	409	---
TOTAL	29816	24363	55038	217428	69299	112770	59920	197315	29094	37833	45153	17073
MEAN	962	812	1775	7014	2475	3638	1997	6365	970	1220	1457	569
MAX	4490	1870	4080	11800	8820	8260	9200	10700	2620	5620	3420	1440
MIN	114	353	666	855	897	1140	540	678	340	307	280	198
CFSM	.57	.48	1.04	4.13	1.46	2.14	1.18	3.74	.57	.72	.86	.34
IN.	.65	.53	1.20	4.76	1.52	2.47	1.31	4.32	.64	.83	.99	.37

CAL YR 1977 TOTAL 402778 MEAN 1104 MAX 8000 MIN 60 CFSM .65 IN 8.81
WTR YR 1978 TOTAL 895102 MEAN 2452 MAX 11800 MIN 114 CFSM 1.44 IN 19.59

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) National Geodetic Vertical Datum of 1929. 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 190 of this report.

AVERAGE DISCHARGE.--50 years, 16.1 ft³/s (0.456 m³/s), 14.87 in/yr (378 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. 26	0615	2250	63.7	5.08	1.548	May 4	1845	*3230	91.5	*7.07	2.155
Jan. 26	0015	2550	72.2	5.64	1.719	July 11	0400	1090	30.9	3.35	1.021
Mar. 10	0530	927	26.3	3.14	0.957	July 16	1100	2790	79.0	6.12	1.865
Apr. 26	0545	813	23.0	3.01	0.917	Aug. 10	0100	1930	54.7	4.53	1.381

Minimum discharge, 3.2 ft³/s (0.091 m³/s) Oct. 1, 7, 8, gage height, 0.32 ft (0.098 m); minimum daily, 3.4 ft³/s (0.096 m³/s) Oct. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	7.4	35	10	11	10	11	12	6.2	5.1	6.1	26
2	10	7.4	15	8.9	13	8.8	10	11	5.8	26	5.9	13
3	4.3	7.7	11	7.9	12	24	9.8	9.5	6.0	36	13	100
4	3.6	25	17	7.3	11	24	9.7	1070	5.9	9.6	94	30
5	3.6	16	120	7.3	10	16	9.4	170	5.6	7.0	44	16
6	3.8	30	45	17	10	15	9.2	35	5.5	6.2	256	14
7	3.4	18	16	17	9.0	14	9.2	23	6.0	5.6	74	11
8	3.4	11	11	220	8.7	15	8.9	119	14	5.4	26	10
9	9.4	8.5	10	126	9.1	16	8.5	99	66	5.6	42	9.3
10	5.0	7.3	8.5	27	9.7	367	8.2	28	20	5.5	378	8.7
11	4.5	6.4	7.7	16	9.2	62	8.1	18	8.7	215	26	8.6
12	4.1	5.9	7.2	13	8.8	26	8.9	15	7.5	15	18	8.3
13	9.0	5.6	7.2	63	9.3	19	7.8	32	6.5	9.2	13	8.0
14	10	5.4	11	73	9.9	28	7.2	22	5.8	9.4	11	8.0
15	7.5	5.4	12	33	9.2	21	7.1	16	5.7	32	9.7	7.6
16	11	5.4	9.0	18	9.0	16	7.1	15	5.6	1540	8.6	7.1
17	9.4	6.4	49	116	8.8	13	7.4	13	5.5	68	8.1	7.9
18	8.6	5.4	87	63	9.0	12	7.8	12	5.4	26	7.6	7.7
19	8.6	5.2	29	60	9.5	11	11	12	5.3	17	7.2	7.5
20	8.3	5.0	21	127	8.9	10	9.1	11	5.2	12	6.9	6.8
21	8.3	5.0	18	48	8.6	11	7.5	10	15	9.3	6.3	6.8
22	8.4	5.7	13	23	9.0	11	7.0	8.7	12	8.0	6.0	9.5
23	8.5	9.5	10	18	8.0	10	6.9	7.2	8.3	7.4	5.8	29
24	8.6	6.8	9.5	16	8.1	9.6	6.7	7.6	10	7.1	5.7	9.3
25	8.6	8.3	21	629	8.3	13	43	7.6	7.4	7.6	5.8	8.3
26	615	11	12	701	7.7	107	252	7.4	34	7.1	257	7.4
27	37	6.9	9.2	38	7.3	30	101	6.8	12	6.7	32	7.0
28	16	20	8.4	22	8.3	18	27	6.7	6.9	14	16	6.8
29	11	17	7.7	16	---	15	16	6.5	5.8	8.1	13	6.4
30	9.0	32	10	14	---	12	14	6.4	5.3	6.7	13	6.1
31	7.7	---	13	13	---	12	---	6.2	---	6.2	11	---
TOTAL	869.1	316.6	661.4	2568.4	260.4	976.4	656.5	1823.6	318.9	2143.8	1426.7	412.1
MEAN	28.0	10.6	21.3	82.9	9.30	31.5	21.9	58.8	10.6	69.2	46.0	13.7
MAX	615	32	120	701	13	367	252	1070	66	1540	378	100
MIN	3.4	5.0	7.2	7.3	7.3	8.8	6.7	6.2	5.2	5.1	5.7	6.1
CFSM	1.91	.72	1.45	5.64	.63	2.14	1.49	4.00	.72	4.71	3.13	.93
IN.	2.20	.80	1.67	6.50	.66	2.47	1.66	4.61	.81	5.42	3.61	1.04

CAL YR 1977 TOTAL 6113.3 MEAN 16.7 MAX 1250 MIN 1.1 CFSM 1.14 IN 15.47
WTR YR 1978 TOTAL 12433.9 MEAN 34.1 MAX 1540 MIN 3.4 CFSM 2.32 IN 31.46

02099000 EAST FORK DEEP RIVER NEAR HIGH POINT, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
OCT												
26...	1255	247	415	277	--	--	--	--	--	--	--	--
JAN												
25...	1150	890	890	2140	16	20	31	40	52	70	83	97
25...	1650	247	388	259	--	--	--	--	--	--	--	--
26...	1000	215	510	296	--	--	--	--	--	--	--	--
MAR												
07...	1345	14	12	.45	--	--	--	--	--	--	--	--
APR												
26...	1240	220	311	185	--	--	--	--	--	--	--	--

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) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records fair. Some regulation by High Point Lake and Oak Hollow Reservoir (see pp. 354, 355). City of High Point diverted an average of 17.3 ft³/s (0.49 m³/s) for municipal water supply during water year; 10.4 ft³/s (0.29 m³/s) was discharged as sewage effluent into Richland Creek above station and 4.8 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 192 of this report.

AVERAGE DISCHARGE.--50 years, 124 ft³/s (3.502 m³/s), 13.58 in/yr (345 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft³/s (566 m³/s) Sept. 25, 1947, gage height, 32.2 ft (9.81 m), from floodmark, from rating curve extended above 7,100 ft³/s (201 m³/s) on basis of contracted-opening measurement of peak flow at bridge 1.5 mi (2.4 km) upstream; minimum, 0.5 ft³/s (0.014 m³/s) Nov. 28, 1931, gage height, 1.41 ft (0.430 m); minimum daily, 1.2 ft³/s (0.034 m³/s) Nov. 12, 1933.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,600 ft³/s (74 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 26	1130	4760	135	18.60	5.669	May 5	0215	*9410	266	*25.06	7.638
Jan. 9	0300	2610	73.9	12.85	3.917	July 16	2100	3830	108	16.51	5.032
Jan. 26	0730	5620	159	20.19	6.154	Sept. 3	1330	2790	79.0	13.44	4.097
Mar. 10	0900	2940	83.3	13.95	4.252						

Minimum discharge, 17 ft³/s (0.48 m³/s) Oct. 1, gage height, 1.93 ft (0.588 m); minimum daily, 20 ft³/s (0.57 m³/s) Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	77	468	143	288	68	108	165	54	36	437	53
2	348	71	229	130	292	57	98	133	45	88	90	53
3	61	53	144	120	267	133	87	110	42	193	83	1290
4	33	182	112	183	169	156	84	1810	38	140	424	438
5	27	178	538	265	163	113	84	5080	36	75	308	144
6	24	365	603	311	137	101	78	647	37	55	1080	86
7	22	273	263	145	83	101	73	332	40	47	915	62
8	20	158	170	791	102	98	67	953	77	39	265	51
9	45	104	155	1380	105	108	64	1300	300	34	159	43
10	33	82	138	338	108	1770	64	460	271	34	558	42
11	24	69	125	236	123	492	64	269	122	333	213	44
12	22	56	122	228	116	289	78	203	82	208	107	39
13	34	49	119	581	153	198	65	298	64	95	64	36
14	77	45	175	815	217	223	62	338	53	78	55	29
15	39	41	234	480	209	215	56	235	46	111	45	27
16	29	38	151	348	207	151	51	194	40	2140	41	25
17	30	42	397	819	207	138	51	162	36	1230	39	22
18	28	38	1280	610	200	167	55	134	32	255	36	21
19	26	34	399	544	200	161	69	118	32	132	31	22
20	24	32	277	1040	186	188	67	103	37	88	27	21
21	54	33	251	674	147	235	65	92	37	68	26	21
22	204	36	191	408	148	246	55	89	57	56	26	21
23	190	61	163	356	141	186	49	80	44	47	24	67
24	41	56	154	335	137	77	49	76	35	45	24	68
25	47	73	240	1880	107	98	197	76	37	53	24	49
26	2310	138	170	4200	95	469	1790	66	81	51	634	42
27	671	72	142	859	92	220	989	56	123	44	148	34
28	242	144	133	413	63	215	412	52	71	83	72	29
29	142	246	125	335	---	181	238	52	52	69	50	24
30	101	281	138	312	---	147	183	54	46	51	55	23
31	85	---	165	300	---	118	---	55	---	240	48	---
TOTAL	5097	3127	7971	19579	4462	7119	5452	13792	2067	6218	6108	2926
MEAN	164	104	257	632	159	230	182	445	68.9	201	197	97.5
MAX	2310	365	1280	4200	292	1770	1790	5080	300	2140	1080	1290
MIN	20	32	112	120	63	57	49	52	32	34	24	21

CAL YR 1977 TOTAL 42067 MEAN 115 MAX 4940 MIN 11
WTR YR 1978 TOTAL 83918 MEAN 230 MAX 5080 MIN 20

CAPE FEAR RIVER BASIN

02099500 DEEP RIVER NEAR RANDLEMAN, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
NOV												
15...	1600	37	7	.70	--	--	--	--	--	--	--	--
DEC												
20...	1540	285	21	16	--	--	--	--	--	--	--	--
JAN												
25...	1310	3080	508	4230	11	24	30	48	62	84	94	98
25...	1800	1000	171	462	20	32	52	66	77	90	95	96
26...	1215	4900	264	3490	--	--	--	--	--	--	--	--
APR												
26...	1200	2540	350	2400	--	--	--	--	--	--	--	--
26...	1535	2160	219	1280	--	--	--	--	--	--	--	--
27...	1040	1150	98	304	--	--	--	--	--	--	--	--

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) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good. Flow slightly regulated by High Point Municipal Lake (see p. 355) and small powerplant reservoirs. Prior to January 1963 large diurnal fluctuation caused by powerplant immediately above station. Town of Asheboro diverted an average of 5.4 ft³/s (0.15 m³/s) for water supply from Pee Dee River basin and discharged an average of 4.8 ft³/s (0.14 m³/s) of sewage into the Deep River above the station. Suspended-sediment records for the current year are published on page 194 of this report.

AVERAGE DISCHARGE.--55 years, (1923-78) 350 ft³/s (9.912 m³/s), 13.74 in/yr (349 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)
Oct. 26	1130	13400	379	19.40	5.913	Apr. 26	1530	7270	206	12.29	3.746
Jan. 9	0800	6300	178	10.95	3.338	May 5	1200	12100	343	18.08	5.511
Jan. 26	0530	*14000	396	*20.10	6.126	May 9	0500	6510	184	11.24	3.426
Mar. 10	1430	6220	176	10.84	3.304						

Minimum discharge, 43 ft³/s (1.22 m³/s) Oct. 1, gage height, 0.82 ft (0.250 m); minimum daily, 43 ft³/s (1.22 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	185	1080	317	514	326	228	347	136	82	2330	144
2	920	173	541	287	506	344	227	307	122	73	322	143
3	457	162	335	253	523	466	233	291	108	71	203	1770
4	151	528	259	242	414	746	226	993	101	175	544	1230
5	111	591	648	374	374	550	284	8960	100	129	517	341
6	94	849	1610	452	374	434	355	1430	702	99	1700	190
7	82	764	608	600	287	408	337	680	255	85	1390	139
8	73	442	388	1370	274	359	319	2010	195	74	596	111
9	69	367	333	4350	357	374	294	4460	352	67	318	95
10	72	394	308	993	455	4640	270	1490	398	61	1070	91
11	86	352	262	541	442	2030	246	671	234	55	516	84
12	81	315	245	455	422	879	194	509	150	291	256	95
13	77	284	243	1660	402	641	178	792	126	153	182	90
14	246	213	267	2900	480	531	164	1220	103	102	140	85
15	214	121	608	1510	434	520	147	653	92	94	126	79
16	126	105	376	749	367	379	137	516	82	1120	114	70
17	97	104	328	1830	363	359	131	461	78	2130	108	65
18	91	108	2160	2390	326	340	138	401	74	405	100	63
19	81	94	997	1440	329	330	171	362	69	199	91	60
20	75	87	553	3360	326	328	210	333	65	133	84	56
21	72	86	579	1990	284	402	164	305	63	102	75	50
22	141	89	428	934	284	445	145	284	65	95	67	47
23	242	117	347	692	267	401	130	271	75	90	61	46
24	177	146	321	614	270	272	123	266	80	86	57	48
25	79	132	536	4250	260	262	449	256	129	97	54	65
26	7900	319	447	11400	222	955	4790	229	167	115	382	76
27	2150	217	326	2300	203	711	2220	201	256	104	336	75
28	614	161	294	915	250	469	989	169	140	99	153	69
29	370	549	266	670	---	399	535	136	102	99	107	63
30	267	357	267	577	---	321	390	127	92	106	103	58
31	210	---	352	545	---	252	---	124	---	236	336	---
TOTAL	15468	8411	16312	50960	10009	19873	14424	29254	4711	6827	12438	5598
MEAN	499	280	526	1644	357	641	481	944	157	220	401	187
MAX	7900	849	2160	11400	523	4640	4790	8960	702	2130	2330	1770
MIN	43	86	243	242	203	252	123	124	63	55	54	46
CFSM	1.44	.81	1.52	4.75	1.03	1.85	1.39	2.73	.45	.64	1.16	.54
IN.	1.66	.90	1.75	5.48	1.08	2.14	1.55	3.15	.51	.73	1.34	.60

CAL YR 1977 TOTAL 114644 MEAN 314 MAX 7900 MIN 15 CFSM .91 IN 12.33
WTR YR 1978 TOTAL 194285 MEAN 532 MAX 11400 MIN 43 CFSM 1.54 IN 20.89

CAPE FEAR RIVER BASIN

02100500 DEEP RIVER AT RAMSEUR, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
NOV												
15...	1245	127	18	6.2	--	--	--	--	--	--	--	--
DEC												
20...	1240	523	63	89	--	--	--	--	--	--	--	--
JAN												
25...	1435	5280	225	3210	--	--	--	--	--	--	--	--
25...	1905	5630	421	6400	20	37	50	67	81	97	97	98
26...	1700	10800	459	13400	--	--	--	--	--	--	--	--
MAR												
06...	1130	432	36	42	--	--	--	--	--	--	--	--
APR												
10...	1120	272	14	10	--	--	--	--	--	--	--	--
26...	1040	5040	454	6180	--	--	--	--	--	--	--	--
26...	1440	6930	672	12600	--	--	--	--	--	--	--	--
27...	1145	1920	99	513	--	--	--	--	--	--	--	--

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, Aug. 30 to Sept. 30, which are fair. Suspended-sediment records for the current year are published on page 196 of this report.

AVERAGE DISCHARGE.--20 years, 15.1 ft³/s (0.428 m³/s), 13.40 in/yr (340 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,120 ft³/s (88.4 m³/s) July 13, 1975, gage height, 9.43 ft (2.874 m); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft³/s (9.91 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 26	1115	*1600	45.3	*7.45	2.271	Mar. 10	0700	546	15.5	5.31	1.618
Jan. 9	0230	402	11.4	4.86	1.481	Apr. 26	0715	457	12.9	5.04	1.536
Jan. 19	2330	672	19.0	5.65	1.722	May 13	2145	1090	30.9	6.56	1.999
Jan. 26	0330	910	25.8	6.20	1.890	June 7	0300	1380	39.1	7.09	2.161

Minimum discharge, 0.01 ft³/s (0.0003 m³/s) Oct. 1, 2, gage height, 1.60 ft (0.488 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.92	5.6	9.6	11	19	8.7	9.8	2.2	2.5	.99	.27
2	.34	.99	4.0	7.6	11	13	7.5	8.5	1.9	3.9	.92	.28
3	2.9	1.2	3.3	5.8	12	59	6.8	7.0	1.9	4.4	1.3	.80
4	.64	3.3	3.4	4.8	9.7	48	6.8	42	2.5	3.2	3.1	.66
5	.23	4.1	9.5	4.6	8.9	29	6.4	45	2.2	1.3	6.3	.54
6	.12	10	15	9.9	8.9	21	5.7	17	80	1.1	11	.46
7	.07	7.1	5.4	15	7.2	17	5.6	10	385	.99	8.8	.38
8	.04	2.8	3.5	19	6.9	15	5.0	159	27	.88	6.6	.30
9	.05	1.8	3.2	189	7.0	20	4.7	158	117	.80	2.7	.25
10	.07	1.4	3.0	28	7.0	320	4.5	111	35	.70	1.8	.20
11	.05	1.2	2.3	15	6.4	70	4.3	29	13	1.1	1.5	.22
12	.05	1.4	2.0	11	6.1	36	4.1	18	9.0	1.5	1.3	.24
13	1.3	1.6	2.0	136	6.5	28	4.6	277	6.8	1.3	1.2	.30
14	8.8	1.6	10	112	7.5	26	4.2	164	5.3	1.4	15	.25
15	3.1	1.6	20	44	6.6	23	3.5	36	4.5	3.7	18	.22
16	1.5	1.2	8.1	21	6.6	17	3.3	25	3.9	73	3.5	.23
17	1.0	1.7	6.9	103	9.2	13	3.1	17	3.3	9.8	1.9	.24
18	.72	1.6	16	81	7.8	11	3.6	12	2.9	4.5	1.4	.23
19	.48	1.4	10	198	7.4	11	5.8	9.5	2.5	3.1	1.1	.22
20	.35	1.5	7.9	333	6.6	9.8	4.7	7.6	2.3	2.4	.91	.22
21	.28	2.0	50	68	6.3	9.2	3.6	6.4	2.1	2.0	.55	.22
22	.26	2.1	18	30	11	8.6	3.2	5.5	2.3	1.8	.41	.21
23	.25	2.4	10	22	9.8	7.9	3.0	5.0	4.2	1.6	.41	.22
24	.21	2.5	8.3	18	19	7.7	2.8	5.5	2.4	8.3	.35	.23
25	.19	2.6	14	496	33	21	29	6.4	2.0	10	.22	.26
26	440	3.2	10	395	28	50	275	4.5	12	9.5	.15	.32
27	14	2.9	6.8	43	16	28	81	3.8	7.6	2.7	.25	.40
28	4.1	2.9	5.7	26	14	18	30	3.6	3.2	.29	.29	.38
29	2.3	3.0	4.9	18	---	13	16	3.3	2.1	2.3	.25	.36
30	1.6	3.5	5.4	15	---	11	11	3.0	1.7	.50	.50	.37
31	1.0	---	14	13	---	9.5	---	2.6	---	.23	.23	---
TOTAL	486.01	75.51	288.2	2491.3	297.4	989.7	557.5	1212.0	747.8	160.79	92.93	9.48
MEAN	15.7	2.52	9.30	80.4	10.6	31.9	18.6	39.1	24.9	5.19	3.00	.32
MAX	440	10	50	496	33	320	275	277	385	73	18	.80
MIN	.01	.92	2.0	4.6	6.1	7.7	2.8	2.6	1.7	.23	.15	.20
CFSM	1.03	.17	.61	5.26	.69	2.09	1.22	2.56	1.63	.34	.20	.02
IN.	1.18	.18	.70	6.06	.72	2.41	1.36	2.95	1.82	.39	.23	.02

CAL YR 1977 TOTAL 3759.27 MEAN 10.3 MAX 440 MIN .00 CFSM .67 IN 9.14
WTR YR 1978 TOTAL 7408.62 MEAN 20.3 MAX 496 MIN .01 CFSM 1.33 IN 18.01

02101800 TICK CREEK NEAR MOUNT VERNON SPRINGS, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 05...	1400	.22	167	.10
NOV 16...	1230	1.7	68	.31
DEC 23...	1100	10	44	1.2
MAY 02...	1400	8.5	15	.34
JUL 25...	0856	5.6	120	1.8
AUG 28...	1645	.30	6	.00

02102000 DEEP RIVER AT MONCURE, N. C.

LOCATION.--Lat 35°37'41", long 79°06'48", Lee County, Hydrologic Unit 03030003, on right bank 1.0 mi (1.6 km) upstream from Lockville Dam, 1.2 mi (1.9 km) upstream from bridge on U.S. Highway 1, 1.5 mi (2.4 km) northwest of Moncure, 2.2 mi (3.5 km) downstream from Rocky River, and 4.5 mi (7.2 km) upstream from confluence with Haw River.

DRAINAGE AREA.--1,410 mi² (3,650 km²), approximately.

PERIOD OF RECORD.--July 1930 to current year. Records for May 1898 to December 1899 published in 21st Annual Report, Part 4, and in Bulletins 34 and 39 of North Carolina Department of Conservation and Development have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 822: Drainage area. WSP 1082: (1930-46 not previously published).

GAGE.--Water-stage recorder. Datum of gage is 185.06 ft (56.406 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Diurnal fluctuation and some regulation at low flow caused by small powerplants above station. Suspended sediment records for the current year are published on page 467 of this report.

AVERAGE DISCHARGE.--48 years, 1,453 ft³/s (41.15 m³/s), 13.99 in/yr (355 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 80,300 ft³/s (2,270 m³/s) Sept. 18, 1945, gage height, 17.20 ft (5.243 m); minimum, 5.5 ft³/s (0.16 m³/s) Oct. 10, 1954, gage height, 0.35 ft (0.107 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 15,000 ft³/s (425 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 20	1100	20400	578	8.66	2.640	Mar. 10	1600	17400	493	8.04	2.451
Jan. 26	1300	*23300	660	*9.20	2.804	Apr. 26	1800	19700	558	8.52	2.597

Minimum discharge, 66 ft³/s (1.87 m³/s) Oct. 1, 2, Sept. 28, gage height, 1.01 ft (0.308 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	478	629	1010	1530	1120	987	1450	401	310	311	270
2	68	390	1050	1020	1420	1530	883	1220	374	266	2100	331
3	186	333	1080	819	1450	2050	807	1070	376	276	1000	313
4	889	318	712	687	1470	5830	757	1060	401	281	580	1200
5	509	347	568	593	1310	4420	735	4460	362	251	750	2030
6	270	2340	1300	606	1140	2860	709	9520	1130	271	1000	816
7	171	2810	2710	1380	1070	2110	748	4770	7260	294	2540	456
8	137	1960	1370	1780	975	1720	785	6820	3170	244	2610	302
9	127	1120	843	10200	852	1640	739	12700	6700	209	1520	220
10	124	759	644	12000	839	12100	699	14100	5560	187	984	183
11	107	637	577	4500	959	15000	670	9950	2580	180	925	157
12	102	584	524	1700	971	11500	636	2840	1280	185	1100	150
13	118	517	460	3720	936	3930	605	1910	868	172	627	140
14	229	463	460	13000	930	2580	581	9570	667	254	434	124
15	374	424	1160	11700	977	2280	569	6180	539	368	349	124
16	355	377	1340	4770	1000	2010	529	2690	450	1740	494	124
17	398	296	1150	2740	986	1590	472	1970	392	2780	387	116
18	290	251	1100	9370	1070	1340	455	1560	351	2970	270	107
19	217	237	2950	8920	1020	1190	674	1280	322	1140	220	102
20	180	231	2230	18700	936	1110	929	1090	300	626	194	96
21	161	227	1890	16700	884	1060	842	955	281	420	183	89
22	146	215	2230	13100	925	1030	693	952	284	309	160	86
23	134	213	1430	4120	1010	1090	567	768	509	248	143	91
24	126	216	985	2310	1110	1030	494	712	472	210	131	116
25	203	223	859	8290	1640	959	569	693	329	270	121	104
26	5190	282	1130	20900	1910	1850	14300	718	429	415	124	84
27	11500	290	1260	17600	1340	3970	15700	672	2250	628	134	70
28	9490	399	957	17900	1050	2800	12000	591	799	552	234	68
29	1850	401	695	8500	---	1730	3860	534	583	350	393	82
30	878	363	625	2260	---	1380	1960	483	412	276	281	84
31	617	---	710	1740	---	1140	---	434	---	236	550	---
TOTAL	35212	17701	35628	222635	31710	95949	64954	103422	39831	16918	20849	8235
MEAN	1136	590	1149	7182	1133	3095	2165	3343	1328	546	673	275
MAX	11500	2810	2950	20900	1910	15000	15700	14100	7260	2970	2610	2030
MIN	66	213	460	593	839	959	455	434	281	172	121	68
CFSM	.81	.42	.82	5.09	.80	2.20	1.54	2.37	.94	.39	.48	.20
IN.	.93	.47	.94	5.87	.84	2.53	1.71	2.73	1.05	.45	.55	.22

CAL YR 1977 TOTAL 421909 MEAN 1156 MAX 13900 MIN 34 CFSM .82 IN 11.13
WTR YR 1978 TOTAL 693244 MEAN 1899 MAX 20900 MIN 66 CFSM 1.35 IN 18.29

02102192 BUCKHORN CREEK NEAR CORINTH, N. C.

LOCATION.--Lat 35°34'18", long 78°58'09", Chatham County, Hydrologic Unit 03030004, on left bank at upstream side of bridge on State Highway 42, 0.2 mi (0.3 km) downstream from White Oak Creek, and 2 mi (3.2 km) east of Corinth.

DRAINAGE AREA.--74.2 mi² (192 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 154.63 ft (47.131 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for periods of no gage-height record, Jan. 10 to Feb. 13, which are poor. Suspended sediment records for the current year are published on page 199 of this report.

AVERAGE DISCHARGE.--6 years, 83.5 ft³/s (2.365 m³/s), 15.28 in/yr (388 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)
Nov. 6	2130	719	20.4	6.27	1.911	Mar. 10	1630	1770	50.1	10.56	3.219
Jan. 9	1200	1340	37.9	8.97	2.734	Mar. 27	0845	827	23.4	6.81	2.076
Jan. 15	Unknown	Unknown		Unknown		Apr. 26	2145	*4660	132	*17.48	5.328
Jan. 21	Unknown	1760	49.8	10.53	3.210	May 8	1645	1440	40.8	9.36	2.853
Jan. 27	Unknown	1320	37.4	8.89	2.710	June 9	1300	1420	40.2	9.27	2.825

Minimum discharge, 0.54 ft³/s (0.015 m³/s) Oct, 5, 6, gage height, 1.30 ft (0.396 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	14	16	70	50	102	57	83	11	11	19	3.4
2	1.6	11	16	52	58	92	49	71	9.6	8.6	27	3.1
3	2.0	14	15	39	70	254	41	59	11	8.0	23	3.8
4	2.2	106	14	31	65	477	37	107	16	7.2	21	5.4
5	1.5	71	14	28	60	229	36	262	14	6.1	23	5.6
6	2.5	297	24	59	55	135	33	117	25	5.2	37	4.3
7	2.5	390	23	216	51	100	31	71	38	5.0	47	3.2
8	2.5	94	16	111	47	88	28	1030	62	4.2	27	2.5
9	3.6	50	14	1120	44	112	26	1020	635	4.1	22	1.9
10	5.3	37	14	500	43	1300	24	357	321	3.9	18	1.5
11	4.7	28	13	200	41	1080	23	142	72	16	15	2.0
12	4.5	23	12	80	41	279	22	83	38	17	12	2.8
13	13	20	12	190	40	157	25	85	28	8.2	9.9	2.5
14	40	18	49	500	40	111	29	270	22	6.0	8.5	2.2
15	43	17	307	1500	38	101	23	124	18	6.3	7.0	1.9
16	18	17	94	350	36	83	20	111	16	120	5.9	1.9
17	10	17	80	120	61	71	19	83	13	145	5.3	2.0
18	7.6	15	159	230	61	60	25	61	12	45	4.7	1.9
19	6.1	13	91	480	58	53	132	48	10	24	4.3	1.8
20	5.2	12	57	860	51	50	77	38	9.4	16	4.4	1.7
21	4.5	12	170	1700	44	46	44	33	8.4	13	9.3	1.7
22	4.3	12	148	580	64	43	32	28	7.8	9.1	8.8	1.6
23	4.5	12	69	230	73	39	28	25	9.0	7.6	5.7	1.5
24	5.1	11	49	100	91	36	24	22	13	6.0	4.0	1.7
25	6.2	12	51	230	188	39	34	21	10	6.4	3.5	1.8
26	222	23	55	540	179	156	2820	20	14	7.9	3.3	2.0
27	175	17	37	1200	91	749	2400	17	26	7.4	3.7	1.9
28	45	15	31	400	71	291	441	16	24	8.0	3.9	1.7
29	28	12	28	160	---	122	182	15	15	11	3.7	1.6
30	20	12	29	60	---	83	111	14	12	9.8	3.4	1.7
31	15	---	76	55	---	66	---	12	---	8.5	3.6	---
TOTAL	706.7	1402	1783	11991	1811	6604	6873	4445	1520.2	561.5	393.9	72.6
MEAN	22.8	46.7	57.5	387	64.7	213	229	143	50.7	18.1	12.7	2.42
MAX	222	390	307	1700	188	1300	2820	1030	635	145	47	5.6
MIN	1.3	11	12	28	36	36	19	12	7.8	3.9	3.3	1.5
CFSM	.31	.63	.78	5.22	.87	2.87	3.09	1.93	.68	.24	.17	.03
IN.	.35	.70	.89	6.01	.91	3.31	3.45	2.23	.76	.28	.20	.04

CAL YR 1977 TOTAL 21256.55 MEAN 58.2 MAX 1680 MIN .07 CFSM .78 IN 10.66
WTR YR 1978 TOTAL 38163.90 MEAN 105 MAX 2820 MIN 1.3 CFSM 1.42 IN 19.13

CAPE FEAR RIVER BASIN

02102192 BUCKHORN CREEK NEAR CORINTH, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
NOV 29...	1000	13	40	1.4
DEC 28...	1445	30	13	1.1
FEB 13...	1310	35	6	.57
MAR 20...	1130	50	14	1.9
APR 26...	1430	4080	289	3180
MAY 09...	0955	1200	55	178
JUL 17...	1120	144	350	136
SEP 01...	1115	3.5	15	.14

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) National Geodetic Vertical Datum of 1929. Dec. 6, 1923 to Oct. 7, 1927, nonrecording gage and Oct. 8, 1927 to Dec. 2, 1975, water-stage recorder at site 60 ft (18 m) upstream in bridge pier at same datum. Gage height telemeters at station.

REMARKS.--Records good. Some regulation at high flows, beginning December 1972, caused by temporary storage in B. Everett Jordan Reservoir. Diurnal fluctuation and slight regulation at low flow caused by powerplants above station. Fluctuation and regulation by Buckhorn Reservoir 13 mi (21 km) above station ended in December 1962.

AVERAGE DISCHARGE.--54 years (water years 1924-78), 3,364 ft³/s (95.27 m³/s), 13.28 in/yr (337 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.--Peak discharges above base of 30,000 ft³/s (850 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. 20	2100	34300	971	15.06	4.590	Apr. 27	0200	*36800	1040	*15.66	4.773
Jan. 26	2300	36000	1020	15.47	4.715						

Minimum discharge, 170 ft³/s (4.81 m³/s) Oct. 1, gage height, 0.82 ft (0.250 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	195	2670	1550	2250	11600	2730	3520	11600	1010	856	995	916
2	219	1930	2660	2490	11000	3160	2660	10600	968	675	3160	986
3	219	1310	2880	2080	10500	3800	2190	9760	924	631	2950	1560
4	751	1470	1940	1720	9790	8780	1960	9140	1020	638	1800	1770
5	968	1510	1530	1500	8520	9390	1790	11600	959	774	2320	3850
6	653	2910	2510	1440	6240	7400	1730	18100	1630	755	2900	2440
7	454	6000	6610	2610	3080	6150	1710	16400	6110	697	4760	1680
8	333	4450	4320	4310	2380	5180	1700	17300	6520	675	5940	1280
9	289	3280	2380	15100	2340	4550	1600	25100	9550	596	5050	1020
10	303	2620	1760	22700	2080	14500	1520	26200	10600	509	4500	821
11	294	2120	1510	16100	2080	26200	1460	23700	6090	561	4270	721
12	280	1800	1300	10300	2120	22900	1420	14400	3790	675	4690	715
13	424	1500	1160	10800	2010	14900	1440	11600	2700	1560	4100	561
14	675	1260	1180	22300	2040	11500	1420	17000	2000	1070	3570	512
15	1060	1100	2850	22400	2160	10700	1330	18100	1500	1180	3070	478
16	1300	968	4080	15900	2480	9860	1230	12600	1170	2510	2630	464
17	1240	856	3440	11100	2320	8650	1120	11000	995	7910	2170	389
18	933	743	3290	15900	2380	7620	1140	10000	881	8620	1520	351
19	697	690	5870	18700	2450	6540	1630	9070	806	6780	1060	363
20	542	645	6200	29200	2210	5220	1930	8270	758	5180	774	330
21	454	631	5010	30700	2110	3320	1890	7510	690	3190	660	308
22	407	631	6050	25900	2170	2540	1660	6540	675	1690	582	389
23	353	697	4270	16500	2550	2410	1390	5670	881	1190	466	349
24	313	751	3110	11900	2650	2280	1220	4760	1530	831	430	275
25	318	682	2620	14000	3260	2200	1230	3790	1320	690	401	489
26	2610	924	2630	32000	4320	2810	22600	2810	1270	727	395	514
27	15900	864	3030	32600	4000	8060	33700	1910	2840	1160	424	395
28	15700	1000	2300	30900	3110	7770	26300	1420	1950	1420	484	347
29	7380	1010	1800	25300	---	6000	17300	1270	1490	1190	847	349
30	4520	1250	1600	14400	---	5220	12900	1160	1110	995	782	324
31	3530	---	1770	12600	---	4470	---	1070	---	873	856	---
TOTAL	63314	48272	93210	475700	113950	236810	154690	329450	73737	56808	68556	24946
MEAN	2042	1609	3007	15350	4070	7639	5156	10630	2458	1833	2211	832
MAX	15900	6000	6610	32600	11600	26200	33700	26200	10600	8620	5940	3850
MIN	195	631	1160	1440	2010	2200	1120	1070	675	509	395	275
CFSM	.59	.47	.87	4.46	1.18	2.22	1.50	3.09	.72	.53	.64	.24
IN.	.68	.52	1.01	5.14	1.23	2.56	1.67	3.56	.80	.61	.74	.27

CAL YR 1977 TOTAL 888310 MEAN 2434 MAX 23400 MIN 106 CFSM .71 IN 9.61
WTR YR 1978 TOTAL 1739443 MEAN 4766 MAX 33700 MIN 195 CFSM 1.39 IN 18.81

02102908 FLAT CREEK NEAR INVERNESS, N. C.

LOCATION.--Lat 35°10'54", long 79°10'40", Hoke County, Hydrologic Unit 03030004, Fort Bragg military reservation, on left bank 15 ft (5 m) downstream from culvert on Manchester Road, 0.4 mi (0.6 km) upstream from mouth, and 3.6 mi (5.8 km) east of Inverness.

DRAINAGE AREA.--7.65 mi² (19.81 km²).

PERIOD OF RECORD.--June 1968 to current year.

REVISED RECORDS.--WRD N. C. 1972: 1968-70 (M).

GAGE.--Water-stage recorder. Datum of gage is 191.18 ft (58.272 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, July 24 to Aug. 29, which are fair. Some diurnal fluctuation at low flow during growing season. Water quality records for the current year are published on pages 202 and 448 of this report.

AVERAGE DISCHARGE.--10 years, 13.2 ft³/s (0.374 m³/s), 23.43 in/yr (595 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)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar. 10	1730	63	1.78	2.03	0.619	June 6	2130	*173	4.90	*3.83	1.167
Apr. 26	1230	129	3.65	3.11	0.948	June 27	0300	71	2.01	2.15	0.655
May 8	1000	164	4.64	3.69	1.125						

Minimum discharge, 5.0 ft³/s (0.14 m³/s) Sept. 19, 20, 23. Minimum gage height, 0.89 ft (0.271 m) Oct. 6, 7, 8, Sept. 19, 20, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	6.6	9.5	10	12	17	9.6	11	8.6	11	8.0	6.4
2	6.4	6.6	7.6	9.0	13	12	9.2	11	7.5	18	8.2	7.1
3	6.8	7.0	6.9	8.4	13	19	8.9	10	7.8	32	8.4	15
4	6.2	7.1	6.6	8.1	12	22	9.2	15	8.7	18	8.2	12
5	6.1	9.4	9.0	7.8	12	14	8.9	35	7.9	12	8.2	8.0
6	6.1	23	9.0	11	12	12	8.7	14	54	11	16	7.4
7	6.1	18	7.1	13	11	12	8.6	14	80	10	12	7.2
8	6.2	9.0	6.8	10	11	13	8.3	100	28	9.8	9.0	6.9
9	10	8.1	7.0	43	11	13	8.2	38	21	9.2	8.0	6.6
10	10	7.7	6.8	16	10	51	8.2	20	18	8.9	9.9	6.6
11	7.5	7.2	6.6	11	10	23	8.1	15	13	9.3	12	7.1
12	7.5	7.0	6.5	9.7	10	15	10	14	12	9.5	8.4	6.7
13	20	6.9	6.6	25	10	14	17	14	10	8.9	8.5	6.4
14	29	6.6	13	26	11	14	14	16	9.7	9.6	8.6	6.3
15	13	6.6	26	14	10	13	9.5	14	9.4	11	8.4	6.5
16	9.0	6.4	9.7	12	11	12	8.7	14	9.0	30	8.2	6.7
17	8.4	6.4	8.7	15	16	12	8.6	13	8.4	22	20	6.2
18	7.6	6.2	9.7	20	12	12	14	12	8.4	11	12	6.0
19	7.3	6.2	8.4	21	12	12	21	11	8.1	9.9	17	5.9
20	6.7	6.0	7.8	49	11	11	12	10	7.8	9.2	25	5.9
21	6.6	6.2	20	19	11	11	9.8	9.6	7.8	8.6	14	6.2
22	6.3	6.2	12	14	16	10	9.2	9.3	11	8.4	8.0	6.0
23	6.2	6.2	8.7	13	12	9.9	8.7	9.2	25	8.2	8.0	6.3
24	5.9	6.2	8.4	12	12	9.8	8.4	9.3	15	8.0	7.4	7.1
25	6.0	7.6	13	30	11	10	12	10	11	10	7.4	6.8
26	16	10	10	41	10	15	82	8.9	20	12	7.4	6.7
27	12	7.7	8.4	18	9.7	28	30	8.3	44	9.0	7.4	6.3
28	8.0	6.9	8.1	14	10	14	16	8.9	13	8.5	7.6	6.3
29	7.2	6.6	7.8	13	---	11	13	8.5	11	8.0	7.0	6.2
30	6.8	7.5	9.7	13	---	10	12	8.1	10	8.0	6.7	6.5
31	6.6	---	18	12	---	10	---	7.6	---	8.0	6.3	---
TOTAL	273.0	239.1	303.4	538.0	321.7	461.7	411.8	498.7	505.1	367.0	311.2	211.3
MEAN	8.81	7.97	9.79	17.4	11.5	14.9	13.7	16.1	16.8	11.8	10.0	7.04
MAX	29	23	26	49	16	51	82	100	80	32	25	15
MIN	5.5	6.0	6.5	7.8	9.7	9.8	8.1	7.6	7.5	8.0	6.3	5.9
CFSM	1.15	1.04	1.28	2.28	1.50	1.95	1.79	2.11	2.20	1.54	1.31	.92
IN.	1.33	1.16	1.48	2.62	1.56	2.24	2.00	2.42	2.46	1.78	1.51	1.03

CAL YR 1977 TOTAL 3614.7 MEAN 9.90 MAX 51 MIN 4.0 CFSM 1.29 IN 17.58
WTR YR 1978 TOTAL 4442.0 MEAN 12.2 MAX 100 MIN 5.5 CFSM 1.60 IN 21.60

CAPE FEAR RIVER BASIN

02102908 FLAT CREEK NEAR INVERNESS, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
03...	1650	7.1	6	.12
NOV				
28...	0945	7.0	2	.04
DEC				
07...	0830	7.2	2	.04
29...	1000	8.1	4	.09
FEB				
10...	0900	11	4	.12
MAR				
21...	1000	11	6	.18
APR				
26...	1650	86	129	30
MAY				
08...	1745	97	40	10
AUG				
30...	0845	7.1	4	.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 current year.

GAGE.--Water-stage recorder. Datum of gage is 147.92 ft (45.086 m) National Geodetic Vertical datum of 1929 (North Carolina Geodetic Survey bench mark).

REMARKS.--Records good. Suspended sediment records for the current year are published on page 204 of this report. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 184 ft³/s (5.21 m³/s) Aug. 18, 1977, gage height, 5.62 ft (1.713 m); minimum, 0.84 ft³/s (0.024 m³/s) July 10, 1978.

EXTREMES FOR CURRENT YEAR.--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)
Apr. 26	0300	*106	3.00	*4.55	1.387	June 26	2200	84	2.38	4.16	1.268
June 6	1015	83	2.35	4.13	1.259	July 2	1415	75	2.12	3.98	1.213

Minimum discharge, 0.84 ft³/s (0.024 m³/s) July 10; minimum gage height, 1.65 ft (0.503 m) July 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.6	1.8	2.6	3.1	5.6	1.6	2.9	4.9	2.5	1.7	1.8
2	1.3	1.6	1.5	2.1	4.5	3.1	1.5	2.7	3.1	31	1.9	2.1
3	1.2	1.6	1.3	1.9	4.7	15	1.4	2.4	2.5	20	2.3	4.5
4	1.2	1.7	1.2	1.6	3.2	9.6	1.4	5.8	2.7	5.0	2.0	2.3
5	1.2	3.0	3.0	1.6	2.8	3.1	1.4	12	4.7	1.4	2.0	1.8
6	1.2	10	2.6	4.2	2.8	2.4	1.3	3.5	36	1.2	7.3	1.7
7	1.2	7.5	1.7	4.5	2.3	2.1	1.3	7.1	9.4	1.1	4.5	1.8
8	1.3	2.3	1.3	2.4	2.4	2.7	1.2	33	9.2	1.0	2.6	1.7
9	2.3	1.8	1.4	5.4	2.5	7.0	1.2	12	21	1.0	1.9	1.7
10	1.8	1.7	1.3	2.4	2.3	37	1.3	6.4	12	1.0	2.6	6.1
11	1.3	1.5	1.2	1.5	2.1	9.8	1.3	4.5	4.0	2.4	5.2	19
12	3.0	1.5	1.2	1.4	1.9	6.3	2.1	3.6	2.6	2.1	2.4	3.5
13	13	1.5	1.2	13	2.2	4.7	8.1	6.0	1.9	1.3	2.6	2.3
14	19	1.4	12	12	3.4	4.5	5.9	9.8	1.7	2.0	3.0	1.7
15	3.5	1.4	14	4.0	2.2	4.7	1.9	4.2	1.5	7.6	2.9	1.7
16	1.6	1.4	3.0	2.5	2.5	3.5	1.4	3.5	1.3	17	2.4	1.8
17	1.3	1.4	2.6	6.0	3.7	2.9	1.4	4.0	1.2	12	10	1.7
18	1.2	1.3	2.9	7.8	3.3	2.6	24	3.6	1.2	2.9	5.8	1.6
19	1.1	1.3	2.6	23	3.5	2.5	16	2.7	1.1	1.8	9.8	1.7
20	1.1	1.2	2.2	29	2.2	2.4	6.2	2.6	1.0	1.7	15	1.7
21	1.1	1.3	11	7.6	2.1	2.4	3.1	2.4	1.0	1.8	3.3	1.7
22	1.1	1.3	3.7	4.2	4.7	2.2	2.7	2.2	2.8	1.7	2.1	1.7
23	1.1	1.3	2.3	3.2	3.1	2.2	2.2	2.1	14	1.6	2.2	1.7
24	1.1	1.3	2.0	2.8	2.0	2.3	2.0	2.8	2.8	2.7	1.7	1.9
25	1.2	2.0	4.8	16	1.9	4.0	4.1	3.9	1.8	3.8	1.6	2.1
26	13	2.1	3.0	20	1.7	8.3	53	2.6	26	4.9	1.7	2.1
27	5.2	1.2	2.1	6.9	1.6	7.8	10	2.3	25	2.2	1.7	1.8
28	2.0	1.2	1.8	4.7	2.1	3.1	5.9	2.2	3.9	1.8	2.0	1.8
29	1.7	1.1	1.7	3.9	---	2.1	4.1	2.2	1.8	1.7	1.6	1.8
30	1.6	1.2	3.3	3.4	---	1.8	3.3	2.3	1.6	1.6	1.6	1.9
31	1.5	---	5.4	3.2	---	1.6	---	2.5	---	1.6	1.7	---
TOTAL	90.7	60.7	101.1	204.8	76.8	169.3	172.3	159.8	203.7	141.4	109.1	80.7
MEAN	2.93	2.02	3.26	6.61	2.74	5.46	5.74	5.15	6.79	4.56	3.52	2.69
MAX	19	10	14	29	4.7	37	53	33	36	31	15	19
MIN	1.1	1.1	1.2	1.4	1.6	1.6	1.2	2.1	1.0	1.0	1.6	1.6
CFSM	1.06	.73	1.18	2.40	.99	1.98	2.08	1.87	2.46	1.65	1.28	.98
IN.	1.22	.82	1.36	2.76	1.03	2.28	2.32	2.15	2.74	1.91	1.47	1.09

CAL YR 1977 TOTAL 1352.2 MEAN 3.70 MAX 68 MIN 1.0 CFSM 1.34 IN 18.22
WTR YR 1978 TOTAL 1570.4 MEAN 4.30 MAX 53 MIN 1.0 CFSM 1.56 IN 21.16

02104387 BUCKHEAD CREEK NEAR OWENS, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
03...	1425	1.3	9	.03
NOV				
23...	1415	1.4	9	.03
JAN				
03...	1140	1.8	6	.03
FEB				
10...	1250	2.4	12	.08
MAR				
21...	1438	2.3	11	.07
APR				
26...	1402	45	99	12
MAY				
08...	1455	28	63	4.8
JUN				
13...	1545	2.0	13	.07
AUG				
30...	1510	1.7	6	.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) National Geodetic Vertical Datum of 1929. Prior to Jan. 8, 1939, nonrecording gage on upper lock wall 100 ft (30 m) downstream at same datum. Auxiliary water-stage recorder 1.8 mi (2.9 km) downstream from base gage; prior to Jan. 14, 1943, auxiliary nonrecording gage 400 ft (122 m) downstream on lower end of lock wall; Jan. 14, 1943 to Sept. 30, 1953, auxiliary water-stage recorder at site 600 ft (183 m) downstream.

REMARKS.--Records good. 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 power plants above station. Suspended sediment records for the current year are published on page 206 of this report.

AVERAGE DISCHARGE.--41 years, 4,982 ft³/s (141.1 m³/s), 14.06 in/yr (357 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, 37,500 ft³/s (1,060 m³/s) Apr. 28; maximum gage height, 22.98 ft (7.004 m) Apr. 28, minimum discharge, 570 ft³/s (16.1 m³/s) Oct. 3-5, gage height, 0.90 ft (0.274 m); minimum daily, 570 ft³/s (16.1 m³/s) Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	630	4300	2200	4230	18900	4460	5980	21500	1900	2470	1620	1360
2	600	3330	2740	4610	15800	4520	4830	17300	1760	2350	1920	1470
3	580	2580	3860	4440	14100	5340	4040	14400	1680	2700	4550	1690
4	570	2180	3520	3800	13000	8110	3520	12600	1680	2400	4090	2380
5	1010	2190	2800	3270	11800	12400	3270	12500	1700	2360	3360	3400
6	1250	2290	2670	3010	10300	11700	3000	16200	2390	2390	4020	4260
7	1030	6160	4930	3430	7150	9530	2860	19400	5760	2050	4920	3020
8	835	7500	6950	5100	5000	8160	2770	19600	11100	1660	6970	2310
9	753	5880	4520	8080	4510	7260	2700	25800	10700	1590	7400	1850
10	799	4810	3110	18800	4250	12000	2490	30300	14000	1290	6480	1580
11	836	3920	2530	20900	3900	22000	2360	31600	14300	1150	5750	1690
12	857	3230	2260	17700	3840	28200	2310	28100	10200	1140	5290	1450
13	1090	2740	2020	13800	3800	27500	2540	20300	7030	1470	5210	1320
14	1880	2360	2080	15800	3800	21800	3090	18500	4980	1940	4860	1140
15	2350	2110	3710	22900	3650	17700	3130	21100	3430	1830	4380	1010
16	2720	1910	5680	24100	3930	14900	2800	20100	2550	2700	3900	976
17	2410	1810	5880	19300	4250	12800	2470	16800	2080	6000	3480	884
18	2120	1680	5290	16800	4210	11100	2810	14200	1820	10000	2960	800
19	1730	1560	5760	19300	4440	9590	3870	12500	1660	11500	2210	747
20	1370	1490	8020	23500	4420	7940	4690	11300	1540	9290	1840	819
21	1160	1400	7820	33400	4010	6350	4560	10000	1420	6710	1640	728
22	1050	1360	7920	34600	4030	4890	4090	8700	1360	4050	1310	639
23	989	1370	7660	32100	4090	4270	3430	7560	1510	2520	1180	679
24	920	1440	5830	25900	4330	4000	2810	6560	2150	1850	1030	663
25	876	1470	4970	19800	4350	3790	2380	5670	2450	1710	919	637
26	1360	1580	4650	21700	5110	4050	11600	4710	2460	2580	840	795
27	8790	1800	4690	32600	5730	6780	29700	3700	3940	2780	906	860
28	18500	1840	4540	33700	5080	10900	36800	2890	5400	2840	1040	797
29	15000	1870	3650	33100	---	9920	34200	2380	4000	2670	991	711
30	5750	1840	3240	32300	---	8190	28700	2210	3300	2220	1260	674
31	5390	---	3640	24200	---	7150	---	2110	---	1850	1270	---
TOTAL	85205	80000	139140	576270	181780	327300	223800	440590	130250	100060	97596	41339
MEAN	2749	2667	4488	18590	6492	10560	7460	14210	4342	3228	3148	1378
MAX	18500	7500	8020	34600	18900	28200	36800	31600	14300	11500	7400	4260
MIN	570	1360	2020	3010	3650	3790	2310	2110	1360	1140	840	637
CFSM	.57	.55	.93	3.87	1.35	2.20	1.55	2.95	.90	.67	.65	.29
IN.	.66	.62	1.08	4.46	1.41	2.53	1.73	3.41	1.01	.77	.75	.32

CAL YR 1977 TOTAL 1389444 MEAN 3807 MAX 25800 MIN 392 CFSM .79 IN 10.75
WTR YR 1978 TOTAL 2423330 MEAN 6639 MAX 36800 MIN 570 CFSM 1.38 IN 18.74

02105500 CAPE FEAR RIVER AT WILLIAM O HUSKE LOCK NEAR TARHEEL, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
03...	1120	590	99	158
FEB				
06...	1130	10400	49	1380
JUL				
18...	1045	9940	101	2710

02105769 CAPE FEAR RIVER AT LOCK 1 NEAR KELLY, N. C.

LOCATION.--Lat 34°24'15", long 78°17'38", Bladen County, Hydrologic Unit 03030005, on right bank near upstream end of Lock No. 1, 1.3 mi (2.1 km) upstream from Natmore Creek, 2.0 mi (3.2 km) upstream from bridge on State Highway 11 4.6 mi (7.4 km) southeast of Kelly, and at mile 67 (108 km).

DRAINAGE AREA.--5,220 mi² (13,520 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1969 to current year.

GAGE.--Water-stage recorder with concrete lock and dam control. Datum of gage is 2.90 ft (0.884 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Water-discharge record fair. Slight regulation at high flow, beginning December 1972, caused by storage in B. Everett Jordan Reservoir. Slight diurnal fluctuation and some regulation for short periods at low flow caused by powerplants above station. The city of Wilmington diverted an average of 15.9 ft³/s (0.45 m³/s) for municipal water supply, most of which is returned as sewage below station. Gage height telemeter at station.

AVERAGE DISCHARGE.--9 years, 6,007 ft³/s (170.1 m³/s), 15.63 in/yr (397 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, 37,800 ft³/s (1,070 m³/s) Jan. 31, gage height, 22.88 ft (6.974 m); minimum, 669 ft³/s (18.9 m³/s) Oct. 4, gage height, 14.74 ft (4.493 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	876	6450	2240	4890	33900	5330	8050	36200	2290	3640	1960	1460
2	782	4550	2630	5330	27700	4890	6610	32900	2100	3290	1860	1640
3	739	3460	3330	5500	21900	5170	5260	26800	1970	3910	2800	1750
4	750	2720	4070	5120	18200	6520	4380	21200	1970	3960	4400	2170
5	756	2460	3610	4470	16100	9480	3830	17500	1920	3860	4060	2720
6	1160	4270	3220	3990	14200	11900	3470	16000	2050	3380	3810	4010
7	1270	7590	3400	3980	12100	11900	3180	14800	3310	3010	4460	4060
8	1100	9450	5970	4670	8470	10600	3050	14400	7350	2450	5530	3090
9	970	8900	6390	6470	6110	9150	2990	20100	10500	2040	7100	2400
10	914	7190	4570	10600	5320	9400	2840	22300	12000	1820	7490	1960
11	928	5750	3350	15700	4860	13700	2720	25400	14200	1560	7130	1910
12	981	4620	2770	18000	4500	17800	2680	29200	14200	1460	6500	1830
13	1220	3800	2470	18600	4390	20900	2800	31700	11500	1460	6070	1640
14	1780	3200	2340	17600	4350	24100	3710	30400	7900	1860	5750	1440
15	2470	2790	3630	17800	4340	24900	3960	26000	5260	2140	5410	1300
16	2820	2490	5370	19700	4290	22300	3690	23100	3570	2360	4880	1210
17	2900	2300	6720	21600	4500	19100	3250	21900	2660	4300	4270	1140
18	2580	2130	6770	22000	4740	16300	3050	20100	2170	8360	3780	1040
19	2260	1960	6420	20700	4810	13700	3980	17800	1910	10600	3090	944
20	1880	1860	7240	20900	4990	11500	5200	15600	1730	11300	2400	897
21	1530	1760	8950	22500	4820	9400	5590	13600	1590	9960	2070	908
22	1320	1700	9360	25800	4550	7170	5350	11600	1490	7130	1800	829
23	1210	1690	9540	31100	4490	5590	4820	9920	1470	4320	1500	773
24	1140	1690	8680	34800	4620	4890	4010	8360	1670	2780	1340	773
25	1040	1770	7100	34500	4740	4510	3400	7100	2310	2120	1220	762
26	1220	1850	6270	30300	4950	4410	4650	5980	2510	2260	1130	784
27	2860	2010	5800	26600	5640	5570	13400	4910	3090	2820	1270	874
28	10300	2110	5710	27500	5870	8740	18800	3880	4680	2960	1290	908
29	14200	2160	5180	31700	---	11100	24300	3030	5140	2960	1290	851
30	14300	2170	4450	36000	---	10900	32600	2600	4240	2660	1300	784
31	10300	---	4410	37300	---	9410	---	2470	---	2220	1430	---
TOTAL	88556	106850	161960	585720	249450	350330	195620	542850	138750	118950	108390	46857
MEAN	2857	3562	5225	18890	8909	11300	6521	17510	4625	3837	3496	1562
MAX	14300	9450	9540	37300	33900	24900	32600	36200	14200	11300	7490	4060
MIN	739	1690	2240	3980	4290	4410	2680	2470	1470	1460	1130	762
CFSM	.55	.68	1.00	3.62	1.71	2.17	1.25	3.35	.89	.74	.67	.30
IN.	.63	.76	1.15	4.17	1.78	2.50	1.39	3.87	.99	.85	.77	.33

CAL YR 1977 TOTAL 1573992 MEAN 4312 MAX 22000 MIN 463 CFSM .83 IN 11.22
WTR YR 1978 TOTAL 2694283 MEAN 7382 MAX 37300 MIN 739 CFSM 1.41 IN 19.20

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 February, March, April and September.

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, 166 micromhos Oct.28; minimum, 45 micromhos Jan. 31, Feb. 1.
WATER TEMPERATURES: Maximum, 31.0°C July 31, Aug. 1; minimum, 2.0°C Feb. 7, 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
OCT											
25...	1100	1060	95	6.3	15.0	8	--	8.8	96	<4	16
NOV											
15...	1020	2820	85	5.7	13.0	8	--	9.0	110	1800	17
DEC											
20...	1145	7310	82	6.5	8.0	25	--	11.2	200	370	19
JAN											
31...	1030	37600	48	5.7	3.0	250	--	11.6	--	K3500	14
FEB											
23...	1230	4460	85	6.5	4.0	15	--	11.8	--	--	17
MAR											
29...	1017	11000	75	7.1	13.0	30	--	9.6	450	160	16
APR											
04...	1130	4430	70	5.6	15.5	30	--	9.5	K60	100	17
MAY											
09...	1130	19800	59	6.5	14.5	100	--	9.7	580	280	17
JUL											
05...	1120	3910	73	6.4	27.0	--	20	6.2	180	140	14
18...	1150	8560	78	5.6	28.0	--	40	6.8	--	150	14
AUG											
15...	1045	5410	65	6.2	26.0	--	50	8.8	380	330	19
SEP											
06...	1115	4110	75	6.3	26.5	--	2.0	6.7	110	K60	29

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

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)
OCT											
25...	1	3.8	1.6	11	55	1.2	2.5	19	0	16	15
NOV											
15...	4	4.0	1.7	8.2	47	.9	2.6	16	0	13	51
DEC											
20...	5	4.6	1.9	8.3	45	.8	2.5	18	0	15	9.1
JAN											
31...	6	3.3	1.3	3.2	31	.4	1.7	9	0	7	29
FEB											
23...	4	4.1	1.7	7.0	44	.7	1.6	16	0	13	8.1
MAR											
29...	4	3.9	1.5	6.7	45	.7	1.5	14	0	11	1.8
APR											
04...	5	4.2	1.5	5.5	39	.6	1.5	14	0	11	56
MAY											
09...	7	4.2	1.5	3.8	31	.4	1.7	12	0	10	6.1
JUL											
05...	3	3.3	1.5	7.7	50	.9	1.8	14	0	11	8.9
18...	3	3.0	1.6	7.8	51	.9	2.0	14	0	11	56
AUG											
15...	2	4.4	1.7	5.0	34	.5	2.1	19	0	16	19
SEP											
06...	0	7.1	2.8	5.7	28	.5	2.0	37	0	30	30

DATE	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)
OCT										
25...	13	9.6	.0	7.5	77	--	58	.10	220	--
NOV										
15...	11	8.5	.1	9.6	75	--	54	.10	571	--
DEC										
20...	11	7.5	.1	11	74	--	56	.10	1460	--
JAN										
31...	12	3.9	.0	5.9	68	53	36	.09	6900	130
FEB										
23...	15	8.6	.1	9.9	62	--	56	.08	747	--
MAR										
29...	10	6.7	.1	8.0	63	--	45	.09	1870	--
APR										
04...	12	6.3	.1	8.0	53	--	46	.07	634	--
MAY										
09...	8.9	4.1	.1	6.5	66	--	37	.09	3530	--
JUL										
05...	9.1	6.6	.1	7.9	78	--	45	.11	823	--
18...	8.0	7.2	.1	7.5	42	--	44	.06	971	--
AUG										
15...	6.2	5.4	.1	8.8	72	--	44	.10	1050	--
SEP										
06...	6.1	5.7	.1	8.5	62	--	56	.08	688	--

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DIS. SOLVED (MG/L AS P)
OCT 25...	.60	.12	--	--	--	.50	--	--	.22	.18
NOV 15...	.36	.08	--	--	--	.63	--	--	.17	.13
DEC 20...	.48	.11	--	--	--	.53	--	--	.15	.08
JAN 31...	.40	.10	--	--	--	.43	--	--	.19	.04
FEB 23...	.64	.28	--	--	--	.69	--	--	.14	.12
MAR 29...	.61	.13	.37	.50	.00	.50	1.1	4.9	.18	.08
APR 04...	.45	.11	.33	.44	.00	.53	.89	3.9	.13	.10
MAY 09...	.52	.11	.74	.85	.40	.45	1.4	6.1	.30	.06
JUL 05...	.67	.13	.64	.77	.01	.76	1.4	6.4	.17	.11
18...	.60	.30	.53	.83	.14	.69	1.4	6.3	.30	.19
AUG 15...	.45	.07	.59	.66	.21	.45	1.1	4.9	.18	.16
SEP 06...	.04	.06	.26	.32	.02	.30	.36	1.6	.02	.01

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUSPENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)
NOV 15...	2	1	1	0	0	0	0	0	0	<10	<10	0
JAN 31...	0	0	0	0	0	0	0	0	0	20	20	0
APR 04...	1	0	1	0	0	0	1	1	0	20	18	2
AUG 15...	1	0	1	0	0	0	4	0	7	40	37	3

DATE	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)
NOV 15...	1	0	3	4	1	3	1100	--	600	0	0	0
JAN 31...	0	0	0	11	9	2	8600	--	170	18	4	14
APR 04...	0	0	0	6	4	2	1200	--	350	15	15	0
AUG 15...	0	0	0	5	1	4	3800	3200	600	32	0	40

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)
NOV 15...	100	20	80	<.5	.0	<.5	0	0	0	0	0
JAN 31...	80	50	30	<.5	.0	<.5	0	0	0	0	0
APR 04...	50	10	40	<.5	.0	<.5	0	0	0	0	0
AUG 15...	60	30	30	<.5	.0	<.5	0	0	0	2	0

DATE	SILVER, DISSOLVED (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DISSOLVED, RADON METHOD (PCI/L)
NOV 15...	0	10	0	10	--	--	--	--	--	--	--
JAN 31...	0	30	20	10	1.9	5.6	4.1	3.3	3.8	3.0	.20
APR 04...	0	20	20	0	--	--	--	--	--	--	--
AUG 15...	2	20	10	10	.9	1.0	3.3	.9	3.1	.9	.05

DATE	URANIUM DISSOLVED, EXTRACTION (UG/L)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	PERIPHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERIPHYTON BIOMASS ASH WEIGHT G/SQ M	CHLOR-A PERIPHYTON CHROMOGRAPHIC FLUOROM (MG/M2)	CHLOR-B PERIPHYTON CHROMOGRAPHIC FLUOROM (MG/M2)	LENGTH OF EXPOSURE (DAYS)
OCT 25...	--	12	--	--	.157	.079	.006	.000	41
NOV 15...	--	--	12	--	--	--	--	--	--
DEC 20...	--	7.6	--	--	--	--	--	--	--
JAN 31...	.01	--	14	--	--	--	--	--	--
FEB 23...	--	5.8	--	--	--	--	--	--	--
MAR 29...	--	9.0	--	--	--	--	--	--	--
APR 04...	--	--	12	.7	--	--	--	--	--
MAY 09...	--	6.0	--	--	--	--	--	--	--
JUL 05...	--	6.5	--	--	--	--	--	--	--
18...	--	7.6	--	--	.079	.000	.000	.000	12
AUG 15...	.06	--	10	--	--	--	--	--	--
SEP 06...	--	8.9	--	--	--	--	--	--	--

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	NOV 15,77		MAR 29,78		MAY 9,78		SEP 6,78	
TIME	1020		1017		1130		1115	
TOTAL CELLS/ML	200		6500		260		73	
DIVERSITY: DIVISION	0.3		1.1		0.0		1.0	
.CLASS	0.3		1.1		0.0		1.0	
..ORDER	0.3		1.6		0.0		1.5	
...FAMILY	0.4		1.6		0.0		1.5	
....GENUS	0.4		1.8		0.0		1.5	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...OOCYSTACEAE								
....ANKISTRODESMUS	--	-	110	2	--	-	29#	40
....CHODATELLA	--	-	*	0	--	-	--	-
....SELENASTRUM	--	-	*	0	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	--	-	200	3	--	-	--	-
....MELOSIRA	--	-	3200#	49	--	-	29#	40
....STEPHANODISCUS	--	-	*	0	--	-	--	-
..PENNALES								
...NAVICULACEAE								
....NAVICULA	6	3	--	-	260#	100	15#	20
...NITZSCHIACEAE								
....NITZSCHIA	6	3	100	2	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROCCOCCALES								
...CHROCCOCCACEAE								
....ANACYSTIS	--	-	1900#	29	--	-	--	-
..HORMOGONALES								
...OSCILLATORIACEAE								
....LYNGBYA	180#	94	--	-	--	-	--	-
....OSCILLATORIA	--	-	1000#	15	--	-	--	-

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

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	100	98	99	78	74	76	84	77	81	70	67	69
2	101	99	100	77	75	76	89	84	87	73	68	71
3	99	92	96	79	75	78	94	88	90	69	66	68
4	93	91	92	81	78	80	101	94	98	69	66	68
5	99	92	96	83	81	82	110	100	103	70	67	68
6	105	100	102	82	74	79	126	110	120	70	67	68
7	104	102	103	79	75	77	129	126	127	75	70	73
8	109	104	107	80	69	76	139	130	133	78	73	75
9	109	107	108	84	79	81	128	119	124	75	73	73
10	107	101	104	79	74	77	119	112	114	79	74	76
11	118	103	109	77	73	75	130	117	126	98	80	90
12	123	118	121	77	73	75	129	116	124	79	68	72
13	118	107	111	82	77	80	116	110	113	68	64	65
14	107	99	106	82	80	81	110	98	104	66	62	64
15	98	90	93	82	79	80	100	94	97	68	61	65
16	107	90	101	86	81	84	94	83	88	63	58	61
17	107	102	104	94	87	90	82	79	81	63	58	61
18	107	102	105	96	93	95	82	76	78	61	57	59
19	105	102	104	96	93	94	78	74	77	59	56	58
20	105	101	102	96	94	95	83	74	79	60	56	58
21	106	101	105	95	92	94	85	80	82	61	56	59
22	101	96	98	92	90	91	88	85	87	56	53	54
23	97	94	95	90	88	89	96	85	91	52	49	51
24	97	95	96	90	88	89	93	82	88	53	49	50
25	99	94	96	93	90	92	81	76	77	54	49	51
26	95	91	94	94	92	93	78	70	75	53	50	52
27	90	86	88	93	90	92	70	67	69	57	52	55
28	166	88	137	90	85	88	67	65	66	56	51	55
29	152	83	112	86	84	85	69	65	67	52	49	50
30	93	78	81	84	83	83	67	66	66	49	46	48
31	81	78	80	---	---	---	67	66	66	48	45	46
MONTH	166	78	101	96	69	84	139	65	93	98	45	62

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	49	45	47	92	86	88	---	---	62	48	47	48
2	50	47	48	99	91	95	---	---	65	49	47	48
3	54	49	51	100	98	99	---	---	68	52	48	50
4	56	51	53	99	94	96	67	66	67	56	51	54
5	57	52	55	92	89	90	69	66	68	59	56	57
6	57	54	56	92	86	89	72	69	70	57	54	56
7	58	55	57	91	84	88	71	69	70	57	53	54
8	61	57	60	85	83	84	72	70	71	67	57	61
9	63	61	62	87	82	84	73	71	72	58	52	56
10	66	62	64	81	78	79	74	72	73	56	55	56
11	70	65	68	85	75	80	73	72	72	56	55	56
12	69	66	68	73	62	69	75	72	74	56	54	56
13	70	67	69	64	58	61	78	75	76	55	53	54
14	69	67	68	61	56	59	80	78	79	54	52	53
15	71	67	69	59	55	57	78	75	77	54	52	53
16	73	72	73	60	54	57	75	73	74	60	55	58
17	76	73	75	61	56	59	78	73	76	62	56	59
18	77	75	77	64	59	62	78	75	76	59	56	58
19	82	78	80	67	62	64	75	74	74	59	57	58
20	78	74	76	66	63	64	75	72	75	59	56	58
21	80	73	76	66	63	65	71	68	69	62	58	61
22	82	80	81	68	63	65	68	65	66	64	61	63
23	85	80	81	70	63	67	71	66	68	66	63	64
24	84	82	83	72	67	70	70	67	69	68	64	66
25	86	80	84	74	70	72	68	65	66	69	67	68
26	82	77	80	74	71	72	69	65	67	72	68	70
27	83	80	81	74	71	73	76	65	70	74	71	73
28	88	81	85	75	70	72	65	49	56	76	74	75
29	---	---	---	75	70	71	50	48	49	77	74	76
30	---	---	---	---	---	58	50	48	49	78	76	77
31	---	---	---	---	---	60	---	---	---	79	76	77
MONTH	88	45	69	100	54	73	80	48	69	79	47	60

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	80	77	79	80	69	72	72	64	67	83	81	82
2	82	80	80	84	77	80	64	53	59	---	---	91
3	84	82	83	90	78	85	53	51	52	---	---	90
4	83	82	82	90	81	87	71	54	62	---	---	86
5	84	82	82	81	67	75	73	71	72	---	---	82
6	83	79	81	66	58	62	80	72	76	---	---	82
7	78	76	77	57	55	56	96	81	89	104	82	90
8	82	75	79	56	52	55	101	86	97	123	105	115
9	79	69	77	54	52	53	85	69	75	129	121	124
10	83	61	69	66	52	54	81	71	76	137	131	135
11	70	49	59	55	52	53	86	79	82	138	135	137
12	70	54	62	54	53	53	83	67	76	146	137	142
13	54	53	53	57	53	55	67	64	66	147	142	146
14	57	53	55	57	55	56	72	64	68	142	123	133
15	64	57	61	60	55	58	67	65	66	122	100	110
16	67	64	66	65	61	63	70	65	68	100	98	98
17	67	64	65	68	65	67	73	69	71	106	98	103
18	67	65	66	87	68	77	75	73	74	109	106	108
19	67	65	66	100	86	94	77	74	76	113	109	111
20	66	62	64	104	75	88	80	77	79	113	110	112
21	64	62	63	75	67	69	81	80	81	110	104	107
22	66	63	65	70	66	68	82	80	81	104	101	102
23	67	65	66	71	67	70	83	81	82	101	100	100
24	71	66	69	69	67	68	84	82	83	100	96	98
25	75	70	72	72	69	71	82	80	82	96	89	93
26	75	73	74	74	72	73	83	80	81	88	83	85
27	72	68	69	78	74	76	85	82	84	84	82	83
28	68	66	68	82	78	80	87	84	85	92	85	89
29	69	62	66	80	76	78	85	83	84	94	92	94
30	76	68	73	77	74	75	86	84	85	94	91	92
31	---	---	---	76	72	75	85	82	84	---	---	---
MONTH	84	49	70	104	52	69	101	51	76	147	81	104
YEAR	166	45	78									

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	25.5	25.0	25.0	16.5	16.0	16.0	12.5	12.0	12.5	5.5	5.0	5.0
2	26.0	25.0	25.5	16.5	16.0	16.5	12.5	12.5	12.5	5.5	5.0	5.5
3	25.0	24.5	25.0	17.0	16.5	16.5	12.5	12.0	12.5	5.5	5.0	5.0
4	24.5	24.0	24.5	17.0	17.0	17.0	12.0	12.0	12.0	5.0	5.0	5.0
5	24.0	23.5	24.0	17.5	17.0	17.0	12.0	11.5	11.5	5.0	5.0	5.0
6	23.5	23.0	23.0	18.5	17.5	18.0	12.0	11.5	12.0	5.5	5.0	5.5
7	23.0	22.5	23.0	18.5	18.0	18.5	11.5	10.5	11.0	5.5	5.5	5.5
8	22.5	22.5	22.5	19.0	18.5	18.5	10.5	9.5	10.0	6.5	5.5	6.0
9	22.5	22.0	22.5	19.0	18.5	18.5	9.5	9.5	9.5	6.5	6.0	6.5
10	22.0	21.5	22.0	19.0	19.0	19.0	9.5	8.5	9.0	6.0	6.0	6.0
11	22.0	21.0	21.5	18.5	17.5	18.0	8.5	7.5	8.0	6.5	5.5	6.0
12	21.5	21.0	21.0	17.0	16.0	16.5	7.5	7.0	7.0	6.5	6.0	6.5
13	21.0	20.0	20.5	16.0	15.0	15.5	7.5	7.0	7.0	6.0	5.5	6.0
14	19.5	18.5	19.0	15.0	14.0	14.5	7.5	7.0	7.5	5.5	4.5	5.0
15	18.5	18.0	18.0	14.0	13.5	14.0	8.0	7.5	7.5	4.5	4.0	4.5
16	18.0	17.0	17.5	14.0	13.5	14.0	8.5	8.0	8.0	4.0	3.5	3.5
17	17.0	16.5	16.5	14.0	13.5	14.0	8.0	7.5	8.0	4.0	3.0	3.5
18	16.5	16.0	16.0	14.0	13.5	14.0	9.0	7.5	8.5	4.5	3.5	4.0
19	16.0	15.5	16.0	13.5	13.0	13.5	9.5	9.0	9.5	4.0	3.5	4.0
20	16.0	15.5	15.5	13.5	13.0	13.0	9.5	9.0	9.0	4.0	4.0	4.0
21	15.5	15.0	15.5	13.0	13.0	13.0	9.5	9.0	9.5	4.5	4.0	4.5
22	15.5	15.0	15.5	13.0	13.0	13.0	9.5	8.5	9.0	4.5	4.0	4.0
23	15.5	15.0	15.0	13.0	13.0	13.0	8.5	8.0	8.5	4.0	3.5	4.0
24	15.5	15.5	15.5	13.0	13.0	13.0	8.5	8.0	8.5	4.0	3.5	3.5
25	15.5	15.0	15.5	13.0	13.0	13.0	8.5	8.0	8.5	5.0	3.5	4.5
26	16.0	15.5	16.0	13.0	12.5	13.0	8.0	7.5	8.0	5.5	4.5	5.0
27	16.0	16.0	16.0	12.5	12.0	12.0	7.5	7.0	7.0	5.0	4.0	4.5
28	16.5	16.0	16.0	12.0	12.0	12.0	7.0	6.5	6.5	5.5	4.5	4.5
29	17.0	16.5	16.5	12.0	12.0	12.0	6.5	6.0	6.0	5.0	4.5	4.5
30	16.5	16.0	16.5	12.0	12.0	12.0	6.0	5.5	5.5	5.0	4.0	4.5
31	16.0	16.0	16.0	---	---	---	5.5	5.5	5.5	4.5	3.5	4.0
MONTH	26.0	15.0	19.0	19.0	12.0	15.0	12.5	5.5	9.0	6.5	3.0	5.0

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4.0	3.5	3.5				---	---	---	14.5	14.5	14.5
2	3.5	3.0	3.0				---	---	---	14.5	14.5	14.5
3	3.5	2.5	3.0				---	---	---	15.0	14.5	14.5
4	3.0	2.5	2.5				16.5	16.0	16.0	15.0	14.5	15.0
5	3.0	2.5	2.5				17.0	16.5	16.5	16.0	15.0	15.5
6	3.0	2.5	3.0				18.5	17.0	17.5	16.5	15.5	16.0
7	2.5	2.0	2.5				19.0	18.0	18.5	16.0	16.0	16.0
8	2.5	2.0	2.5				19.5	19.0	19.0	16.5	16.0	16.0
9	3.0	2.5	3.0				19.5	19.0	19.5	16.5	16.0	16.5
10	3.0	2.5	3.0				20.0	19.5	19.5	16.5	16.5	16.5
11	3.0	2.5	3.0				20.5	19.5	20.0	16.5	16.5	16.5
12	3.5	2.5	3.0				20.5	20.5	20.5	18.0	16.5	17.5
13	4.0	3.0	3.5				21.0	20.5	20.5	18.5	18.0	18.0
14	4.5	3.5	4.0				20.5	20.5	20.5	18.5	18.5	18.5
15	4.5	4.0	4.5				20.5	20.0	20.0	18.5	18.0	18.5
16	5.0	4.5	4.5				20.5	20.0	20.5	18.0	17.5	17.5
17	5.5	4.5	5.0				20.0	20.0	20.0	18.5	18.0	18.0
18	5.5	5.0	5.5				20.0	19.5	19.5	18.5	18.0	18.0
19	5.5	5.5	5.5				19.5	19.5	19.5	18.0	17.5	18.0
20	5.5	5.5	5.5				19.5	19.5	19.5	18.5	18.0	18.0
21	6.0	5.5	5.5				19.5	19.0	19.0	19.5	18.5	19.0
22	5.5	5.0	5.5				18.5	17.5	18.0	20.0	19.5	19.5
23	5.5	4.5	5.0				18.0	17.5	17.5	20.5	20.0	20.0
24	5.0	4.0	4.5				18.0	17.5	18.0	21.5	20.5	21.0
25	---	---	---				18.5	18.0	18.5	22.5	21.5	22.0
26	---	---	---				19.0	18.0	18.5	23.0	22.0	22.5
27	---	---	---				18.5	17.0	17.5	23.5	22.5	23.0
28	---	---	---				16.5	14.5	15.5	23.5	23.0	23.5
29	---	---	---				14.5	14.5	14.5	24.5	23.5	24.0
30	---	---	---				14.5	14.5	14.5	24.5	24.0	24.5
31	---	---	---				---	---	---	25.0	24.5	24.5
MONTH	6.0	2.0	4.0				21.0	14.5	18.5	25.0	14.5	18.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.5	25.0	25.0	29.5	29.0	29.0	31.0	30.5	30.5	30.0	29.5	30.0
2	26.5	25.5	26.0	29.5	28.5	29.0	30.5	30.0	30.0	---	---	---
3	27.0	26.5	26.5	28.5	28.0	28.0	30.0	29.5	29.5	---	---	---
4	26.5	26.5	26.5	28.0	27.5	28.0	30.0	29.0	29.5	---	---	---
5	27.0	26.5	26.5	28.5	27.5	28.0	30.0	29.5	29.5	---	---	---
6	27.0	26.5	26.5	27.5	27.0	27.0	29.5	29.0	29.0	---	---	---
7	27.0	26.5	27.0	27.0	27.0	27.0	29.0	28.5	29.0	28.0	27.5	27.5
8	27.5	27.0	27.0	27.5	27.0	27.0	29.0	28.5	29.0	27.5	27.0	27.5
9	27.5	26.5	27.0	28.0	27.5	27.5	29.0	28.5	28.5	27.5	27.0	27.5
10	26.0	25.5	25.5	28.5	27.5	28.0	28.5	28.0	28.5	27.5	27.0	27.5
11	25.5	25.0	25.0	28.5	28.5	28.5	28.0	27.5	28.0	27.0	27.0	27.0
12	25.5	25.0	25.0	29.0	28.0	28.5	27.5	27.5	27.5	27.5	27.0	27.0
13	25.0	24.5	25.0	29.0	28.0	28.5	28.0	27.5	27.5	27.5	27.0	27.0
14	25.0	24.5	24.5	28.5	28.5	28.5	28.5	28.0	28.0	27.5	27.0	27.0
15	25.0	24.5	25.0	28.5	28.0	28.0	28.5	27.5	28.0	27.0	26.5	27.0
16	25.0	25.0	25.0	28.0	27.5	28.0	29.0	28.0	28.5	27.5	26.5	27.0
17	25.5	25.0	25.0	28.5	27.5	27.5	29.0	28.5	29.0	27.5	27.0	27.0
18	26.0	25.5	25.5	28.0	27.5	28.0	29.5	29.0	29.0	27.5	27.0	27.5
19	26.5	26.0	26.0	27.5	27.0	27.0	30.0	29.0	29.5	28.0	27.0	27.5
20	27.0	26.0	26.5	27.0	26.5	26.5	30.5	30.0	30.0	27.5	27.5	27.5
21	27.0	26.5	27.0	26.5	25.5	26.0	30.5	30.0	30.0	28.0	27.0	27.5
22	27.5	27.0	27.0	27.0	26.5	26.5	30.5	30.0	30.0	28.0	27.5	27.5
23	27.5	27.0	27.0	27.5	27.0	27.0	30.5	29.5	30.0	27.5	27.0	27.5
24	28.0	27.0	27.5	28.0	27.5	28.0	30.5	29.5	30.0	27.0	27.0	27.0
25	28.5	27.5	28.0	28.5	28.0	28.5	30.0	29.0	29.5	27.0	26.5	26.5
26	28.5	28.5	28.5	29.0	28.5	29.0	30.0	29.5	29.5	26.5	26.0	26.5
27	28.5	28.0	28.5	29.5	29.0	29.0	29.5	29.5	29.5	26.5	26.0	26.0
28	29.0	28.5	29.0	29.5	29.5	29.5	29.5	29.0	29.5	26.0	25.5	25.5
29	29.5	29.0	29.0	30.0	29.5	29.5	29.5	29.0	29.0	25.5	25.0	25.0
30	29.5	29.0	29.5	30.5	29.5	30.0	30.0	29.0	29.5	25.0	25.0	25.0
31	---	---	---	31.0	30.5	31.0	30.0	29.5	30.0	---	---	---
MONTH	29.5	24.5	26.5	31.0	25.5	28.0	31.0	27.5	29.0	30.0	25.0	27.0
YEAR	31.0	2.0	18.5									

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 25...	1100	1060	27	77	85
NOV 15...	1020	2820	18	137	100
DEC 20...	1145	7310	36	711	96
JAN 31...	1030	37600	137	13900	96
FEB 23...	1230	4460	15	181	76
MAR 29...	1017	11000	39	1160	96
APR 04...	1130	4430	27	323	92
MAY 09...	1130	19800	132	7060	99
JUL 05...	1120	3910	20	211	98
18...	1150	8560	51	1180	98
AUG 15...	1045	5410	22	321	100
SEP 06...	1115	4110	10	111	92

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER YEAR OCTOBER 1977 to SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT 05...	1210	730	100	6.3	22.0	7.7	29	.2	30
NOV 03...	1130	3960	80	6.5	18.0	6.8	34	.8	60
DEC 06...	1130	3200	100	6.8	13.0	9.8	15	1.1	90
JAN 05...	1145	4480	50	6.6	6.0	11.7	22	1.2	270
FEB 09...	1200	6040	40	6.3	4.0	12.0	24	1.2	100
MAR 06...	1215	12000	60	6.5	6.0	12.3	14	1.4	300
APR 05...	1300	3810	65	6.3	19.0	8.9	21	.9	80
MAY 08...	1230	18500	60	6.9	16.0	8.3	24	1.3	1000
JUN 08...	1230	7350	90	7.0	27.0	6.6	--	--	200
JUL 12...	1200	1440	62	6.2	27.0	6.3	28	.5	40

02106000 LITTLE COHARIE CREEK NEAR ROSEBORO, N. C.

LOCATION.--Lat 34°57'13", long 78°29'17", Sampson County, Hydrologic Unit 03030006, on downstream end of center pier of bridge on State Highway 24, 1.2 mi (1.9 km) east of Roseboro, and 1.5 mi (2.4 km) upstream from Bear-skin Swamp.

DRAINAGE AREA.--96.4 mi² (250 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 80.52 ft (24.542 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Jan. 12, 1951, nonrecording gage at same site and datum.

REMARKS.--Records good. Suspended sediment records for the current year are published on page 218 of this report.

AVERAGE DISCHARGE.--28 years, 116 ft³/s (3.285 m³/s), 16.34 in/yr (415 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, 1,310 ft³/s (37.1 m³/s) Apr. 28, gage height, 8.07 ft (2.460 m); minimum, 7.8 ft³/s (0.22 m³/s),Oct. 5, 6, gage height, 1.53 ft (0.466 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	42	73	237	309	121	269	484	49	24	12	21
2	9.9	37	74	234	284	126	238	389	40	56	13	26
3	9.4	33	72	237	272	161	208	320	36	99	23	20
4	8.6	33	67	237	265	220	177	283	39	96	31	19
5	8.0	37	71	225	257	234	150	286	37	63	76	16
6	8.0	155	86	208	249	239	129	274	38	43	82	14
7	8.1	377	85	203	236	264	117	274	38	38	116	12
8	8.4	369	79	211	222	273	106	335	44	29	148	12
9	9.9	352	71	225	208	260	96	434	61	21	146	11
10	14	370	62	239	189	412	88	440	79	18	104	12
11	16	321	57	246	167	518	82	439	84	18	87	75
12	15	267	53	240	152	629	81	441	91	26	67	145
13	34	215	51	251	145	685	116	372	86	24	49	143
14	105	155	80	295	142	546	163	306	51	19	45	147
15	113	113	219	300	138	432	160	270	34	29	54	148
16	114	99	228	297	138	351	148	261	27	41	49	64
17	92	92	225	322	155	300	124	277	23	74	34	36
18	53	86	241	339	156	275	195	278	21	85	30	29
19	38	79	248	338	159	253	403	275	19	88	46	24
20	31	73	233	532	165	232	389	240	17	48	42	21
21	27	68	289	591	165	212	333	220	16	27	40	18
22	25	65	334	682	164	194	332	192	15	20	44	17
23	24	68	302	647	156	174	314	139	36	16	28	17
24	23	72	290	512	146	157	275	106	48	16	20	17
25	22	72	310	454	137	147	240	90	70	28	16	16
26	25	93	306	518	129	172	441	78	101	44	16	16
27	47	97	278	490	121	254	754	68	121	55	80	14
28	51	90	250	493	114	277	1230	62	63	43	77	13
29	48	80	231	498	---	288	956	60	41	26	92	12
30	50	72	220	430	---	319	633	55	29	19	59	11
31	48	---	232	358	---	300	---	61	---	15	28	---
TOTAL	1095.3	4082	5417	11089	5140	9025	8947	7809	1454	1248	1754	1146
MEAN	35.3	136	175	358	184	291	298	252	48.5	40.3	56.6	38.2
MAX	114	377	334	682	309	685	1230	484	121	99	148	148
MIN	8.0	33	51	203	114	121	81	55	15	15	12	11
CFSM	.37	1.41	1.82	3.71	1.91	3.02	3.09	2.61	.50	.42	.59	.40
IN.	.42	1.58	2.09	4.28	1.98	3.48	3.45	3.01	.56	.48	.68	.44

CAL YR 1977 TOTAL 40961.5 MEAN 112 MAX 723 MIN 3.1 CFSM 1.16 IN 15.81
WTR YR 1978 TOTAL 58206.3 MEAN 159 MAX 1230 MIN 8.0 CFSM 1.65 IN 22.46

02106000 LITTLE COHARIE CREEK NEAR ROSEBORO, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
JAN				
09...	0930	222	11	6.6
20...	1050	541	17	25
20...	1603	579	17	27
24...	1200	512	19	26
25...	1100	444	6	7.2
25...	1530	463	7	8.8
FEB				
09...	1615	194	5	2.6
MAR				
27...	1312	254	13	8.9
MAY				
04...	1015	282	4	3.0

02106500 BLACK RIVER NEAR TOMAHAWK, N. C.

LOCATION.--Lat 34°45'17", long 78°17'21", Sampson County, Hydrologic Unit 03030006, on left bank 30 ft (9 m) upstream from bridge on State Highway 411, 0.2 mi (0.3 km) downstream from Clear Run Swamp, and 3.8 mi (6.1 km) northeast of Tomahawk.

DRAINAGE AREA.--680 mi² (1,760 km²).

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

REVISED RECORDS.--WSP 1723: 1955(M).

GAGE.--Water-stage recorder. Datum of gage is 24.61 ft (7.501 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1951, to June 29, 1961, nonrecording gage on downstream side of bridge. June 30, 1961, to Sept. 30, 1964, water-stage recorder at present site at datum 25.00 ft (7.620 m) lower.

REMARKS.--Records good. Suspended sediment records for the current year are published on page 220 of this report.

AVERAGE DISCHARGE.--27 years, 790 ft³/s (22.37 m³/s), 15.78 in/yr (401 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, 3,740 ft³/s (106 m³/s) Apr. 30, gage height, 15.41 ft (4.697 m); minimum, 64 ft³/s (1.81 m³/s) Sept. 30, gage height, 1.56 ft (0.475 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	259	578	1470	2740	768	1690	3660	349	187	155	186
2	85	237	592	1500	2440	822	1590	3420	324	367	240	182
3	82	224	568	1480	2190	865	1450	3090	289	1030	265	211
4	76	220	526	1430	1980	1030	1310	2730	275	1210	233	181
5	73	230	498	1340	1800	1200	1190	2490	266	1080	202	155
6	71	641	572	1240	1650	1300	1060	2350	264	784	238	138
7	70	1550	620	1220	1510	1380	907	2250	291	555	429	126
8	70	1990	574	1250	1400	1420	766	2150	275	397	579	116
9	73	2750	526	1300	1300	1430	675	2110	340	294	582	107
10	85	2960	489	1370	1200	1510	618	2200	508	234	513	100
11	91	2700	459	1410	1120	1720	588	2270	472	202	667	96
12	98	2310	436	1410	1060	1980	574	2330	410	259	674	174
13	163	1960	420	1410	1020	2230	653	2330	362	308	630	265
14	414	1650	443	1490	989	2510	1060	2210	337	256	542	256
15	639	1410	920	1600	959	2650	1260	1990	324	222	390	224
16	609	1190	1290	1700	917	2630	1260	1760	302	231	322	206
17	506	910	1450	1780	895	2470	1110	1570	250	737	285	181
18	433	730	1550	1870	896	2230	971	1470	200	1120	241	134
19	351	632	1600	1910	937	1980	1270	1410	174	1050	200	112
20	287	572	1570	2100	999	1750	1810	1280	159	750	195	99
21	237	528	1530	2350	1010	1550	2820	1130	147	420	268	91
22	205	495	1570	2630	978	1390	3570	1020	136	301	237	85
23	185	484	1630	2960	946	1230	3580	894	146	240	222	80
24	171	513	1690	3180	921	1080	3140	775	219	195	190	78
25	161	529	1770	3190	897	976	2650	659	250	169	156	78
26	178	584	1830	3160	859	925	2500	570	225	224	137	77
27	260	677	1820	3130	812	1080	2770	500	222	425	169	74
28	307	668	1720	3160	766	1300	3080	455	244	337	340	73
29	305	624	1610	3250	---	1430	3480	433	278	250	338	70
30	298	586	1500	3250	---	1550	3710	407	220	208	303	66
31	285	---	1450	3040	---	1660	---	372	---	165	249	---
TOTAL	6957	30813	33801	63580	35191	48046	53112	52285	8258	14207	10191	4021
MEAN	224	1027	1090	2051	1257	1550	1770	1687	275	458	329	134
MAX	639	2960	1830	3250	2740	2650	3710	3660	508	1210	674	265
MIN	70	220	420	1220	766	768	574	372	136	165	137	66
CFSM	.33	1.51	1.60	3.02	1.85	2.28	2.60	2.48	.40	.67	.48	.20
IN.	.38	1.69	1.85	3.48	1.93	2.63	2.91	2.86	.45	.78	.56	.22

CAL YR 1977 TOTAL 256875 MEAN 704 MAX 3010 MIN 36 CFSM 1.04 IN 14.05
WTR YR 1978 TOTAL 360462 MEAN 988 MAX 3710 MIN 66 CFSM 1.45 IN 19.72

CAPE FEAR RIVER BASIN

02106500 BLACK RIVER NEAR TOMAHAWK, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
JAN				
04...	1120	1390	4	15
20...	1445	2170	9	53
24...	1300	3200	13	112
25...	1200	3190	15	129
25...	1430	3190	20	172
FEB				
08...	0840	1350	3	11
MAR				
27...	1015	1060	13	37
APR				
26...	1235	2490	11	74
MAY				
04...	1540	2690	4	29
JUL				
28...	0940	202	9	4.9

02106648 BLACK RIVER AT SECONDARY ROAD 1722 NEAR DUNN, N. C.

LOCATION.--Lat 35°20'52", long 78°37'28", Harnett County, Hydrologic Unit 03030006, at bridge on Secondary Road 1722 and 3.0 mi (4.8 km) north-northwest of Dunn.

DRAINAGE AREA.--38 mi² (98 km²).

PERIOD OF RECORD.--Water years 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	ACIDITY (MG/L AS H)
OCT										
04...	1400	1.8	60	5.5	15.5	3.3	230	K72	--	--
14...	0930	17	60	4.9	12.0	7.2	--	--	--	.0
NOV										
06...	1430	100	53	4.9	19.0	5.2	--	--	--	--
07...	1500	265	51	4.7	18.0	4.6	5000	980	--	--
30...	1045	44	57	4.8	7.0	8.7	--	--	--	--
JAN										
09...	1420	86	53	5.5	6.0	9.0	640	K240	--	--
11...	0945	80	54	4.8	.0	11.4	K68	76	--	--
14...	1205	160	54	5.4	2.0	11.2	--	--	--	--
MAR										
29...	1245	66	52	6.1	16.0	11.6	820	92	--	.0
APR										
26...	1320	335	37	5.3	--	--	K27000	K32000	--	--
27...	1330	600	37	5.1	7.5	8.5	7500	K7000	--	--
29...	1000	335	43	4.9	8.5	8.4	--	--	--	--
MAY										
12...	1120	135	52	6.0	13.5	7.2	--	--	--	.0
31...	1220	9.0	56	6.0	17.0	6.2	770	320	470	.0
JUN										
19...	1115	4.8	57	6.2	20.0	5.6	440	270	--	--
AUG										
10...	1500	1.2	76	5.9	24.0	4.9	--	--	--	--

DATE	ACIDITY (MG/L AS CACO3)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
OCT									
04...	--	10	0	8	51	100	.14	.49	--
14...	.0	5	0	4	101	76	.10	3.49	--
NOV									
06...	--	2	0	2	40	60	.08	16.2	.04
07...	--	2	0	2	64	60	.08	42.9	.00
30...	--	3	0	2	76	--	--	--	.01
JAN									
09...	--	4	0	3	20	52	.07	12.1	.19
11...	--	2	0	2	51	45	.06	9.72	.18
14...	--	3	0	2	19	50	.07	21.6	.54
MAR									
29...	.0	8	0	7	10	54	.07	9.62	.01
APR									
26...	--	4	0	3	32	37	.05	33.5	.21
27...	--	2	0	2	25	42	.06	68.0	.22
29...	--	1	0	1	20	52	.07	47.0	.15
MAY									
12...	.0	6	0	5	9.6	51	.07	18.6	.12
31...	.0	13	0	11	21	72	.10	1.75	.12
JUN									
19...	--	11	0	9	11	82	.11	1.06	.10
AUG									
10...	--	7	0	6	14	87	.12	.28	.04

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

02106648 BLACK RIVER AT SECONDARY ROAD 1722 NEAR DUNN, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS TOTAL (MG/L AS PO4)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
04...	--	.01	--	--	--	--	--	.01	9.1
14...	--	.17	--	--	--	--	--	--	9.1
NOV									
06...	.01	.05	.00	--	--	.08	.25	.02	--
07...	.00	.00	.01	--	--	.04	.12	.01	31
30...	.00	.01	.01	--	--	.02	.06	.00	13
JAN									
09...	.01	.20	.01	--	--	.02	.06	.01	7.3
11...	.00	.18	.00	--	--	.02	.06	.00	8.1
14...	.01	.55	.22	--	--	.07	.21	.03	8.9
MAR									
29...	.00	.01	.00	--	--	.08	.25	.05	16
APR									
26...	.03	.24	.30	--	--	.30	.92	.14	9.1
27...	.02	.24	.06	--	--	.10	.31	.05	7.9
29...	.01	.16	.03	--	--	.08	.25	.05	8.5
MAY									
12...	.01	.13	.05	--	--	.06	.18	.02	8.5
31...	.01	.13	.06	--	--	.07	.21	.03	4.9
JUN									
19...	.01	.11	.13	--	--	.06	.18	.03	5.6
AUG									
10...	.00	.04	.04	.76	.80	.04	.12	.01	8.5

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
04...	1400	1.8	28	.14
14...	0930	17	34	1.6
NOV				
06...	1430	100	27	7.3
07...	1500	265	16	11
30...	1045	44	13	1.5
JAN				
09...	1420	86	23	5.3
11...	0945	80	24	5.2
14...	1205	160	14	6.0
MAR				
29...	1245	66	7	1.2
APR				
26...	0915	225	81	49
26...	1320	335	51	46
26...	1533	410	36	40
27...	1330	600	34	55
29...	1000	335	15	14
MAY				
05...	1445	92	8	2.0
12...	1120	135	16	5.8
31...	1220	9.0	18	.44
JUN				
19...	1115	4.8	15	.19
AUG				
10...	1500	1.2	5	.02

02106681 BLACK RIVER NEAR DUNN, N. C.

LOCATION.--Lat 35°17'03", long 78°38'21", Harnett County, Hydrologic Unit 03030006, at bridge 1.5 mi (2.4 km) below Popes Pond and 2.3 mi (3.7 km) southwest of Dunn.

DRAINAGE AREA.--49 mi² (127 km²).

PERIOD OF RECORD.--Water years 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	ACIDITY (MG/L AS H)
OCT										
04...	1045	2.4	65	6.4	15.5	2.6	K1100	84	--	--
14...	1015	47	60	4.8	12.0	7.0	--	--	--	.0
NOV										
06...	1515	180	54	5.0	19.0	5.0	--	--	--	--
07...	1230	210	54	5.3	18.0	4.1	K1200	K1900	--	--
30...	1130	84	57	4.5	7.0	8.5	--	--	--	--
JAN										
09...	1305	175	54	5.5	6.0	9.4	600	K100	--	--
11...	1100	155	55	5.0	.0	11.4	80	88	--	--
14...	1110	290	43	4.2	1.0	11.4	--	--	--	.0
MAR										
29...	1345	115	49	6.2	16.5	10.8	250	70	--	.0
APR										
26...	1415	570	39	5.1	--	--	K11000	>240	--	--
27...	1110	560	35	4.9	8.0	8.5	K12000	K8000	--	--
29...	0845	900	41	4.8	8.5	8.6	--	--	--	--
MAY										
12...	1005	280	53	5.9	13.0	7.5	--	--	--	.0
31...	1020	17	53	5.7	17.5	6.0	530	K140	310	.0
AUG										
10...	1345	4.4	75	6.0	24.5	--	--	--	--	--

DATE	ACIDITY (MG/L AS CACO3)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
OCT									
04...	--	8	0	7	5.1	104	.14	.67	--
14...	.0	7	0	6	178	68	.09	8.63	--
NOV									
06...	--	2	0	2	32	69	.09	33.5	.02
07...	--	3	0	2	24	64	.09	36.3	.02
30...	--	1	0	1	51	--	--	--	.01
JAN									
09...	--	3	0	2	15	48	.07	22.7	.20
11...	--	2	0	2	32	41	.06	17.2	.17
14...	.0	4	0	3	404	50	.07	39.1	.43
MAR									
29...	.0	9	0	7	9.1	50	.07	15.5	.01
APR									
26...	--	3	0	2	38	42	.06	64.6	.39
27...	--	2	0	2	40	40	.05	60.5	.25
29...	--	1	0	1	25	50	.07	121	.12
MAY									
12...	.0	6	0	5	12	54	.07	40.8	.08
31...	.0	10	0	8	32	93	.13	4.27	.11
AUG									
10...	--	8	0	7	13	87	.12	1.03	.08

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

02106681 BLACK RIVER NEAR DUNN, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
04...	--	.01	--	--	--	--	--	.01	8.7
14...	--	.28	--	--	--	--	--	--	8.3
NOV									
06...	.01	.03	.01	--	--	.08	.25	.03	--
07...	.01	.03	.01	--	--	.05	.15	.01	27
30...	.00	.01	.01	--	--	.03	.09	.01	15
JAN									
09...	.00	.20	.01	--	--	.02	.06	.00	10
11...	.00	.17	.00	--	--	.01	.03	.00	7.3
14...	.01	.44	.01	--	--	.04	.12	.01	9.3
MAR									
29...	.01	.02	.00	--	--	.02	.06	.00	15
APR									
26...	.02	.41	.13	--	--	.14	.43	.03	8.4
27...	.02	.27	.05	--	--	.10	.31	.05	12
29...	.01	.13	.03	--	--	.09	.28	.05	9.2
MAY									
12...	.01	.09	.03	--	--	.04	.12	.01	9.7
31...	.01	.12	.07	--	--	.07	.21	.03	9.5
AUG									
10...	.01	.09	.02	.62	.71	.06	.18	.03	11

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)
OCT				
04...	1045	2.4	28	.18
14...	1015	47	22	2.8
NOV				
06...	1515	180	24	12
07...	1230	210	19	11
30...	1130	84	10	2.3
JAN				
09...	1305	175	6	2.8
11...	1100	155	6	2.5
14...	1110	290	11	8.6
MAR				
29...	1345	115	6	1.9
APR				
26...	1415	570	65	100
26...	1512	540	54	79
27...	1110	560	25	38
29...	0845	900	17	41
MAY				
05...	1400	150	12	4.9
12...	1005	280	10	7.6
31...	1020	17	14	.64
JUN				
19...	1215	9.5	13	.33

02107000 SOUTH RIVER NEAR PARKERSBURG, N. C.

LOCATION.--Lat 34°48'45", long 78°27'26", Bladen County, Hydrologic Unit 03030006, near center of span on downstream side of bridge (revised) 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) National Geodetic Vertical Datum of 1929. Prior to Oct. 13, 1961, nonrecording gage at present site at datum 50.00 ft (15.240 m) lower.

REMARKS.--Records good. Suspended sediment records for the current year are published on page 226 of this report.

AVERAGE DISCHARGE.--27 years, 428 ft³/s (12.12 m³/s), 15.22 in/yr (387 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, 2,440 ft³/s (69.1 m³/s) Jan. 26, gage height, 11.72 ft (3.572 m); minimum, 16 ft³/s (0.45 m³/s) Sept. 30, gage height, 2.91 ft (0.887 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	160	278	869	1530	454	786	2140	204	168	103	52
2	52	154	270	853	1370	448	825	2200	172	223	84	60
3	46	147	260	841	1240	463	839	2220	146	353	77	56
4	41	141	254	821	1120	505	795	2110	127	421	69	48
5	37	140	258	793	1020	547	714	1970	111	407	60	41
6	34	212	276	761	937	592	640	1720	103	326	76	33
7	32	389	283	736	862	637	577	1460	114	239	99	29
8	30	499	286	704	796	676	514	1310	105	166	116	26
9	29	634	290	712	734	710	459	1270	134	121	118	22
10	30	807	292	716	683	857	408	1290	158	95	107	20
11	29	846	287	718	645	1060	364	1360	147	82	123	39
12	31	790	279	721	612	1350	335	1440	147	78	142	135
13	49	707	272	760	581	1630	350	1430	156	67	127	174
14	654	586	288	817	557	1780	417	1350	160	59	113	194
15	630	552	420	859	532	1790	428	1230	156	63	106	211
16	610	521	513	926	509	1730	415	1110	151	87	103	197
17	216	600	570	1020	495	1630	391	1010	145	231	96	131
18	211	570	609	1120	488	1500	394	940	135	207	86	82
19	191	560	630	1190	489	1360	516	873	125	188	76	60
20	160	540	642	1390	486	1230	719	830	124	200	82	49
21	134	498	697	1600	483	1100	941	807	129	217	101	40
22	117	452	802	2000	484	973	1050	751	131	192	113	33
23	106	408	913	2310	485	856	1050	664	126	140	131	28
24	98	366	988	2360	484	749	962	588	114	103	143	25
25	93	332	1040	2330	481	667	849	510	103	81	136	23
26	97	317	1050	2420	476	632	908	438	89	72	102	22
27	114	307	1020	2330	467	679	1130	387	84	90	95	21
28	126	297	978	2220	455	731	1570	346	89	120	99	19
29	139	288	931	2100	---	748	2080	307	111	150	96	18
30	152	283	892	1930	---	754	2200	270	143	157	84	16
31	160	---	888	1730	---	761	---	237	---	133	64	---
TOTAL	4507	13103	17456	40657	19501	29599	23626	34568	3944	5236	3127	1904
MEAN	145	437	563	1312	696	955	788	1115	131	169	101	63.5
MAX	654	846	1050	2420	1530	1790	2200	2220	204	421	143	211
MIN	29	140	254	704	455	448	335	237	84	59	60	16
CFSM	.38	1.14	1.47	3.44	1.82	2.50	2.06	2.92	.34	.44	.26	.17
IN.	.44	1.28	1.70	3.96	1.90	2.88	2.30	3.37	.38	.51	.30	.19

CAL YR 1977 TOTAL 138544.7 MEAN 380 MAX 1720 MIN 4.2 CFSM 1.00 IN 13.49
WTR YR 1978 TOTAL 197228.0 MEAN 540 MAX 2420 MIN 16 CFSM 1.41 IN 19.21

02107000 SOUTH RIVER NEAR PARKERSBURG, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
JAN				
04...	1410	858	3	6.9
20...	1135	1380	6	22
20...	1526	1410	6	23
24...	1230	2360	16	102
25...	1115	2310	8	50
25...	1500	2360	7	45
FEB				
09...	1400	752	1	2.0
MAR				
27...	1225	677	5	9.1
MAY				
04...	1245	1970	11	59
JUN				
16...	1320	149	17	6.8
JUL				
24...	1205	98	10	2.6
AUG				
31...	1225	60	6	.97

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) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good except those for period of no gage-height record May 12 to June 19, which are poor. Suspended sediment records for the current year are published on page 228 of this report.

AVERAGE DISCHARGE.--38 years, 732 ft³/s (20.73 m³/s), 16.57 in/yr (421 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,400 ft³/s (578 m³/s) July 6, 1962, gage height, 20.16 ft (6.145 m); minimum, 5.3 ft³/s (0.15 m³/s) Oct. 10, 11, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1908 reached a stage of 22.6 ft (6.89 m) at old bridge site 1,000 ft (305 m) upstream from gage. Flood in 1928 reached a stage of 0.8 ft (0.2 m) lower than that in 1908, from information by North Carolina State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,630 ft³/s (159 m³/s) Apr. 28, gage height, 13.83 ft (4.215 m); minimum, 32 ft³/s (0.91 m³/s) Sept. 30, gage height, 1.41 ft (0.430 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	480	590	1360	2380	583	1240	3970	280	419	500	141
2	64	385	589	1450	1930	643	1120	3180	250	441	651	133
3	60	322	570	1430	1630	696	973	2390	230	645	744	148
4	56	260	538	1350	1430	835	802	1900	210	815	642	162
5	52	660	511	1210	1280	958	670	1790	190	863	586	144
6	48	1200	506	1100	1170	1040	579	1820	170	758	627	123
7	45	2000	497	1100	1060	1060	517	1840	190	623	658	104
8	42	2500	478	1120	954	1080	474	1790	180	435	616	92
9	40	3000	459	1280	895	1100	436	1860	300	226	517	83
10	45	3500	437	1410	860	1210	405	2320	450	135	455	75
11	50	2800	415	1460	811	1370	470	3100	500	119	505	68
12	60	2200	398	1410	765	1500	507	3000	420	164	558	63
13	90	1600	384	1380	727	1600	571	2600	310	182	543	61
14	179	1200	380	1500	707	1690	949	2200	240	152	488	61
15	349	950	591	1610	691	1770	1180	1900	190	123	434	56
16	422	700	834	1640	672	1730	1180	1600	160	176	331	54
17	382	600	1010	1600	680	1520	1020	1500	130	487	255	52
18	348	560	1130	1660	690	1270	1220	1400	110	781	200	50
19	302	530	1190	1740	716	1050	2030	1400	90	1020	161	48
20	240	500	1270	2360	738	872	3390	1300	75	1110	173	45
21	193	480	1380	3510	751	762	4350	1200	62	914	188	42
22	164	470	1540	4180	747	686	4160	1000	57	621	330	38
23	142	499	1680	4230	726	625	3510	880	111	314	399	38
24	121	570	1720	3940	704	576	2690	740	165	174	360	37
25	108	595	1670	3590	673	538	2070	640	170	145	351	36
26	170	625	1630	3560	638	555	2950	550	164	328	305	37
27	499	661	1610	3780	600	898	4850	470	150	691	222	36
28	683	667	1520	3900	564	1240	5510	420	300	958	178	35
29	676	645	1360	3670	---	1440	5490	380	523	1130	166	34
30	634	603	1190	3300	---	1480	4800	340	536	1100	153	33
31	584	---	1230	2890	---	1390	---	310	---	817	149	---
TOTAL	6918	31762	29307	69720	26189	33767	60113	49790	6913	16866	12445	2129
MEAN	223	1059	945	2249	935	1089	2004	1606	230	544	401	71.0
MAX	683	3500	1720	4230	2380	1770	5510	3970	536	1130	744	162
MIN	40	260	380	1100	564	538	405	310	57	119	149	33
CFSM	.37	1.77	1.58	3.75	1.56	1.82	3.34	2.68	.38	.91	.67	.12
IN.	.43	1.97	1.82	4.32	1.62	2.09	3.73	3.09	.43	1.05	.77	.13

CAL YR 1977 TOTAL 230867 MEAN 633 MAX 3960 MIN 13 CFSM 1.06 IN 14.31
WTR YR 1978 TOTAL 345919 MEAN 948 MAX 5510 MIN 33 CFSM 1.58 IN 21.45

02108000 NORTHEAST CAPE FEAR RIVER NEAR CHINQUAPIN, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
JAN				
05...	0850	1240	4	13
24...	1400	3920	86	910
MAY				
03...	1336	2340	10	63
SEP				
05...	1310	144	8	3.1

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) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1958, nonrecording gage at site 1.0 mi (1.6 km) downstream at different datum. Oct. 1, 1958, to June 1, 1960, nonrecording gage at present site and datum.

REMARKS.--Records good except those for period of no gage-height record, Nov. 7, which are fair. Suspended sediment records for the current year are published on page 230 of this report.

AVERAGE DISCHARGE.--23 years, 98.4 ft³/s (2.787 m³/s), 20.94 in/yr (532 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,540 ft³/s (157 m³/s) Nov. 7, 1977 gage height, 13.17 ft (4.014 m) from floodmarks; minimum daily, 0.4 ft³/s (0.011 m³/s) July 27-30, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1948 reached a stage of about 15.5 ft (4.72 m) at former site and datum, from information by local resident, discharge, 2,800 ft³/s (79.3 m³/s). A discharge of 0.04 ft³/s (0.001 m³/s) was measured on Sept. 8, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (19.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 7	Unknown	*5540	157	*13.17	4.014	Apr. 27	2100	792	22.4	8.84	2.694
Jan. 20	1600	786	22.3	8.82	2.688	Aug. 11	2100	754	21.4	8.71	2.655
Apr. 21	0300	818	23.2	8.93	2.722						

Minimum discharge, 4.3 ft³/s (0.12 m³/s) Sept. 30, gage height, 1.03 ft (0.314 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	35	71	214	159	51	107	196	19	7.7	16	13
2	12	31	74	231	144	62	72	166	19	105	20	24
3	13	28	72	196	147	80	54	145	62	335	23	35
4	13	28	64	163	149	113	45	154	61	293	20	30
5	12	35	58	132	146	126	42	293	32	235	18	20
6	13	921	63	117	132	131	38	375	24	135	23	16
7	13	4000	65	138	119	109	34	313	24	59	47	14
8	12	1360	62	160	107	77	31	229	34	31	66	12
9	13	652	53	220	101	70	27	231	60	20	71	12
10	15	423	47	237	91	135	25	387	92	16	52	9.9
11	17	295	44	213	81	193	29	489	75	15	513	9.8
12	16	219	42	184	71	268	37	343	32	23	604	11
13	27	168	41	179	68	233	79	221	18	19	334	10
14	50	128	47	254	69	180	179	154	14	15	202	9.5
15	64	102	161	287	69	144	208	106	12	14	119	8.9
16	63	86	304	264	68	118	205	90	11	32	54	9.0
17	42	77	369	212	68	93	140	80	10	54	35	8.6
18	28	70	270	199	67	70	115	74	9.1	63	26	7.3
19	23	62	212	224	74	57	251	82	8.8	74	21	7.8
20	20	57	177	678	72	48	661	99	8.9	35	164	7.0
21	18	52	186	734	67	44	739	92	8.6	20	198	7.0
22	17	50	287	548	61	48	459	56	8.3	17	71	7.0
23	16	59	324	366	55	50	295	40	11	15	32	6.5
24	16	66	275	261	53	43	207	34	15	13	22	6.3
25	16	68	219	273	50	39	164	30	11	20	18	6.3
26	38	84	206	552	48	49	260	27	9.6	80	16	6.6
27	73	95	196	629	46	246	650	23	10	70	19	5.8
28	64	96	182	483	42	290	669	22	11	46	20	5.7
29	59	85	154	330	---	271	430	22	10	40	17	5.5
30	51	69	130	236	---	211	278	22	8.5	29	15	4.6
31	41	---	170	188	---	154	---	20	---	19	13	---
TOTAL	888	9501	4625	9102	2424	3803	6530	4615	728.8	1949.7	2869	336.1
MEAN	28.6	317	149	294	86.6	123	218	149	24.3	62.9	92.5	11.2
MAX	73	4000	369	734	159	290	739	489	92	335	604	35
MIN	12	28	41	117	42	39	25	20	8.3	7.7	13	4.6
CFSM	.45	4.97	2.34	4.61	1.36	1.93	3.42	2.34	.38	.99	1.45	.18
IN.	.52	5.54	2.70	5.31	1.41	2.22	3.81	2.69	.42	1.14	1.67	.20

CAL YR 1977 TOTAL 34840.6 MEAN 95.5 MAX 4000 MIN 1.8 CFSM 1.50 IN 20.31
WTR YR 1978 TOTAL 47371.6 MEAN 130 MAX 4000 MIN 4.6 CFSM 2.04 IN 27.62

02108500 ROCKFISH CREEK NEAR WALLACE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
JAN				
03...	1715	197	5	2.7
20...	1705	788	45	96
24...	1415	265	7	5.0
25...	1230	266	91	65
25...	1345	277	56	42
MAY				
03...	1445	149	12	4.8

02108548 LITTLE ROCKFISH CREEK AT WALLACE, N. C.

LOCATION.--Lat 34°44'02", long 77°59'03", Duplin County, Hydrologic Unit 03030007, on right bank, 0.4 mi (0.6 km) downstream from bridge on State Highway 41, 0.6 mi (1.0 km) east-southeast of Wallace, and 1.2 mi (1.9 km) upstream from mouth.

DRAINAGE AREA.--7.8 mi² (20.2 km²), approximately (revised).

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) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. Suspended-sediment records for the current year are published on page 232 of this report. Recording rain gage at station.

EXTREMES FOR PERIOD OF PERIOD.--Maximum discharge, 336 ft³/s (9.52 m³/s) Nov. 6, 1977, gage height, 7.55 ft (2.301 m); no flow June 19, 22, Sept. 27-30, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 130 ft³/s (3.68 ft³/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. 28	2345	140	3.96	4.58	1.396	Jan. 26	0200	177	5.01	5.02	1.530
Nov. 6	1830	*336	9.52	*7.55	2.301	Apr. 26	1615	156	4.42	4.74	1.445
Jan. 20	0815	212	6.00	5.65	1.722	July 2	1400	224	6.34	5.85	1.783

No flow June 19, 22, Sept. 27-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.51	8.0	7.4	31	13	7.1	9.0	13	.41	.21	.27	1.4
2	.43	6.7	7.2	23	17	6.8	7.4	14	.51	96	.12	10
3	.33	5.7	6.1	17	18	9.8	6.0	12	.85	69	.18	19
4	.26	5.4	5.3	13	15	12	5.2	22	1.1	24	.11	4.6
5	.26	7.5	5.9	11	12	9.6	4.6	46	.32	21	.26	1.9
6	.25	204	6.8	13	11	8.0	3.9	30	.15	6.8	3.8	1.1
7	.25	203	5.5	23	9.3	7.0	3.1	17	.94	3.4	3.6	.63
8	.50	72	4.5	20	8.7	7.1	2.5	16	.94	2.1	2.9	.40
9	1.0	40	4.2	42	8.3	8.7	2.6	34	2.5	1.4	1.2	.22
10	2.0	28	4.0	30	7.8	28	2.5	54	1.2	.90	15	.23
11	5.0	20	3.4	19	7.0	25	2.4	26	.20	1.4	42	.11
12	11	14	3.1	14	6.7	16	4.1	14	.86	1.2	13	.06
13	14	11	3.2	33	6.4	12	22	10	.18	.77	7.3	.05
14	11	9.3	7.7	51	7.5	11	31	8.6	.06	.52	3.9	.05
15	7.5	8.4	25	33	7.0	9.9	14	6.9	.04	1.2	2.8	.03
16	5.0	7.6	20	23	6.9	8.8	9.0	6.0	.01	2.0	2.3	.03
17	3.4	7.1	15	25	7.7	7.4	6.9	4.8	.01	2.3	1.5	.22
18	2.6	6.1	14	38	8.8	6.1	22	4.0	.01	1.3	1.1	.02
19	2.0	5.2	14	48	9.8	5.3	48	3.2	.00	.73	1.0	.01
20	1.6	4.7	11	176	8.3	4.9	40	2.4	.01	.42	28	.01
21	1.3	4.4	35	75	7.2	4.7	21	1.9	.06	.28	23	.01
22	1.1	4.3	41	41	7.0	4.3	14	1.4	.09	.15	7.4	.01
23	.91	6.6	24	30	6.1	3.8	9.9	1.1	.84	.09	3.8	.01
24	.76	6.7	18	23	6.0	3.4	7.8	.88	.08	.24	2.1	.01
25	.68	7.3	23	74	5.5	3.2	16	.73	.07	3.6	1.4	.01
26	16	10	26	128	5.1	18	118	.57	1.8	1.8	.89	.01
27	23	8.7	18	55	4.6	62	72	.51	.80	.88	.76	.00
28	13	6.9	13	33	4.8	38	35	.94	1.5	.28	.66	.00
29	27	6.0	11	24	---	23	23	.47	.09	.18	.50	.00
30	18	6.3	15	19	---	15	14	.44	.11	.15	.30	.00
31	11	---	36	16	---	11	---	.39	---	.11	.60	---
TOTAL	181.64	740.9	433.3	1201	242.5	396.9	576.9	353.23	15.85	244.41	173.75	40.13
MEAN	5.86	24.7	14.0	38.7	8.66	12.8	19.2	11.4	.53	7.88	5.60	1.34
MAX	27	204	41	176	18	62	118	54	2.5	96	42	19
MIN	.25	4.3	3.1	11	4.6	3.2	2.4	.39	.00	.09	.11	.00
CFSM	.75	3.17	1.80	4.96	1.11	1.64	2.46	1.46	.07	1.01	.72	.17
IN.	.87	3.53	2.07	5.73	1.16	1.89	2.75	1.68	.08	1.17	.83	.19

CAL YR 1977 TOTAL 4406.06 MEAN 12.1 MAX 204 MIN .05 CFSM 1.55 IN 21.01
WTR YR 1978 TOTAL 4600.51 MEAN 12.6 MAX 204 MIN .00 CFSM 1.62 IN 21.94

CAPE FEAR RIVER BASIN

02108548 LITTLE ROCKFISH CREEK AT WALLACE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
13...	0815	16	14	.60
NOV				
21...	1205	4.2	12	.14
DEC				
21...	1145	28	13	.98
JAN				
20...	1205	202	122	67
20...	1340	193	92	48
20...	1535	180	117	57
FEB				
08...	1440	8.0	4	.09
MAR				
24...	0920	3.2	10	.09
APR				
26...	1120	145	103	40
MAY				
03...	1710	14	9	.34
JUL				
25...	1300	1.0	13	.04
SEP				
05...	1440	1.7	6	.03

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) National Geodetic Vertical Datum of 1929. Prior to July 15, 1943, nonrecording gage 150 ft (46 m) upstream at same datum. Auxiliary nonrecording gage 3.3 mi (5.3 km) downstream from base gage Oct. 7, 1949 to July 14, 1952. Since July 15, 1952 auxiliary water-stage recorder at same site and datum.

REMARKS.--Records good. Suspended sediment records for the current year are published on page 234 of this report.

AVERAGE DISCHARGE.--39 years, 705 ft³/s (19.97 m³/s), 13.56 in/yr (344 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, 6,030 ft³/s (171 m³/s) Nov. 12, gage height, 15.45 ft (4.709 m); minimum, 31 ft³/s (0.88 m³/s) June 26, gage height, 1.85 ft (0.564 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	302	893	2030	3090	624	776	1830	394	41	105	492
2	110	313	880	2040	2950	607	759	1810	342	42	84	456
3	99	310	874	2010	2830	599	743	1750	311	87	70	438
4	89	299	866	1940	2700	600	726	1760	288	133	62	424
5	81	290	853	1850	2550	609	705	1820	262	176	60	427
6	75	280	876	1760	2360	618	676	1910	228	219	66	414
7	66	1130	910	1710	2150	617	643	1930	198	255	81	376
8	60	2480	945	1660	1970	605	610	1920	176	273	96	334
9	55	4410	966	1650	1810	593	567	2000	181	263	109	294
10	49	5240	959	1630	1660	594	528	2210	199	246	126	256
11	44	5750	931	1600	1530	614	485	2400	199	228	195	249
12	43	6010	892	1560	1410	641	443	2630	185	261	336	294
13	89	5820	850	1530	1270	661	422	3090	165	287	474	311
14	187	5290	821	1530	1150	683	464	3670	141	306	621	278
15	233	4610	816	1550	1080	706	508	3810	119	320	723	269
16	243	3940	835	1580	1010	748	533	3620	104	333	843	255
17	235	3330	889	1620	961	806	533	3250	90	368	920	229
18	220	2810	973	1690	911	852	534	2820	78	392	900	197
19	204	2420	1060	1830	874	883	550	2440	71	376	836	168
20	189	2120	1150	2260	844	894	576	2110	63	331	764	140
21	171	1880	1370	2730	821	887	607	1840	60	284	679	117
22	152	1690	1650	3120	799	863	632	1620	55	245	583	101
23	133	1540	1920	3390	772	820	653	1410	52	210	479	86
24	116	1400	2130	3590	747	770	685	1160	46	179	377	73
25	103	1230	2220	3950	723	712	711	1020	38	147	288	64
26	112	1120	2230	4300	694	676	828	893	34	145	207	56
27	173	1060	2190	4340	669	676	1100	781	38	140	328	49
28	197	1010	2130	4160	645	715	1390	694	44	241	490	45
29	220	957	2050	3840	---	761	1610	607	41	203	577	44
30	263	917	1980	3550	---	786	1750	524	42	166	582	42
31	287	---	2010	3300	---	787	---	453	---	135	543	---
TOTAL	4417	69958	40119	75300	40980	22007	21747	59782	4244	7032	12604	6978
MEAN	142	2332	1294	2429	1464	710	725	1928	141	227	407	233
MAX	287	6010	2230	4340	3090	894	1750	3810	394	392	920	492
MIN	43	280	816	1530	645	593	422	453	34	41	60	42
CFSM	.20	3.30	1.83	3.44	2.07	1.01	1.03	2.73	.20	.32	.58	.33
IN.	.23	3.69	2.11	3.97	2.16	1.16	1.15	3.15	.22	.37	.66	.37

CAL YR 1977 TOTAL 257463 MEAN 705 MAX 6010 MIN 22 CFSM 1.00 IN 13.57
WTR YR 1978 TOTAL 365168 MEAN 1000 MAX 6010 MIN 34 CFSM 1.42 IN 19.24

WACCAMAW RIVER BASIN

02109500 WACCAMAW RIVER AT FREELAND, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
NOV 18...	1330	2440	4	26
JAN 06...	1530	1680	1	4.5
FEB 06...	1350	2750	2	15

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) National Geodetic Vertical Datum of 1929. Prior to Feb. 9, 1940 nonrecording gage at present site, at datum 1.00 ft (0.305 m) higher. Prior to Oct. 20, 1970 at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good. Corps of Engineers rainfall and stage radio telemeter at station. Suspended-sediment records for the current year are published on page 236 of this report.

AVERAGE DISCHARGE.--39 years, 49.6 ft³/s (1.405 m³/s), 23.23 in/yr (590 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,200 ft³/s (459 m³/s) Aug. 13, 1940, gage height, 12.70 ft (3.871 m), datum then in use, from rating curve extended above 1,400 ft³/s (39.6 m³/s) on basis of computation of peak flow over dam 1 mi (1.6 km) upstream at gage heights 4.58 ft (1.396 m), 6.60 ft (2.012 m), 7.70 ft (2.347 m), 12.70 ft (3.871 m); minimum observed, 3.0 ft³/s (0.085 m³/s) May 15, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 6	0930	*3710	105	*7.83	2.387	Jan. 8	2400	451	12.8	3.17	0.966
Nov. 6	2300	2810	79.6	7.04	2.146	Jan. 25	2400	1010	28.6	4.64	1.414

Minimum discharge, 18 ft³/s (0.51 m³/s) Sept. 29, 30, gage height, 0.92 ft (0.280 m); minimum daily, 18 ft³/s (0.51 m³/s) Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	30	66	50	74	43	75	57	43	25	36	76
2	25	30	59	48	71	43	70	53	41	27	31	40
3	23	35	56	45	67	47	66	50	41	32	28	39
4	21	48	55	44	63	44	63	95	40	28	26	31
5	21	179	89	43	61	42	61	93	38	26	25	28
6	21	1390	89	43	58	45	59	74	37	25	27	26
7	20	707	74	43	58	47	57	70	44	25	121	23
8	24	250	67	158	64	47	54	85	56	26	67	23
9	47	148	64	263	55	48	53	88	49	27	42	22
10	29	108	57	120	53	186	52	76	40	25	34	22
11	26	86	53	102	51	131	53	69	37	29	31	34
12	24	74	51	85	49	97	51	68	37	25	34	36
13	23	66	50	79	50	83	48	158	40	27	47	24
14	23	61	65	73	49	94	46	138	35	31	41	24
15	22	56	67	65	47	90	45	100	33	27	39	23
16	22	54	59	62	47	81	45	86	33	53	51	24
17	23	77	57	69	47	74	46	77	33	30	49	22
18	22	62	67	70	49	68	48	70	31	26	36	21
19	22	57	61	69	49	64	55	64	31	25	35	21
20	21	54	60	77	47	61	50	60	36	25	30	20
21	21	51	57	69	46	58	46	57	37	24	29	20
22	21	54	53	63	45	56	44	54	42	23	27	22
23	21	75	51	60	44	54	43	53	35	29	26	31
24	20	67	50	59	44	52	42	57	32	25	25	24
25	23	67	64	214	44	108	57	52	30	25	25	22
26	153	69	54	434	44	306	143	48	28	24	24	21
27	58	62	50	188	42	189	100	46	28	38	24	20
28	44	60	49	127	43	128	73	46	27	35	24	19
29	38	57	49	101	---	102	64	47	26	25	37	18
30	34	57	49	93	---	89	60	52	26	24	29	18
31	32	---	50	80	---	81	---	48	---	35	45	---
TOTAL	946	4191	1842	3096	1461	2658	1769	2191	1086	871	1145	794
MEAN	30.5	140	59.4	99.9	52.2	85.7	59.0	70.7	36.2	28.1	36.9	26.5
MAX	153	1390	89	434	74	306	143	158	56	53	121	76
MIN	20	30	49	43	42	42	42	46	26	23	24	18
CFSM	1.05	4.83	2.05	3.45	1.80	2.96	2.03	2.44	1.25	.97	1.27	.91
IN.	1.21	5.38	2.36	3.97	1.87	3.41	2.27	2.81	1.39	1.12	1.47	1.02

CAL YR 1977 TOTAL 19565 MEAN 53.6 MAX 1390 MIN 17 CFSM 1.85 IN 25.10
WTR YR 1978 TOTAL 22050 MEAN 60.4 MAX 1390 MIN 18 CFSM 2.08 IN 28.28

PEE DEE RIVER BASIN

02111000 YADKIN RIVER AT PATTERSON, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
26...	1345	111	46	14
NOV				
07...	1215	550	526	781
JAN				
23...	1030	61	11	1.8
APR				
26...	1015	128	75	26
MAY				
01...	1400	57	3	.46
JUN				
08...	1100	46	134	17
27...	1130	27	9	.66
JUL				
31...	1100	21	8	.45
AUG				
07...	1310	167	1420	640
29...	1230	24	7	.45
SEP				
28...	1500	19	5	.26

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) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for period of no gage-height record, Nov. 5-18, Dec. 6 to Jan. 2, Mar. 26 to Apr. 5, May 18-30, Aug. 9-30, 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 238 of this report.

AVERAGE DISCHARGE.--13 years, 107 ft³/s (3.030 m³/s), 28.55 in/yr (725 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft³/s (329 m³/s) Nov. 6, 1977, gage height, 9.58 ft (2.920 m) from floodmarks, from rating curve extended above 2,400 ft³/s (68.0 m³/s) on basis of contracted-opening measurement at gage height, 7.28 ft (2.219 m); minimum, 16 ft³/s (0.45 m³/s) Oct. 3, 1968, gage height, 0.83 ft (0.253 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Aug. 13, 1940 reached a stage of about 22 ft (6.7 m), discharge, about 70,000 ft³/s (1,980 m³/s), on basis of several contracted-opening and slope-area measurements. A discharge of 6.0 ft³/s (0.17 m³/s) was measured Sept. 19, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (20 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 26	0445	1130	32.0	3.08	0.939	Jan. 8	2145	1130	32.0	3.07	0.936
Nov. 6	a1000	*11600	329	b*9.58	2.920	Jan. 25	2245	1150	32.6	3.10	0.945
Nov. 6	a2330	5830	165	b6.93	2.112						

a About.
b From floodmarks.

Minimum discharge, 28 ft³/s (0.79 m³/s) Sept. 28, gage height, 0.92 ft (0.280 m); minimum daily, 29 ft³/s (0.82 m³/s) Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	62	144	90	139	80	145	123	77	45	71	64
2	78	60	134	90	132	79	135	110	73	55	47	71
3	52	69	126	81	120	82	130	101	70	70	43	76
4	44	117	124	77	109	80	123	215	70	54	44	55
5	41	573	194	79	105	74	116	266	66	50	45	46
6	40	4400	160	80	100	79	114	186	64	51	48	43
7	40	1830	135	80	99	80	110	155	69	51	184	40
8	45	600	120	342	98	82	106	182	86	51	98	37
9	107	330	110	741	97	85	103	188	83	51	85	36
10	81	200	100	276	97	387	99	163	69	49	75	35
11	63	170	100	197	94	269	98	140	64	47	72	69
12	53	150	98	163	91	193	96	130	64	47	72	47
13	46	135	96	149	90	169	92	328	63	50	80	42
14	45	125	110	133	90	206	89	306	57	66	80	40
15	42	115	120	117	90	211	87	208	57	54	74	40
16	40	110	110	107	90	174	87	172	57	145	67	40
17	40	170	105	122	89	149	87	140	57	65	62	36
18	40	150	120	127	87	132	88	120	55	54	58	35
19	39	139	150	125	87	123	92	110	58	50	58	35
20	38	127	110	153	87	116	92	103	77	49	54	33
21	37	120	105	134	87	109	85	96	74	48	50	33
22	36	118	98	119	81	106	82	92	71	45	47	33
23	35	150	96	110	79	103	80	90	59	52	46	54
24	34	144	93	106	84	99	80	98	55	46	45	37
25	37	140	120	337	80	104	96	92	53	45	44	34
26	452	150	100	806	83	500	438	84	53	41	43	33
27	158	136	96	345	81	320	310	80	52	48	42	31
28	108	131	90	228	80	220	188	80	47	55	41	30
29	88	121	90	180	---	190	150	84	46	43	40	29
30	76	117	90	165	---	170	134	87	45	39	39	29
31	67	---	90	156	---	160	---	84	---	46	48	---
TOTAL	2140	10959	3534	6015	2646	4931	3732	4413	1891	1662	1902	1263
MEAN	69.0	365	114	194	94.5	159	124	142	63.0	53.6	61.4	42.1
MAX	452	4400	194	806	139	500	438	328	86	145	184	76
MIN	34	60	90	77	79	74	80	80	45	39	39	29
CFSM	1.36	7.17	2.24	3.81	1.86	3.12	2.44	2.79	1.24	1.05	1.21	.83
IN.	1.56	8.01	2.58	4.40	1.93	3.60	2.73	3.23	1.38	1.21	1.39	.92

CAL YR 1977 TOTAL 42680 MEAN 117 MAX 4400 MIN 28 CFSM 2.30 IN 31.19
WTR YR 1978 TOTAL 45088 MEAN 124 MAX 4400 MIN 29 CFSM 2.44 IN 32.95

02111180 ELK CREEK AT ELKVILLE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
NOV				
16...	1640	2500	1120	7560
JAN				
23...	0900	112	1	.30
APR				
26...	1055	407	82	90
MAY				
01...	1600	121	2	.65
09...	1130	190	20	10
JUN				
27...	1100	53	8	1.1
JUL				
31...	0910	36	7	.68
AUG				
07...	1145	268	285	206
SEP				
28...	1200	30	4	.32

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) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Slight diurnal fluctuation at low flow during growing season. Suspended-sediment records for the current year are published on page 240 of this report.

AVERAGE DISCHARGE.--39 years, 144 ft³/s (4.078 m³/s), 20.83 in/yr (529 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft³/s (765 m³/s) Aug. 14, 1940, gage height, 22.02 ft (6.712 m), from rating curve extended above 2,200 ft³/s (62.3 m³/s) on basis of computation of peak flow over dam; minimum, 22 ft³/s (0.62 m³/s) Aug. 17, 1954, gage height, 0.63 ft (0.193 m).

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

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 6	1400	*7300	207	*12.70	3.871	Jan. 26	0230	4150	118	9.54	2.908
Nov. 7	0600	4860	138	10.38	3.164						

Minimum discharge, 71 ft³/s (2.01 m³/s) Oct. 1; minimum gage height, 1.06 ft (0.323 m) Sept. 20, 21, 22, 29, 30; minimum daily, 75 ft³/s (2.12 m³/s) Oct. 23, 24, Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	100	208	152	213	156	225	198	180	111	99	93
2	315	101	180	147	213	156	215	184	169	154	97	104
3	126	112	171	140	200	167	215	178	167	178	102	120
4	97	203	169	138	190	156	206	379	163	128	111	96
5	88	510	286	136	188	149	188	369	154	118	129	90
6	84	3230	267	138	175	158	184	265	150	121	149	88
7	81	1980	208	138	167	165	182	234	163	119	629	86
8	101	520	186	447	173	173	176	291	213	116	274	82
9	216	396	180	755	176	176	176	313	188	114	252	81
10	142	313	165	303	174	622	176	256	158	110	165	81
11	115	258	159	320	171	382	178	227	150	107	140	109
12	103	230	156	247	169	286	174	217	149	105	138	92
13	92	208	154	215	171	252	169	399	150	107	147	90
14	95	194	194	204	171	300	163	413	138	110	174	94
15	88	184	206	182	167	279	161	305	136	105	158	92
16	86	178	178	164	165	241	161	270	136	363	147	90
17	86	261	173	206	165	217	163	245	138	138	129	84
18	82	202	204	221	173	200	171	227	133	114	118	82
19	80	182	186	210	171	190	186	213	149	110	123	81
20	78	174	178	274	165	184	182	202	206	107	110	77
21	76	169	173	234	163	180	167	194	156	102	107	78
22	76	173	161	200	161	176	159	186	147	107	102	80
23	75	219	156	186	156	171	158	184	136	105	100	101
24	75	188	156	180	158	169	156	196	131	102	99	87
25	77	192	188	583	158	340	186	184	128	113	97	87
26	684	206	161	1620	161	1070	430	174	126	102	96	81
27	201	180	152	435	154	486	345	169	124	102	97	78
28	146	176	149	320	158	338	256	167	118	119	104	78
29	126	167	145	263	---	286	219	188	116	97	97	75
30	112	174	150	234	---	256	204	305	114	94	99	75
31	103	---	152	227	---	238	---	234	---	94	93	---
TOTAL	4001	11380	5551	9219	4826	8319	5931	7566	4486	3772	4482	2632
MEAN	129	379	179	297	172	268	198	244	150	122	145	87.7
MAX	684	3230	286	1620	213	1070	430	413	213	363	629	120
MIN	75	100	145	136	154	149	156	167	114	94	93	75
CFSM	1.37	4.04	1.91	3.16	1.83	2.85	2.11	2.60	1.60	1.30	1.54	.93
IN.	1.59	4.51	2.20	3.65	1.91	3.30	2.35	3.00	1.78	1.49	1.78	1.04

CAL YR 1977 TOTAL 57828 MEAN 158 MAX 3230 MIN 57 CFSM 1.68 IN 22.91
WTR YR 1978 TOTAL 72165 MEAN 198 MAX 3230 MIN 75 CFSM 2.11 IN 28.59

02111500 REDDIES RIVER AT NORTH WILKESBORO, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
26...	1435	509	19	26	--
31...	1320	98	3	.79	--
NOV					
06...	1410	7180	1100	21300	75
08...	1030	600	441	714	--
MAR					
01...	1200	158	3	1.3	--
APR					
26...	0900	415	358	401	--
JUL					
31...	1350	96	6	1.6	--
AUG					
07...	1130	1180	3970	12600	--
30...	1310	94	3	.76	--

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) National Geodetic Vertical Datum of 1929. Apr. 10, 1903 to June 30, 1909 and Oct. 17, 1920 to Apr. 10, 1929, nonrecording gage at site 1.2 mi (1.9 km) downstream at different datum. Apr. 11, 1929 to Jan. 9, 1930, nonrecording gage at present site and datum. Datum used 1920-29 was about 1.2 ft (0.366 m) lower than that used 1903-09.

REMARKS.--Records good. Flow regulated by W. Kerr Scott Reservoir 5.5 mi (8.8 km) upstream since 1962 (see p. 352). Corps of Engineers gage-height radio telemeter at station. Suspended-sediment records for the current year are published on page 467 of this report.

AVERAGE DISCHARGE.--63 years (1903-8, 1920-78),823 ft³/s (23.31 m³/s), 22.67 in/yr (576 mm/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 160,000 ft³/s (4,530 m³/s) Aug. 14, 1940, gage height, 37.6 ft (11.46 m), from floodmarks, from rating curve extended above 20,000 ft³/s (566 m³/s) on basis of slope-area measurement of peak flow; minimum, 86 ft³/s (2.44 m³/s) Dec. 4, 1965; minimum daily, 110 ft³/s (3.12 m³/s) Sept. 18, 19, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1916 reached a stage of 34.5 ft (10.52 m) present site and datum, from floodmark, discharge, 116,000 ft³/s (3,290 m³/s), from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,800 ft³/s (334 m³/s) Nov. 6, gage height, 15.52 ft (4.730 m); minimum, 420 ft³/s (11.9 m³/s) July 31, gage height, 2.24 ft (0.683 m); minimum daily, 480 ft³/s (13.6 m³/s) Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	533	545	1120	827	1200	960	1190	1050	821	529	509	531
2	749	541	1200	826	1170	836	1160	1090	818	588	528	563
3	503	555	995	799	1160	931	1170	863	749	907	658	914
4	490	769	919	705	1100	848	1040	1530	738	810	698	790
5	480	1640	1260	668	1000	767	1060	2090	779	575	658	523
6	481	6400	1780	708	999	853	1010	2410	688	498	810	518
7	487	3770	1800	814	925	912	998	1400	715	603	1970	518
8	527	6000	1040	2070	900	932	938	1430	1110	588	2800	512
9	682	5830	925	3360	891	903	994	1830	1480	538	2570	512
10	544	5550	1010	3140	911	2100	913	1500	1530	513	1060	518
11	518	5640	941	3050	994	2050	921	1200	825	544	728	559
12	502	5650	829	2200	934	2360	974	1130	702	537	774	523
13	492	5770	833	1350	904	2870	868	1520	698	529	864	523
14	499	5940	928	1370	1000	1660	826	2190	702	593	1010	529
15	493	5360	1240	1070	904	1630	833	2340	684	627	1180	523
16	495	2190	1160	976	854	1380	853	1550	631	1750	1080	529
17	489	1410	988	1040	870	1260	836	1350	636	1920	977	547
18	482	1290	1090	1390	918	1140	846	1190	656	1470	803	490
19	488	1020	1080	1250	960	1020	1070	1080	638	716	634	506
20	505	980	970	1360	907	988	1090	990	884	575	580	501
21	504	950	970	1550	853	972	778	939	746	540	547	506
22	506	903	912	1170	908	987	748	930	873	543	539	535
23	502	1120	867	930	867	937	836	929	744	540	534	601
24	503	1180	842	982	786	904	784	1140	579	519	521	535
25	514	1090	1060	1960	811	1420	904	957	565	529	518	523
26	1480	1130	965	2750	927	2710	2020	878	651	516	520	512
27	859	1050	842	3400	832	3440	2570	778	640	518	523	512
28	1050	978	793	6040	770	4330	1870	846	591	789	528	501
29	706	962	790	5300	---	3290	1210	893	559	686	522	490
30	570	920	809	2230	---	1570	884	1140	546	542	517	501
31	557	---	862	1410	---	1500	---	972	---	493	519	---
TOTAL	18190	77133	31820	56695	26255	48460	32194	40135	22978	21625	26679	16345
MEAN	587	2571	1026	1829	938	1563	1073	1295	766	698	861	545
MAX	1480	6400	1800	6040	1200	4330	2570	2410	1530	1920	2800	914
MIN	480	541	790	668	770	767	748	778	546	493	509	490
(†)	+15	+5	-5	0	+4	-3	+3	-3	0	-1	-3	-22
MEAN‡	602	2576	1021	1829	942	1560	1076	1292	766	697	858	523
CFSM‡	1.22	5.23	2.07	3.71	1.91	3.16	2.18	2.62	1.55	1.41	1.74	1.06
IN‡	1.41	5.84	2.39	4.28	1.99	3.64	2.43	3.02	1.73	1.63	2.01	1.18

CAL YR 1977 TOTAL 341998 MEAN 937 MAX 6400 MIN 412 MEAN‡ 937 CFSM‡ 1.90 IN‡ 25.81
WTR YR 1978 TOTAL 418509 MEAN 1147 MAX 6400 MIN 480 MEAN‡ 1146 CFSM‡ 2.32 IN‡ 31.55

† 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) National Geodetic Vertical Datum of 1929. Prior to May 1, 1964, nonrecording gage on downstream side of bridge at same site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 243 of this report.

AVERAGE DISCHARGE.--14 years, 195 ft³/s (5.522 m³/s), 21.71 in/yr (551 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. 26	0700	2140	60.6	5.59	1.704	Jan. 8	2030	2770	78.4	6.58	2.006
Nov. 6	1400	*12700	360	*16.53	5.038	Jan. 26	0200	6470	183	11.32	3.450
Nov. 7	0600	2970	84.1	6.88	2.097	Aug. 7	1200	3040	86.1	6.99	2.131

Minimum discharge, 83 ft³/s (2.35 m³/s) Oct. 1, gage height, 1.36 ft (0.415 m); minimum daily, 92 ft³/s (2.61 m³/s) Oct. 7, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	120	255	150	267	175	270	225	181	128	121	122
2	221	118	208	148	267	174	254	209	173	185	115	129
3	117	120	191	143	250	189	239	198	176	280	146	146
4	97	214	184	150	236	175	234	465	173	153	303	121
5	93	764	337	161	229	168	226	450	164	139	240	115
6	93	4530	309	146	221	176	218	318	160	140	186	113
7	92	1660	232	145	210	187	213	280	172	138	1060	109
8	108	595	205	848	210	201	206	369	283	135	416	105
9	274	392	196	921	205	206	201	437	239	141	283	103
10	159	302	175	368	201	831	199	329	180	129	209	103
11	119	248	168	303	197	459	198	283	168	169	182	197
12	113	217	164	274	195	337	195	270	164	127	194	121
13	105	198	158	236	196	291	188	463	163	125	225	118
14	117	185	193	220	196	344	181	480	152	126	228	131
15	107	177	217	198	191	322	178	374	149	125	223	118
16	106	173	181	191	186	280	176	336	149	444	195	116
17	106	279	176	227	187	254	178	302	149	167	179	108
18	99	205	202	249	192	239	187	275	144	138	158	105
19	97	182	185	237	191	226	208	256	144	130	151	103
20	97	171	179	344	184	217	200	240	185	124	145	101
21	94	166	175	276	184	210	181	229	169	119	137	101
22	94	171	167	232	181	206	175	216	192	115	133	102
23	93	241	159	220	178	197	171	213	157	134	130	119
24	92	198	160	210	176	192	169	231	147	125	126	110
25	93	198	196	748	176	365	203	214	142	133	124	109
26	829	223	169	2280	177	1310	420	199	140	120	126	102
27	247	191	157	565	170	602	420	191	138	124	130	101
28	168	187	155	415	175	417	299	188	131	154	127	100
29	143	181	157	345	---	348	250	228	128	119	122	98
30	129	186	153	312	---	307	234	216	127	113	122	97
31	122	---	151	283	---	285	---	205	---	112	119	---
TOTAL	4517	12792	5914	11545	5628	9890	6671	8889	4939	4611	6355	3423
MEAN	146	426	191	372	201	319	222	287	165	149	205	114
MAX	829	4530	337	2280	267	1310	420	480	283	444	1060	197
MIN	92	118	151	143	170	168	169	188	127	112	115	97
CFSM	1.20	3.49	1.57	3.05	1.65	2.62	1.82	2.35	1.35	1.22	1.68	.93
IN.	1.38	3.90	1.80	3.52	1.72	3.02	2.03	2.71	1.51	1.41	1.94	1.04

CAL YR 1977 TOTAL 68072 MEAN 186 MAX 4530 MIN 68 CFSM 1.53 IN 20.76
WTR YR 1978 TOTAL 85174 MEAN 233 MAX 4530 MIN 92 CFSM 1.91 IN 25.97

PEE DEE RIVER BASIN

02112120 ROARING RIVER NEAR ROARING RIVER, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
31...	1530	120	4	1.3
MAR				
01...	1430	173	3	1.4
APR				
26...	1000	378	116	118
JUL				
31...	1130	112	11	3.3

02112250 YADKIN RIVER AT ELKIN, N. C.

LOCATION (REVISED).--Lat 36°14'28", long 80°50'49", Yadkin County, Hydrologic Unit 03040101, on right bank at downstream side of bridge on U.S. Highway 21 at Elkin, 0.3 mi (0.5 km) downstream from Elkin River and 362 mi (582 km) upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--854 mi² (2,212 km²).

PERIOD OF RECORD.--April 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 866.03 ft (263.966 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 28, 1964, nonrecording gage on upstream side of bridge at same datum.

REMARKS.--Records good. Considerable regulation by W. Kerr Scott Reservoir (see p. 352). Corps of Engineers stage radio-telemeter at station. Suspended-sediment records for the current year are published on page 245 of this report.

AVERAGE DISCHARGE.--14 years, 1,455 ft³/s (41.21 m³/s), 23.14 in/yr (588 mm/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,700 ft³/s (700 m³/s) Aug. 10, 1970, gage height, 23.52 ft (7.169 m); minimum, 338 ft³/s (9.57 m³/s) July 28, 29, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of 36.0 ft (10.97 m), from information by North Carolina State Highway Commission. Flood of August 1940 reached a stage of 37.5 ft (11.43 m). A discharge of 172 ft³/s (4.87 m³/s) was measured on Sept. 19, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,900 ft³/s (620 m³/s) Nov. 7, gage height, 21.09 ft (6.428 m); minimum, 750 ft³/s (21.2 m³/s) Sept. 29, gage height, 1.75 ft (0.533 m); minimum daily, 767 ft³/s (21.7 m³/s) Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	842	1020	1930	1320	2080	1400	2060	1660	1440	959	902	891
2	1910	993	1960	1320	1990	1450	1930	1850	1400	1110	876	907
3	1100	999	1710	1310	1930	1480	1920	1590	1360	1660	943	1320
4	928	1200	1520	1180	1840	1490	1790	3150	1330	1440	1450	1380
5	886	3340	1980	1190	1740	1340	1810	3810	1320	1120	1510	943
6	865	13500	2630	1180	1700	1370	1710	3550	1300	980	1930	891
7	865	13100	2560	1280	1560	1510	1740	2560	1230	991	4870	876
8	902	7820	1850	3770	1590	1520	1630	2520	1770	1050	3350	848
9	1420	6940	1500	8220	1570	1590	1680	3090	2170	1070	4860	837
10	1270	6450	1540	4550	1530	4580	1610	2620	2310	943	2070	837
11	1030	6390	1530	4030	1560	3880	1600	2220	1550	1070	1440	1140
12	970	6310	1390	3630	1580	3050	1630	1950	1290	954	1650	943
13	928	6330	1370	2200	1510	3870	1590	2340	1260	912	1760	908
14	954	6460	1430	2160	1580	3020	1470	3360	1240	943	1860	954
15	928	6370	1860	1910	1550	2570	1460	3520	1230	980	2010	933
16	917	3690	1800	1700	1450	2350	1470	2600	1180	3630	2000	917
17	907	2190	1560	1760	1440	2020	1480	2280	1150	2480	1620	902
18	891	2050	1630	2310	1490	1960	1490	2020	1170	2160	1490	870
19	896	1750	1740	2220	1530	1770	1620	1860	1130	1410	1230	860
20	886	1660	1560	2310	1530	1690	1900	1770	1360	1070	1110	837
21	886	1610	1530	2510	1440	1660	1430	1660	1350	991	1040	831
22	886	1580	1480	2210	1450	1660	1400	1670	1390	954	1000	837
23	886	1810	1380	1700	1440	1650	1380	1540	1460	970	980	1140
24	891	1950	1360	1690	1410	1560	1430	1830	1140	949	949	943
25	881	1810	1530	3640	1350	1920	1510	1720	1070	954	922	902
26	4940	1910	1610	11700	1450	6560	2910	1570	1080	928	912	860
27	1760	1860	1370	3800	1450	4710	3940	1450	1160	891	938	860
28	1680	1690	1300	7100	1330	5700	2930	1390	1070	1250	917	831
29	1380	1720	1260	6700	---	5030	2210	1560	1010	1230	896	767
30	1080	1640	1320	4030	---	2620	1680	1740	980	959	902	796
31	1050	---	1360	2380	---	2460	---	1740	---	881	881	---
TOTAL	36615	116142	50550	97010	44070	79440	54410	68190	39900	37889	49268	27761
MEAN	1181	3871	1631	3129	1574	2563	1814	2200	1330	1222	1589	925
MAX	4940	13500	2630	11700	2080	6560	3940	3810	2310	3630	4870	1380
MIN	842	993	1260	1180	1330	1340	1380	1390	980	881	876	767
(+)	+15	+5	-5	0	+4	-3	+3	-3	0	-1	-3	-22
MEAN#	1196	3876	1626	3129	1578	2560	1817	2197	1330	1221	1586	903
CFSM#	1.40	4.54	1.90	3.66	1.85	3.00	2.13	2.57	1.56	1.43	1.86	1.06
IN#	1.61	5.06	2.19	4.22	1.93	3.46	2.38	2.96	1.74	1.65	2.14	1.18

CAL YR 1977	TOTAL	552900	MEAN	1515	MAX	13500	MIN 619	MEAN# 1515	CFSM# 1.77	IN# 24.06		
WTR YR 1978	TOTAL	701245	MEAN	1921	MAX	13500	MIN 767	MEAN# 1920	CFSM# 2.25	IN# 30.52		

† 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.

02112250 YADKIN RIVER AT ELKIN, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
NOV							
08...	1410	7970	361	7770	--	--	--
DEC							
01...	1018	1980	58	310	--	--	--
JAN							
25...	1500	4040	474	5170	--	--	--
26...	0952	16600	731	32800	5	19	31
MAR							
31...	1024	2560	97	670	--	--	--
APR							
26...	1100	2910	279	2190	--	--	--
JUN							
01...	0955	1490	39	157	--	--	--
JUL							
05...	1030	1080	55	160	--	--	--
31...	0931	860	31	72	--	--	--
SEP							
13...	1105	913	35	86	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV						
08...	--	--	--	--	--	42
DEC						
01...	--	--	--	--	--	--
JAN						
25...	--	--	--	--	--	--
26...	44	56	69	81	93	--
MAR						
31...	--	--	--	--	--	--
APR						
26...	--	--	--	--	--	--
JUN						
01...	--	--	--	--	--	--
JUL						
05...	--	--	--	--	--	--
31...	--	--	--	--	--	--
SEP						
13...	--	--	--	--	--	--

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) National Geodetic Vertical Datum of 1929. Prior to Aug. 29, 1964, nonrecording gage at same site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 247 of this report.

AVERAGE DISCHARGE.--14 years, 129 ft³/s (3.653 m³/s), 21.79 in/yr (553 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,450 ft³/s (183 m³/s) Aug. 30, 1964, gage height, 14.85 ft (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 (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. 26	0630	1680	47.6	5.24	1.597	Aug. 6	1900	1750	49.6	5.37	1.637
Jan. 8	2200	1880	53.2	5.59	1.704	Aug. 7	1430	1750	49.6	5.37	1.637
Jan. 26	0230	*3010	85.2	*7.68	2.341						

Minimum discharge, 45 ft³/s (1.27 m³/s) Oct. 1, gage height, 1.88 ft (0.573 m); minimum, 47 ft³/s (1.33 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	70	141	93	146	102	160	147	119	81	87	97
2	128	68	121	91	142	100	151	135	114	103	78	83
3	74	70	109	86	135	112	145	126	115	141	79	170
4	59	112	104	87	126	102	141	525	117	98	229	91
5	55	179	191	95	123	97	139	356	109	88	201	81
6	53	607	177	85	116	101	128	222	107	92	331	78
7	52	852	136	87	113	107	126	192	113	90	682	74
8	60	316	121	507	141	117	124	271	188	86	335	71
9	142	198	116	656	125	123	124	291	172	171	226	70
10	96	156	105	218	107	530	122	218	130	99	159	68
11	76	130	102	176	109	268	124	190	118	97	130	111
12	69	116	99	162	112	195	124	181	115	87	146	82
13	61	106	94	146	111	174	118	260	136	85	223	81
14	68	100	122	132	111	204	114	254	109	83	149	83
15	64	96	141	119	108	192	111	215	107	84	149	77
16	63	96	118	112	108	171	111	202	107	250	141	76
17	65	142	111	131	108	155	111	185	107	124	125	73
18	59	118	123	146	111	147	116	172	102	97	108	70
19	59	109	118	136	110	141	133	164	100	89	101	68
20	58	103	107	193	108	136	130	155	116	85	96	65
21	55	100	106	163	107	139	117	149	111	80	90	65
22	56	103	99	135	105	138	111	142	110	90	87	73
23	56	138	96	124	103	145	108	139	106	97	83	114
24	56	116	96	118	103	140	108	147	98	87	83	83
25	56	112	115	411	99	179	132	142	97	103	81	78
26	607	121	100	1290	101	542	370	135	95	84	84	72
27	154	109	94	324	97	318	291	128	94	80	86	71
28	108	108	92	227	99	228	193	124	87	119	82	70
29	91	104	100	189	---	197	164	137	83	86	85	66
30	82	99	92	169	---	179	153	140	83	77	88	63
31	74	---	96	159	---	167	---	131	---	75	82	---
TOTAL	2803	4854	3542	6767	3184	5646	4299	5975	3365	3108	4706	2424
MEAN	90.4	162	114	218	114	182	143	193	112	100	152	80.8
MAX	607	852	191	1290	146	542	370	525	188	250	682	170
MIN	47	68	92	85	97	97	108	124	83	75	78	63
CFSM	1.12	2.02	1.42	2.71	1.42	2.26	1.78	2.40	1.39	1.24	1.89	1.01
IN.	1.30	2.25	1.64	3.13	1.47	2.61	1.99	2.76	1.56	1.44	2.18	1.12

CAL YR 1977 TOTAL 37509 MEAN 103 MAX 890 MIN 37 CFSM 1.28 IN 17.35
WTR YR 1978 TOTAL 50673 MEAN 139 MAX 1290 MIN 47 CFSM 1.73 IN 23.45

02112360 MITCHELL RIVER NEAR STATE ROAD, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
NOV				
07...	1728	704	137	260
JAN				
25...	1545	365	146	144
26...	1040	1050	644	1830
MAR				
31...	1210	160	4	1.7
APR				
26...	1135	414	137	153
26...	1515	390	92	97
MAY				
04...	1213	268	107	77
04...	1635	1370	1820	6730
JUN				
01...	1145	116	8	2.5
JUL				
31...	1115	75	9	1.8
AUG				
07...	1420	1770	2190	10500
SEP				
29...	1107	65	4	.70

PEE DEE RIVER BASIN

02113000 FISHER RIVER NEAR COPELAND, N. C.

LOCATION.--Lat 36°20'27", long 80°41'10" (revised), 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 (278 m), by barometer. Prior to Sept. 5, 1936, nonrecording gage at same site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 249 of this report.

AVERAGE DISCHARGE.--47 years, 182 ft³/s (5.154 m³/s), 20.43 in/yr (519 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. 26	0800	3730	106	8.05	2.454	May 4	1730	3200	90.6	7.39	2.252
Nov. 7	1230	3930	111	8.30	2.530	Aug. 7	1800	2390	67.7	6.38	1.945
Jan. 8	2330	4140	117	8.56	2.609	Aug. 8	1930	2700	76.5	6.77	2.063
Jan. 26	0300	*5830	165	*10.52	3.206	Aug. 13	0430	2680	75.9	6.74	2.054

Minimum discharge, 64 ft³/s (1.81 m³/s) Oct. 1, gage height, 2.17 ft (0.661 m); minimum daily, 67 ft³/s (1.90 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	117	237	144	236	157	229	221	154	107	98	140
2	285	114	192	140	232	159	217	204	147	165	98	105
3	139	115	171	132	219	174	206	191	149	529	97	368
4	97	158	164	130	205	167	201	1110	152	168	283	158
5	87	328	377	135	199	150	198	615	141	135	275	118
6	82	736	358	129	192	164	191	336	137	131	237	109
7	81	1690	234	130	174	173	189	281	140	129	1110	102
8	85	542	199	1040	216	186	182	412	274	123	680	97
9	204	316	187	1650	195	218	180	454	247	124	388	93
10	154	248	171	383	178	946	178	315	172	114	246	91
11	111	207	161	279	172	459	178	269	154	148	189	259
12	99	184	160	261	168	298	176	252	148	112	244	135
13	93	168	150	236	169	258	170	374	147	109	773	163
14	104	158	187	218	171	324	164	388	135	114	234	122
15	99	151	246	195	169	300	161	296	133	125	214	113
16	95	144	185	182	167	250	159	275	133	451	183	110
17	100	230	174	215	165	226	159	253	138	194	176	103
18	88	179	194	291	169	210	167	236	131	138	149	97
19	86	156	186	256	171	204	189	221	127	124	140	93
20	84	146	174	391	166	194	188	210	160	117	129	89
21	81	141	170	323	162	189	167	201	139	110	122	91
22	81	142	157	244	162	185	159	190	193	108	117	95
23	79	190	150	216	153	179	155	188	204	115	114	139
24	79	165	149	204	162	176	153	193	142	103	110	108
25	80	159	182	810	155	214	183	190	133	108	106	103
26	1510	191	159	3410	157	977	660	176	147	109	105	96
27	311	160	146	581	150	526	463	169	132	100	109	92
28	194	155	144	386	152	340	301	166	118	175	104	91
29	156	146	150	310	---	285	247	169	111	112	104	87
30	137	149	145	277	---	257	228	178	111	102	113	86
31	124	---	146	260	---	240	---	168	---	100	100	---
TOTAL	5072	7685	5805	13558	4986	8785	6398	8901	4549	4599	7147	3653
MEAN	164	256	187	437	178	283	213	287	152	148	231	122
MAX	1510	1690	377	3410	236	977	660	1110	274	529	1110	368
MIN	67	114	144	129	150	150	153	166	111	100	97	86
CFSM	1.36	2.12	1.55	3.61	1.47	2.34	1.76	2.37	1.26	1.22	1.91	1.01
IN.	1.56	2.36	1.78	4.17	1.53	2.70	1.97	2.74	1.40	1.41	2.20	1.12

CAL YR 1977 TOTAL 56095 MEAN 154 MAX 1900 MIN 33 CFSM 1.27 IN 17.25
WTR YR 1978 TOTAL 81138 MEAN 222 MAX 3410 MIN 67 CFSM 1.84 IN 24.94

02113000 FISHER RIVER NEAR COPELAND, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
NOV				
03...	1002	112	8	2.4
07...	1643	2110	1120	6380
DEC				
06...	1058	344	83	77
JAN				
25...	1430	861	379	881
26...	1133	4030	1700	18500
APR				
07...	1020	158	2	.85
26...	1230	825	414	922
26...	1550	724	320	626
MAY				
04...	1300	470	462	586
04...	1600	2990	3730	30100
22...	1338	190	15	7.7
AUG				
03...	1050	94	26	6.6
07...	1140	715	1270	2450
29...	0955	102	10	2.8
SEP				
29...	1253	88	11	2.6

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 (545 km) upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--1220 mi² (3,160 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 782.02 ft (238.360 m) National Geodetic Vertical Datum of 1929 (North Carolina Department of Transportation bench mark). Prior to February 22, 1977, nonrecording gage at same site and datum.

REMARKS.--Records good except those for period of no gage-height record Jan. 26 to Mar. 15, which are fair. Some regulation by W. Kerr Scott Reservoir (see p. 352). Suspended-sediment records for the current year are published on page 251 of this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,500 ft³/s (864 m³/s) Oct. 9, 1976 gage height, 21.37 ft (6.514 m) from floodmarks; minimum, 732 ft³/s (20.7 m³/s) Sept. 6, 1977, gage height, 3.32 ft (1.012 m); minimum daily, 764 ft³/s (21.6 m³/s) Sept. 6, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 14 or 15, 1940 reached a stage of 816.7 ft (248.93 m) National Vertical Datum of 1929, 34.7 ft (10.58 m) gage datum, from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 28,000 ft³/s (793 m³/s) Jan. 26, gage height, 20.30 ft (6.187 m) from floodmarks; minimum, 946 ft³/s (26.8 m³/s) Oct. 1, gage height, 3.64 ft (1.109 m); minimum daily, 955 ft³/s (27.0 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	955	1340	2220	1660	2800	1800	2720	2190	1910	1270	1270	1410
2	1840	1320	2310	1630	2600	1800	2510	2320	1780	1350	1350	1300
3	1670	1310	2120	1630	2500	1900	2460	2180	1800	3220	1370	3600
4	1100	1360	1920	1540	2400	1940	2360	5600	1740	2060	1780	2180
5	1030	2250	2760	1480	2300	1800	2330	7170	1680	1620	2910	1570
6	1000	11800	3830	1480	2200	1660	2240	4540	1700	1380	2030	1280
7	987	19900	3170	1500	2100	1950	2250	3740	1670	1320	6550	1220
8	1000	9390	2610	3010	2000	2000	2140	3880	2130	1420	5820	1200
9	1470	8110	1970	13000	2000	2200	2190	4210	3130	1510	7460	1170
10	1720	7270	1920	6000	2000	7400	2090	3700	2780	1370	3440	1160
11	1250	6870	1900	4700	1950	6200	2000	3050	2210	1840	2230	1600
12	1150	6680	1800	4200	1950	4300	2030	2610	1830	1390	2320	1450
13	1090	6490	1720	3030	1950	4500	2060	2980	1690	1330	3690	1350
14	1080	6430	1750	2790	1950	4100	1920	4280	1650	1590	2670	1320
15	1080	6670	2370	2610	1900	3500	1860	4240	1600	1560	2550	1290
16	1070	4790	2280	2200	1900	3240	1850	3600	1570	5940	2710	1260
17	1060	2710	2050	2280	1900	2770	1860	3000	1550	3450	2260	1240
18	1060	2530	2030	3060	1850	2610	1880	2830	1540	2820	2020	1200
19	1030	2180	2170	3100	1850	2350	2000	2590	1470	2070	1710	1150
20	1010	1930	2040	3260	1850	2240	2410	2330	1600	1530	1530	1120
21	1010	1860	1970	3490	1850	2220	1990	2180	1760	1410	1470	1110
22	1010	1830	1910	3020	1850	2180	1830	2120	1680	1350	1370	1110
23	1010	2040	1790	2620	1800	2160	1750	2020	2030	1380	1360	1550
24	1000	2210	1740	2300	1800	2100	1810	2180	1550	1340	1310	1330
25	1020	2050	1830	6010	1800	2220	1870	2260	1400	1330	1270	1210
26	7000	2200	1990	20000	1800	8430	4120	2040	1430	1330	1330	1160
27	3400	2080	1780	7200	1800	6600	5430	1920	1480	1260	1310	1120
28	2250	1930	1680	8000	1800	6400	4180	1800	1380	1750	1300	1120
29	2020	1920	1580	7600	---	6050	3170	1960	1310	1720	1290	1090
30	1570	1840	1630	5500	---	3800	2420	2110	1300	1400	1340	1050
31	1400	---	1650	3200	---	3100	---	2290	---	1270	1300	---
TOTAL	46342	131290	64490	133100	56450	105520	71730	93920	52350	55580	72320	40920
MEAN	1495	4376	2080	4294	2016	3404	2391	3030	1745	1793	2333	1364
MAX	7000	19900	3830	20000	2800	8430	5430	7170	3130	5940	7460	3600
MIN	955	1310	1580	1480	1800	1660	1750	1800	1300	1260	1270	1050
(†)	+15	+5	-5	0	+4	-3	+3	-3	0	-1	-3	-22

CAL YR 1977 TOTAL 694276 MEAN 1902 MAX 19900 MIN 764 MEAN‡ 1902 CFSM‡ 1.56 IN‡ 21.18
WTR YR 1978 TOTAL 924012 MEAN 2532 MAX 20000 MIN 955 MEAN‡ 2531 CFSM‡ 2.07 IN‡ 28.10

† 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.

02113500 YADKIN RIVER AT SILOAM, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
OCT												
25...	1115	995	14	38	--	--	--	--	--	--	--	--
NOV												
08...	1445	9720	418	11000	--	--	--	--	--	--	--	--
DEC												
01...	1415	2420	45	294	--	--	--	--	--	--	--	--
JAN												
26...	1250	27600	1070	79700	22	29	36	45	55	65	75	88
27...	0958	5420	341	4990	--	--	--	--	--	--	--	--
JUL												
05...	1250	1450	94	368	--	--	--	--	--	--	--	--
31...	1430	1240	33	110	--	--	--	--	--	--	--	--
AUG												
29...	1258	1220	26	86	--	--	--	--	--	--	--	--

02113850 ARARAT RIVER AT ARARAT, N. C.

LOCATION.--Lat 36°24'16", long 80°33'43", Surry County, Hydrologic Unit 03040101, on right bank at upstream side of bridge pier on Secondary Road 2019, at Ararat, and 300 ft (91 m) downstream from Flat Shoal Creek.

DRAINAGE AREA.--231 mi² (598 km²).

PERIOD OF RECORD.--April 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 880.97 ft (268.520 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 253 of this report.

AVERAGE DISCHARGE.--14 years, 305 ft³/s (8.638 m³/s), 17.93 in/yr (455 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft³/s (306 m³/s) June 21, 1972, gage height, 14.72 ft (4.487 m); minimum, 20 ft³/s (0.57 m³/s) Aug. 17, 18, Oct. 7, 8, 1966, gage height, 0.65 ft (0.198 m), result of regulation; minimum daily, 55 ft³/s (1.56 m³/s) Aug. 2, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--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 (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. 26	1200	4560	129	7.80	2.377	May 4	1800	3810	108	6.72	2.048
Nov. 7	1600	3960	112	6.94	2.115	July 10	2400	3740	106	6.63	2.021
Jan. 9	0400	5800	164	9.49	2.893	Aug. 8	2300	4740	134	8.06	2.457
Jan. 26	1100	*8410	238	*12.38	3.773						

Minimum discharge, 102 ft³/s (2.89 m³/s) Oct. 1, gage height, 0.99 ft (0.302 m); minimum daily, 114 ft³/s (3.23 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114	194	394	243	418	276	371	384	264	167	168	369
2	472	189	306	232	418	267	349	347	246	357	182	214
3	206	188	272	219	389	296	332	323	248	1120	167	517
4	152	218	258	206	359	286	323	1600	254	264	519	266
5	133	288	628	219	347	260	318	996	234	201	563	214
6	128	504	614	219	339	278	306	536	228	189	494	198
7	128	2040	383	220	290	289	301	435	262	182	1370	192
8	136	873	322	1230	337	326	288	677	576	176	1430	188
9	331	485	308	3130	322	409	286	816	499	172	1380	174
10	244	372	275	690	311	1570	286	561	301	367	445	168
11	178	305	256	492	299	829	284	449	260	727	339	415
12	160	265	246	449	296	509	288	411	247	222	560	240
13	149	241	245	417	299	440	272	668	246	199	1180	219
14	206	228	350	377	302	602	260	767	224	207	457	224
15	189	221	489	334	301	537	255	509	219	202	413	201
16	171	215	326	309	292	441	249	476	219	584	336	197
17	188	452	298	392	289	392	262	430	223	318	356	181
18	157	306	337	563	290	357	273	400	211	223	278	172
19	150	252	310	465	294	340	303	371	207	199	259	175
20	143	233	298	698	285	327	304	337	238	190	237	167
21	138	226	286	556	275	320	270	315	219	179	222	170
22	132	232	265	416	281	311	257	315	280	186	217	170
23	129	378	253	371	259	301	250	323	287	176	211	196
24	128	288	251	350	276	293	251	333	211	172	203	173
25	130	269	323	1340	270	330	314	323	195	261	200	177
26	2260	347	271	5630	274	1500	1230	301	217	193	286	166
27	545	273	245	1110	264	823	989	288	218	166	239	160
28	319	241	236	685	272	554	563	281	189	395	202	158
29	251	248	239	534	---	471	440	322	176	200	222	153
30	218	253	247	479	---	421	391	313	176	187	263	152
31	201	---	249	458	---	392	---	304	---	175	217	---
TOTAL	8186	10844	9780	23033	8648	14747	10865	14911	7574	8556	13615	6366
MEAN	264	361	315	743	309	476	362	481	252	276	439	212
MAX	2260	2040	628	5630	418	1570	1230	1600	576	1120	1430	517
MIN	114	188	236	206	259	260	249	281	176	166	167	152
CFSM	1.14	1.56	1.36	3.22	1.34	2.06	1.57	2.08	1.09	1.20	1.90	.92
IN.	1.32	1.75	1.57	3.71	1.39	2.37	1.75	2.40	1.22	1.38	2.19	1.03

CAL YR 1977 TOTAL 88226 MEAN 242 MAX 2850 MIN 55 CFSM 1.05 IN 14.21
WTR YR 1978 TOTAL 137125 MEAN 376 MAX 5630 MIN 114 CFSM 1.63 IN 22.08

02113850 ARARAT RIVER AT ARARAT, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
NOV				
07...	1515	3940	2400	25500
JAN				
25...	1335	1890	1265	6460
27...	1100	1040	333	935
MAY				
04...	1347	1460	1380	5440
04...	1532	2650	2240	16000
22...	1158	316	10	8.5
JUN				
29...	0833	172	32	15
AUG				
03...	1145	160	63	27
03...	1345	368	22	22
29...	1400	198	16	8.6

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) National Geodetic Vertical Datum of 1929 (North Carolina State Highway Commission bench mark).

REMARKS.--Records good. A Soil Conservation Service flood-control dam on upstream tributary, drainage area 4.7 mi² (12.2 km²), with flood storage of 695 acre-ft (857,000 m³) was completed on June 21, 1977. On Sept. 30, 1977, reservoir permanent pool was half full. On Dec. 13, 1977 reservoir was full and spilled. Suspended-sediment records for the current year are published on page 255 of this report.

AVERAGE DISCHARGE.--18 years, 46.3 ft³/s (1.311 m³/s), 14.36 in/yr (365 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)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 26	0800	2890	81.8	8.34	2.542	July 3	0400	*6190	175	*15.25	4.648
Jan. 26	0200	4110	116	11.15	3.399	July 16	0830	2700	76.5	7.87	2.399

Minimum discharge, 8.8 ft³/s (0.25 m³/s) Oct. 5-7, gage height, 0.56 ft (0.171 m); minimum daily, 8.8 ft³/s (0.25 m³/s) Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	18	46	26	41	25	37	38	19	16	60	142
2	35	17	31	24	37	25	34	34	18	62	31	31
3	11	17	25	22	34	33	31	31	19	1600	28	63
4	9.5	22	23	22	32	31	31	334	19	191	60	34
5	8.9	47	158	24	30	29	29	180	17	77	41	25
6	8.8	82	96	24	29	30	28	76	17	55	124	22
7	9.0	56	43	25	31	32	28	53	37	49	123	21
8	9.8	37	31	273	28	36	27	192	141	44	81	19
9	19	27	28	355	27	38	26	152	111	40	52	19
10	14	24	24	84	26	709	26	73	42	29	37	18
11	11	21	22	68	26	195	26	52	30	225	31	19
12	11	19	23	52	25	88	27	45	26	55	29	18
13	13	18	21	44	25	61	25	65	23	40	240	18
14	34	17	30	46	26	86	24	80	21	86	57	17
15	23	17	44	44	26	77	23	52	20	78	41	17
16	36	17	32	38	26	54	23	48	19	692	35	18
17	23	20	31	122	25	44	24	41	19	126	31	17
18	17	17	55	127	26	39	24	37	19	61	28	16
19	16	16	48	94	26	36	26	33	18	44	26	15
20	15	15	39	90	25	33	27	30	18	36	25	15
21	14	16	35	73	25	31	24	28	22	31	23	16
22	14	17	30	52	26	30	23	26	69	28	22	16
23	15	23	28	44	24	29	22	26	48	26	22	16
24	15	21	27	41	25	30	22	29	26	25	21	17
25	16	20	41	779	24	34	37	26	22	29	21	17
26	656	26	34	1240	24	344	300	24	47	27	23	16
27	72	21	28	163	24	120	173	23	28	24	23	15
28	38	20	26	77	26	67	71	23	21	62	21	15
29	27	20	26	56	---	52	48	22	18	31	20	14
30	22	22	25	51	---	46	42	22	18	36	22	14
31	19	---	27	44	---	41	---	21	---	35	30	---
TOTAL	1242.0	730	1177	4224	769	2525	1308	1916	972	3960	1428	720
MEAN	40.1	24.3	38.0	136	27.5	81.5	43.6	61.8	32.4	128	46.1	24.0
MAX	656	82	158	1240	41	709	300	334	141	1600	240	142
MIN	8.8	15	21	22	24	25	22	21	17	16	20	14
CFSM	.94	.57	.89	3.18	.64	1.90	1.02	1.44	.76	2.99	1.08	.56
IN.	1.08	.63	1.02	3.67	.67	2.19	1.14	1.67	.84	3.44	1.24	.63

CAL YR 1977 TOTAL 9393.6 MEAN 25.7 MAX 836 MIN 1.6 CFSM .60 IN 8.16
WTR YR 1978 TOTAL 20971.0 MEAN 57.5 MAX 1600 MIN 8.8 CFSM 1.34 IN 18.23

02114450 LITTLE YADKIN RIVER AT DALTON, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
26...	1820	186	227	114
28...	1515	35	26	2.5
DEC				
27...	1256	27	8	.58
JAN				
25...	1230	962	1160	3010
FEB				
28...	1000	25	15	1.0
APR				
03...	1040	32	13	1.1
26...	1415	400	521	563
MAY				
16...	1250	50	20	2.7
JUN				
09...	1605	73	116	23
JUL				
17...	1035	132	194	69
AUG				
16...	1530	35	20	1.9
SEP				
13...	1050	17	12	.58

PEE DEE RIVER BASIN

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) National Geodetic Vertical Datum of 1929. Prior to Nov. 6, 1968, nonrecording gage on downstream side of bridge at same site and datum.

REMARKS.--Records good. Some regulation by W. Kerr Scott Reservoir (see p. 352). Corps of Engineers stage-radio telemeter at station. Suspended-sediment records for the current year are published on page 257 of this report.

AVERAGE DISCHARGE.--14 years, 2,591 ft³/s (73.38 m³/s), 20.94 in/yr (532 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) National Geodetic Vertical Datum (35.8 ft or 10.91 m, gage datum), from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharge, 40,000 ft³/s (1,130 m³/s) Jan. 26, gage height, 23.61 ft (7.196 m); minimum, 1,100 ft³/s (31.2 m³/s) Oct. 1, gage height, 3.42 ft (1.042 m); minimum daily, 1,110 ft³/s (31.4 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1110	1630	2810	2070	3380	2180	3430	2820	2350	1460	1600	2120
2	1840	1600	2980	2000	3220	2300	3110	2890	2110	1560	1690	1640
3	2600	1580	2730	1920	3140	2380	3010	2760	2070	6500	1590	4010
4	1450	1650	2450	1830	2900	2520	2910	5350	2050	3020	2080	3060
5	1270	2360	3390	1740	2700	2310	2810	11700	1970	2140	3990	2010
6	1200	10900	5640	1760	2600	2230	2750	5540	1960	1790	3580	1610
7	1180	24400	3960	1820	2500	2390	2700	4690	1950	1670	6190	1520
8	1180	11900	3370	3590	2400	2510	2630	5010	2520	1710	8480	1460
9	1590	9220	2600	21900	2500	2800	2560	5730	4310	1770	9500	1410
10	2390	8210	2400	7420	2400	9490	2590	4900	3210	1670	4600	1360
11	1660	7610	2320	5480	2400	9760	2520	3860	2790	3180	2890	1780
12	1460	7420	2180	5180	2350	5160	2560	3330	2130	1960	2810	1930
13	1370	7320	2080	3910	2350	5050	2530	3520	2000	1690	5010	1670
14	1430	7390	2130	3370	2350	5180	2390	5240	1910	2670	3370	1580
15	1520	7470	3030	3150	2350	4750	2290	4910	1850	2580	3070	1550
16	1430	6080	2880	2700	2350	3960	2280	4590	1830	8130	3170	1510
17	1460	3440	2610	2860	2350	3410	2290	3670	1800	5170	2810	1460
18	1350	3220	2550	4090	2350	3150	2330	3300	1760	3320	2440	1390
19	1280	2720	2760	4020	2350	2930	2440	3030	1740	2660	2140	1340
20	1250	2390	2570	4110	2350	2780	2830	2830	1780	1940	1910	1320
21	1250	2310	2430	4600	2350	2710	2580	2670	2100	1710	1780	1290
22	1230	2280	2290	3740	2300	2660	2230	2540	1950	1610	1680	1340
23	1230	2570	2150	3030	2250	2620	2170	2460	2460	1610	1630	1520
24	1210	2820	2080	2750	2250	2540	2220	2490	1940	1590	1590	1740
25	1210	2670	2250	7670	2250	2570	2320	2720	1680	1590	1540	1470
26	11800	2790	2490	33700	2200	9940	5450	2460	1690	1730	1600	1410
27	5590	2700	2190	8890	2200	9100	7270	2310	1810	1520	1830	1320
28	2840	2490	2000	8520	2200	7320	5350	2170	1690	2130	1580	1310
29	2510	2390	1850	8850	---	6960	3980	2250	1500	2200	1550	1270
30	1990	2320	1980	6760	---	4930	3180	2540	1490	1740	1630	1220
31	1720	---	2040	4060	---	3690	---	2660	---	1660	1540	---
TOTAL	62600	153850	81190	177490	69290	132280	89710	116940	62400	75680	90870	49620
MEAN	2019	5128	2619	5725	2475	4267	2990	3772	2080	2441	2931	1654
MAX	11800	24400	5640	33700	3380	9940	7270	11700	4310	8130	9500	4010
MIN	1110	1580	1850	1740	2200	2180	2170	2170	1490	1460	1540	1220
(†)	+15	+5	-5	0	+4	-3	+3	-3	0	-1	-3	-22

CAL YR 1977 TOTAL 850899 MEAN 2331 MAX 24400 MIN 903 MEAN‡ 2331 CFSM‡ 1.39 IN‡ 18.87
WTR YR 1978 TOTAL 1161920 MEAN 3183 MAX 33700 MIN 1110 MEAN‡ 3182 CFSM‡ 1.89 IN‡ 25.66

† 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.

PEE DEE RIVER BASIN

02115360 YADKIN RIVER AT ENON, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
28...	1245	2790	208	1570	--
NOV					
08...	1539	11200	507	15300	54
JAN					
27...	1330	7240	557	10900	--
MAR					
01...	1230	2180	19	112	--
APR					
01...	1245	3380	355	3240	--
JUN					
29...	1355	1550	55	230	--
JUL					
20...	1215	1990	90	484	--
SEP					
05...	1230	1990	137	736	--

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 mi² (166.8 km²).

PERIOD OF RECORD.--May 1971 to current year.

GAGE.--Water-stage recorder and concrete control since Dec. 1, 1972. Datum of gage is 693.97 ft (211.522 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, Feb. 1-28, which are poor. Flow regulated by Salem Lake in the headwaters. The city of Winston-Salem diverted an average of 22.7 ft³/s (0.64 m³/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 259 of this report.

AVERAGE DISCHARGE.--7 years, 75.1 ft³/s (2.127 m³/s), 15.84 in/yr (402 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,620 ft³/s (103 m³/s) May 13, 1971 (gage height, 16.30 ft or 4.968 m); minimum, 11 ft³/s (0.31 m³/s) Sept. 13, 1976, Sept. 4, 1977; minimum daily, 12 ft³/s (0.34 m³/s) Sept. 4, 1977; minimum gage height, 0.59 ft (0.180 m) Oct. 15, 16, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,340 ft³/s (94.6 m³/s) Oct. 26, gage height, 14.78 ft (4.505 m); minimum, 18 ft³/s (0.51 m³/s) Oct. 23, 24, gage height, 1.77 ft (0.539 m); minimum daily, 18 ft³/s (0.51 m³/s) Oct. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	32	73	30	60	39	38	55	30	24	45	90
2	139	29	37	28	57	32	36	48	29	54	134	40
3	27	31	31	29	54	94	36	43	28	361	103	593
4	22	61	48	28	52	40	34	720	27	78	276	227
5	21	84	183	28	50	32	33	781	27	42	259	71
6	21	105	65	57	48	35	33	166	32	34	386	52
7	21	60	39	35	47	34	33	113	111	30	527	43
8	19	45	33	371	46	45	31	301	179	26	315	37
9	63	36	33	344	44	38	30	245	299	25	121	33
10	22	31	29	116	43	536	30	108	116	25	203	31
11	20	28	27	60	42	267	34	74	57	304	78	34
12	20	26	28	47	42	99	41	60	48	96	65	33
13	61	24	28	146	42	69	31	96	42	97	58	32
14	45	25	49	123	42	88	30	71	36	95	60	29
15	24	26	35	77	42	59	29	62	32	74	49	29
16	50	25	30	55	42	51	28	58	31	1550	42	28
17	24	48	48	217	42	44	29	51	30	399	39	26
18	22	26	72	172	42	39	30	46	28	99	36	27
19	21	23	38	168	42	37	39	43	29	65	32	27
20	20	22	40	232	42	35	33	39	56	52	30	27
21	20	23	34	162	41	34	31	36	55	43	30	27
22	19	32	31	86	41	34	30	36	36	34	30	54
23	18	76	29	60	40	32	29	36	30	32	29	41
24	19	29	28	45	40	31	30	36	27	39	29	27
25	20	40	69	845	40	60	206	34	51	49	28	28
26	1230	43	30	1790	40	378	567	34	49	36	36	27
27	310	27	28	210	40	128	290	32	39	39	29	27
28	76	54	28	120	41	69	107	31	32	110	28	26
29	50	35	27	90	---	54	67	31	29	45	34	25
30	40	97	48	75	---	46	62	32	26	34	54	23
31	35	---	39	65	---	42	---	32	---	45	117	---
TOTAL	2524	1243	1357	5911	1244	2621	2077	3550	1641	4036	3302	1814
MEAN	81.4	41.4	43.8	191	44.4	84.5	69.2	115	54.7	130	107	60.5
MAX	1230	105	183	1790	60	536	567	781	299	1550	527	593
MIN	18	22	27	28	40	31	28	31	26	24	28	23

CAL YR 1977 TOTAL 16706 MEAN 45.8 MAX 1540 MIN 12
WTR YR 1978 TOTAL 31320 MEAN 85.8 MAX 1790 MIN 18

02115856 SALEM CREEK NEAR ATWOOD, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
DEC												
28...	1255	28	8	.60	--	--	--	--	--	--	--	--
JAN												
25...	1005	1140	1410	4340	14	20	26	36	44	55	70	92
26...	1620	1360	977	3590	9	14	16	24	31	37	58	93
FEB												
28...	1410	40	48	5.2	--	--	--	--	--	--	--	--
APR												
05...	1330	35	10	.94	--	--	--	--	--	--	--	--
26...	1515	714	544	1050	--	--	--	--	--	--	--	--
27...	1407	249	105	71	--	--	--	--	--	--	--	--
MAY												
30...	1145	32	15	1.3	--	--	--	--	--	--	--	--
JUN												
17...	1600	30	186	15	--	--	--	--	--	--	--	--
AUG												
14...	1400	52	37	5.2	--	--	--	--	--	--	--	--
16...	1315	44	18	2.1	--	--	--	--	--	--	--	--
SEP												
13...	1400	40	97	10	--	--	--	--	--	--	--	--

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) National Geodetic Vertical Datum of 1929.

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 22.7 ft³/s (0.64 m³/s) from Salem Lake in the basin and 29.7 ft³/s (0.84 m³/s) from the Yadkin River for water supply. An average of about 34.3 ft³/s (0.97 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 261 of this report.

AVERAGE DISCHARGE.--14 years, 228 ft³/s (6.457 m³/s), 17.39 in/yr (442 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,500 ft³/s (411 m³/s) June 22, 1972, gage height, 21.26 ft (6.480 m); minimum, 21 ft³/s (0.59 m³/s) Oct. 6, 1968, gage height, 1.26 ft (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. 26	1100	4570	129	15.93	4.855	Mar. 26	1030	2530	71.6	12.37	3.770
Jan. 9	0630	2730	77.3	12.88	3.926	May 4	2000	3860	109	14.96	4.560
Jan. 26	1000	*6270	178	*17.58	5.358	July 16	1100	4020	114	15.21	4.636
Mar. 10	1530	2810	79.6	13.05	3.978	Sept. 3	1100	2260	64.0	11.50	3.505

Minimum discharge, 74 ft³/s (2.10 m³/s) Oct. 23, gage height, 2.03 ft (0.619 m); minimum daily, 80 ft³/s (2.27 m³/s) Oct. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	105	155	422	154	261	175	181	202	125	96	200	276
2	334	149	219	145	267	161	165	185	122	139	223	130
3	126	148	173	142	247	262	165	171	115	1030	238	1090
4	99	212	170	138	217	211	164	1670	109	271	593	430
5	94	344	632	139	204	170	162	2570	109	159	529	180
6	92	426	548	180	206	172	162	511	115	138	955	152
7	91	286	230	174	193	178	158	297	244	127	810	139
8	87	215	187	1230	195	193	150	923	347	111	774	128
9	150	181	176	1870	198	196	137	1030	744	102	430	119
10	111	165	156	479	190	2030	138	444	325	104	433	107
11	94	149	142	258	176	1210	145	291	168	518	219	117
12	93	134	145	208	164	425	169	235	150	231	202	121
13	142	123	146	388	172	296	143	281	143	150	193	115
14	167	127	186	576	184	326	139	261	130	271	185	118
15	121	130	200	340	175	298	131	214	128	401	167	121
16	135	129	161	229	172	238	123	212	122	3080	148	119
17	124	167	169	616	169	208	132	195	117	1330	143	104
18	105	137	282	666	163	190	139	179	105	313	133	113
19	100	119	213	466	167	173	157	173	102	210	123	118
20	97	110	193	746	168	174	167	162	165	177	111	114
21	94	121	188	604	165	174	143	149	214	160	111	116
22	90	131	167	299	164	170	133	146	133	158	115	125
23	80	235	154	235	154	165	124	150	133	158	118	143
24	85	144	144	202	158	159	128	155	116	160	113	103
25	91	135	228	2290	151	198	387	149	137	190	110	110
26	3190	212	161	5620	139	1460	1680	143	135	172	121	112
27	1230	139	145	1810	145	601	890	133	136	132	107	110
28	317	167	137	503	158	308	373	121	116	260	109	108
29	213	168	131	334	---	243	237	125	109	154	110	105
30	175	278	159	295	---	212	213	130	104	115	137	97
31	164	---	191	277	---	194	---	129	---	118	176	---
TOTAL	8196	5336	6555	21613	5122	11170	7335	11736	5018	10735	8135	5040
MEAN	264	178	211	697	183	360	245	379	167	346	262	168
MAX	3190	426	632	5620	267	2030	1680	2570	744	3080	955	1090
MIN	80	110	131	138	139	159	123	121	102	96	107	97

CAL YR 1977 TOTAL 63463 MEAN 174 MAX 3190 MIN 59
WTR YR 1978 TOTAL 105991 MEAN 290 MAX 5620 MIN 80

02115860 MUDDY CREEK NEAR MUDDY CREEK, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
OCT												
27...	1225	822	321	712	--	--	--	--	--	--	--	--
NOV												
07...	1420	299	73	59	--	--	--	--	--	--	--	--
29...	1100	161	29	13	--	--	--	--	--	--	--	--
DEC												
28...	1510	144	46	18	--	--	--	--	--	--	--	--
JAN												
26...	1515	5950	426	6840	42	48	56	67	74	84	92	99
27...	1630	920	350	869	--	--	--	--	--	--	--	--
FEB												
28...	1600	166	33	15	--	--	--	--	--	--	--	--
APR												
26...	1110	2050	529	2920	--	--	--	--	--	--	--	--
26...	1750	2200	590	3510	--	--	--	--	--	--	--	--
27...	1625	738	198	395	--	--	--	--	--	--	--	--
JUN												
09...	1417	562	709	1080	--	--	--	--	--	--	--	--
AUG												
14...	1525	168	105	48	--	--	--	--	--	--	--	--
SEP												
13...	1625	129	153	53	--	--	--	--	--	--	--	--

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 263 of this report.

AVERAGE DISCHARGE.--14 years, 44.8 ft³/s (1.269 m³/s), 14.42 in/yr (366 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. 26	1600	1180	33.4	12.14	3.700	May 4	2230	*2010	56.9	*14.58	4.444
Jan. 26	1300	1970	55.8	a14.49	4.417	July 16	1830	919	26.0	10.63	3.240

a From floodmarks.

Minimum discharge, 11 ft³/s (0.312 m³/s) Oct. 1, gage height, 2.66 ft (0.811 m); minimum daily, 15 ft³/s (0.425 m³/s) Oct. 7, 8, 23, 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	28	75	32	124	34	38	39	25	18	28	77
2	140	27	46	30	47	31	35	35	23	33	22	28
3	32	27	38	27	42	44	34	32	24	52	28	222
4	20	40	38	27	39	43	33	697	24	26	104	55
5	17	109	157	27	38	38	33	997	22	22	131	35
6	16	107	118	33	37	38	32	118	22	21	214	30
7	15	61	52	34	37	37	32	76	24	20	138	27
8	15	43	42	274	34	38	31	183	42	20	73	24
9	26	36	38	306	34	38	31	122	87	18	102	24
10	18	32	34	75	34	470	30	69	61	18	98	23
11	16	29	33	50	33	155	30	53	31	66	42	23
12	16	27	30	43	32	75	30	47	27	25	47	22
13	25	25	30	81	34	56	30	68	25	23	34	22
14	30	25	33	136	35	59	29	60	24	44	141	21
15	22	24	34	86	33	51	28	47	23	34	56	22
16	24	24	30	53	32	45	27	44	23	710	35	22
17	21	29	32	171	33	41	27	40	22	133	30	20
18	18	24	60	142	33	38	28	37	22	45	27	20
19	18	22	47	111	35	38	30	35	22	34	25	21
20	17	22	39	219	33	36	30	34	21	30	24	21
21	16	22	37	136	32	35	30	32	22	27	23	21
22	16	24	34	72	32	34	29	30	22	24	22	30
23	15	44	31	59	30	33	27	30	21	23	22	21
24	15	32	31	54	32	33	27	31	21	22	21	21
25	15	30	43	619	31	38	51	30	47	24	21	21
26	892	34	32	1410	30	229	266	28	24	22	28	21
27	166	27	30	169	29	86	122	27	23	22	23	20
28	62	39	28	90	31	56	60	27	20	44	22	20
29	42	43	27	66	---	47	44	27	19	24	20	18
30	35	45	31	54	---	42	41	26	19	22	47	18
31	30	---	36	50	---	39	---	25	---	26	34	---
TOTAL	1853	1101	1366	4736	1046	2077	1315	3146	832	1672	1682	970
MEAN	59.8	36.7	44.1	153	37.4	67.0	43.8	101	27.7	53.9	54.3	32.3
MAX	892	109	157	1410	124	470	266	997	87	710	214	222
MIN	15	22	27	27	29	31	27	25	19	18	20	18
CFSM	1.41	.87	1.04	3.62	.88	1.58	1.04	2.39	.66	1.27	1.28	.76
IN.	1.63	.97	1.20	4.16	.92	1.83	1.16	2.77	.73	1.47	1.48	.85

CAL YR 1977 TOTAL 12042.5 MEAN 33.0 MAX 892 MIN 6.9 CFSM .78 IN 10.59
WTR YR 1978 TOTAL 21796.0 MEAN 59.7 MAX 1410 MIN 15 CFSM 1.41 IN 19.17

02115900 SOUTH FORK MUDDY CREEK NEAR CLEMMONS, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
OCT												
27...	1500	105	167	47	--	--	--	--	--	--	--	--
NOV												
07...	1440	57	66	10	--	--	--	--	--	--	--	--
29...	1400	40	35	3.8	--	--	--	--	--	--	--	--
JAN												
26...	1540	1640	890	3940	65	80	84	88	90	91	95	98
APR												
05...	1600	33	18	1.6	--	--	--	--	--	--	--	--
26...	1045	316	790	674	--	--	--	--	--	--	--	--
26...	1545	385	1480	1540	--	--	--	--	--	--	--	--
27...	1440	122	261	86	--	--	--	--	--	--	--	--
MAY												
16...	1540	45	61	7.4	--	--	--	--	--	--	--	--
JUN												
09...	1245	95	538	138	--	--	--	--	--	--	--	--
JUL												
17...	1345	89	219	53	--	--	--	--	--	--	--	--
AUG												
14...	1120	31	80	6.7	--	--	--	--	--	--	--	--
SEP												
12...	1655	22	46	2.7	--	--	--	--	--	--	--	--

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.

LOCATION.--Lat 35°51'24", long 80°23'10", Davidson County, Hydrologic Unit 03040101, near left bank on downstream side of pier of bridge on U.S. Highway 64, 1.5 mi (2.4 km) south of Yadkin College, 6.2 mi (10.0 km) downstream from Reedy Creek, and 295 mi (475 km) upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--2,280 mi² (5,900 km²), approximately.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 822: Drainage area. WSP 852: 1935-37(m).

GAGE.--Water-stage recorder. Datum of gage is 638.65 ft (194.661 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to July 26, 1957 at site on left bank 80 ft (24 m) downstream at same datum.

REMARKS.--Water-discharge record good. Diurnal fluctuation and occasionally some regulation during low flow caused by small hydroelectric plant with little storage capacity 10 mi (16 km) upstream. Since August 1962, some regulation by W. Kerr Scott Reservoir. (See p. 352). Corps of Engineers stage radio-telemeter at station.

AVERAGE DISCHARGE.--50 years, 2,970 ft³/s (84.11 m³/s), 17.69 in/yr (449 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, 41,400 ft³/s (1,170 m³/s) Jan. 27, gage height, 24.83 ft (7.568 m); minimum, (result of regulation), 1,070 ft³/s (30.3 m³/s) Sept. 28, gage height, 1.03 ft (0.314 m); minimum daily, 1,220 ft³/s (34.6 m³/s) Oct. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1270	1960	3660	2520	4220	2660	4140	3370	2880	1660	2190	2310
2	2230	1820	3750	2450	3850	2680	3700	3200	2520	1770	1990	2180
3	2890	1820	3390	2340	3730	2850	3460	3230	2410	5260	2020	3560
4	2530	1900	3050	2270	3500	3030	3380	5610	2380	4840	2820	5680
5	1440	2410	3690	2160	3340	2890	3250	19600	2310	2830	4220	2910
6	1270	7740	7630	2190	3200	2710	3210	8980	2230	2230	5670	2160
7	1270	17300	5140	2290	2990	2770	3080	5900	2380	1990	5890	1900
8	1260	20800	4180	3960	2860	2960	3050	6140	2710	1840	9900	1780
9	1340	10700	3410	17800	3000	3110	2930	7550	5240	1960	8640	1690
10	2450	8590	2910	17900	2960	8260	2920	6410	4440	1920	6680	1630
11	1930	7680	2770	6710	2890	17400	2880	4850	3600	2820	3870	1610
12	1500	7420	2670	5680	2890	7450	2900	4160	2800	3020	3030	2350
13	1380	7170	2530	5260	2920	5600	2870	3910	2430	2040	4030	1900
14	1500	7120	2550	5050	2870	5830	2780	5120	2310	2070	4640	1820
15	1550	7270	3050	4500	2920	5820	2600	5420	2220	3720	3580	1840
16	1500	6900	3440	3600	2890	4780	2570	5250	2160	6980	3420	1710
17	1550	4660	3090	3610	2800	4190	2560	4360	2140	11200	3280	1690
18	1450	3710	3170	5630	2800	3700	2570	3930	2110	4520	2850	1610
19	1350	3290	3290	5110	2860	3530	2700	3610	2080	3560	2600	1590
20	1300	2880	3140	5710	2890	3280	2940	3350	2040	2670	2280	1480
21	1300	2700	2970	6530	2860	3180	3110	3200	2370	2150	2110	1540
22	1300	2640	2790	4950	2800	3100	2600	3030	2340	1980	1980	1570
23	1250	2940	2640	4070	2720	3030	2490	2960	2550	1900	1890	1690
24	1220	3230	2500	3380	2710	2980	2440	2900	2680	1910	1850	1930
25	1220	3160	2680	7890	2700	2960	2700	3110	2160	2010	1800	1760
26	10300	3210	2880	27000	2600	7790	6160	2960	2030	2030	1780	1620
27	16500	3210	2750	37600	2670	14500	9460	2750	2090	1900	2010	1540
28	4510	3010	2460	13100	2680	7820	6980	2620	2100	2020	1960	1500
29	3290	2950	2300	9800	---	7550	4880	2530	1920	2820	1810	1520
30	2680	2920	2310	8350	---	6440	3970	2780	1770	2260	1770	1470
31	2170	---	2570	5570	---	4370	---	2910	---	1880	1880	---
TOTAL	78700	163110	99360	234980	84120	159220	105280	145700	75400	91760	104440	59540
MEAN	2539	5437	3205	7580	3004	5136	3509	4700	2513	2960	3369	1985
MAX	16500	20800	7630	37600	4220	17400	9460	19600	5240	11200	9900	5680
MIN	1220	1820	2300	2160	2600	2660	2440	2530	1770	1660	1770	1470
(†)	+15	+5	-5	0	+4	-3	+3	-3	0	-1	-3	-22

CAL YR 1977 TOTAL 982296 MEAN 2691 MAX 22900 MIN 894 MEAN‡ 2691 CFSM‡ 1.18 IN‡ 16.02
WTR YR 1978 TOTAL 1401610 MEAN 3840 MAX 37600 MIN 1220 MEAN‡ 3839 CFSM‡ 1.68 IN‡ 22.80

† 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 September 1978.
WATER TEMPERATURES: October 1943 to September 1944, October 1950 to September 1951, October 1955 to September 1967, October 1970 to September 1978.
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 Mar. 4; minimum daily, 37 micromhos Nov. 15, 16.
WATER TEMPERATURES: Maximum daily, 27.0°C June 28, 29, 30, July 2, 11, 23, 24, 25, 27, Aug. 2; minimum daily observed, 1.0°C Dec. 29, 30.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,510 mg/L Jan. 26; minimum daily mean, 15 mg/L Oct. 21, Feb. 26, Mar. 1.
SEDIMENT LOADS: Maximum daily, 110,000 tons (99,800 tonnes) Jan. 26; minimum daily, 53 tons (48 tonnes) Oct. 21.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT 25...	1500	1360	80	6.7	14.5	9	9.8	19	0	5.0
NOV 07...	1130	17600	39	6.3	15.0	240	8.1	10	2	2.4
APR 11...	1300	2890	55	7.0	--	20	--	14	0	3.8
JUL 07...	1000	2020	62	6.0	23.5	110	8.4	15	0	3.7

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT 25...	1.5	7.2	42	.7	2.5	30	0	25	9.6	4.6
NOV 07...	.9	1.8	23	.3	2.9	10	0	8	8.0	5.2
APR 11...	1.1	4.2	37	.5	1.4	21	0	17	3.4	2.7
JUL 07...	1.3	4.8	38	.5	2.2	18	0	15	29	4.1

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT 25...	5.3	.1	12	50	57	.07	184	.44	.25	.69
NOV 07...	2.2	.0	6.2	32	27	.04	1520	.45	.03	.48
APR 11...	3.4	.1	11	45	40	.06	351	.33	.02	.35
JUL 07...	3.3	.1	13	59	45	.08	322	.73	.02	.75

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT 25...	.75	--	.23	.22	.28	.36	.25	.59	.12	.47
NOV 07...	.46	--	.08	.02	.03	1.8	.32	1.9	1.6	.34
APR 11...	.36	7.1	.27	.25	.32	.22	.11	.49	.13	.36
JUL 07...	.78	--	.04	.09	.12	.96	.10	1.0	.81	.19

DATE	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)
OCT 25...	--	1.3	5.7	.30	--	.24	.23	.18	.55
NOV 07...	--	2.4	11	.63	--	.03	.07	.01	.03
APR 11...	800	.84	3.7	.12	.37	.07	.08	.06	.18
JUL 07...	--	1.8	7.7	.25	.77	.11	.11	.09	.28

DATE	PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)
OCT 25...	--	<10	<10	0	--	7	4	3
NOV 07...	--	10	10	0	--	32	29	3
APR 11...	80	<10	<10	0	<10	8	7	1
JUL 07...	--	20	20	0	--	6	4	2

DATE	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)
OCT 25...	--	1700	--	220	--	12	10	2	--
NOV 07...	--	40000	--	150	--	25	20	5	--
APR 11...	<10	2700	2700	40	750	5	4	1	140
JUL 07...	--	4800	4700	120	--	19	0	22	--

DATE	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT 25...	10	10	0	--	6.8	.4	--	.00
NOV 07...	100	90	10	--	8.0	1.1	--	.00
APR 11...	20	20	0	7	2.7	2.0	1.0	.00
JUL 07...	20	20	0	--	5.3	2.4	--	.00

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPEMBER 1978

PHYTOPLANKTON

DATE	OCT 25,77	APR 11,78
TIME	1500	1300
TOTAL CELLS/ML	5800	350
DIVERSITY: DIVISION	0.9	0.0
.CLASS	0.9	0.0
..ORDER	1.9	0.0
...FAMILY	2.3	1.8
....GENUS	2.8	1.8

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)				
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...OOCYSTACEAE				
....QUADRIGULA	*	0	--	-
....SELENASTRUM	42	1	--	-
....TETRAEDRON	*	0	--	-
...SCENEDESMACEAE				
....SCENEDESMUS	150	3	--	-
..TETRASPORALES				
...PALMELLACEAE				
....GLOEOCYSTIS	34	1	--	-
..VOLVOCALES				
...CHLAMYDOMONADACEAE				
....CHLAMYDOMONAS	42	1	--	-
..ZYGNEMATALES				
...DESMIDIACEAE				
....CLOSTERIUM	*	0	--	-
....COSMARIUM	*	0	--	-
CHRYSOPHYTA				
.BACILLARIOPHYCEAE				
..CENTRALES				
...COSCINODISCACEAE				
....CYCLOTELLA	59	1	--	-
....MELOSIRA	190	3	--	-
..PENNALES				
...CYMBELLACEAE				
....CYMBELLA	*	0	14	4
...FRAGILARIACEAE				
....SYNEDRA	*	0	160#	46
...GOMPHONEMATACEAE				
....GOMPHONEMA	--	-	14	4
...NAVICULACEAE				
....AMPHIPLEURA	130	2	--	-
....GYROSIGMA	*	0	--	-
....NAVICULA	--	-	54#	15
...NITZSCHIACEAE				
....NITZSCHIA	85	1	110#	31
.CHRYSOPHYCEAE				
..CHRYSOMONADALES				
...OCHROMONADACEAE				
....DINOBRYON	*	0	--	-

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	OCT 25,77		APR 11,78	
TIME	1500		1300	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CYANOPHYTA (BLUE-GREEN ALGAE)				
.CYANOPHYCEAE				
..CHROCCOCCALES				
...CHROCCOCCACEAE				
....ANACYSTIS	170	3	--	-
..HORMOGONALES				
...NOSTOCACEAE				
....ANABAENA	560	10	--	-
....APHANIZOMENON	940#	16	--	-
...OSCILLATORIACEAE				
....OSCILLATORIA	430	7	--	-
...RIVULARIACEAE				
....RAPHIDIOPSIS	*	0	--	-
..CHROCCOCCALES				
...CHROCCOCCACEAE				
....GOMPHOSPHAERIA	2700#	47	--	-
EUGLENOPHYTA (EUGLENOIDS)				
.CRYPTOPHYCEAE				
..CRYPTOMONIDALES				
...CRYPTOCHRYSIDACEAE				
....RHODOMONAS	34	1	--	-
...CRYPTOMONODACEAE				
....CRYPTOMONAS	34	1	--	-
.EUGLENOPHYCEAE				
..EUGLENALES				
...EUGLENACEAE				
....EUGLENA	*	0	--	-
....TRACHELOMONAS	*	0	--	-

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

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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	40	137	50	265	151	1490	36	245	127	1450	15	108
2	430	2800	45	221	140	1420	30	198	121	1260	20	145
3	342	2670	40	197	110	1010	19	120	101	1020	20	154
4	160	1090	73	374	66	544	21	129	80	756	43	352
5	115	447	89	701	227	2840	17	99	90	812	50	390
6	70	240	930	23900	589	12100	17	101	52	449	26	190
7	31	106	1240	57900	303	4210	25	155	50	404	25	187
8	35	119	570	32000	188	2120	299	4460	45	347	25	200
9	53	192	440	12700	120	1100	1500	81300	68	551	26	218
10	95	628	378	8770	80	629	825	44800	42	336	876	28800
11	83	433	305	6320	58	434	480	8700	52	406	921	44800
12	60	243	315	6310	42	303	356	5460	55	429	330	6640
13	50	186	215	4160	57	389	255	3620	50	394	205	3100
14	52	211	245	4710	40	275	191	2600	39	302	155	2440
15	35	146	208	4080	85	700	180	2190	41	323	158	2480
16	30	121	190	3540	110	1020	125	1220	35	273	182	2350
17	40	167	171	2150	82	684	224	2560	30	227	111	1260
18	40	157	135	1350	72	616	320	4860	30	227	80	799
19	26	95	95	844	85	755	190	2620	39	301	79	753
20	20	70	78	607	65	551	217	3350	35	273	54	478
21	15	53	68	496	65	521	205	3610	32	247	45	386
22	16	56	61	435	60	452	190	2540	30	227	60	502
23	16	54	85	675	32	228	180	1980	20	147	70	573
24	17	56	80	698	30	202	105	958	16	117	62	499
25	20	66	73	623	37	268	611	20100	20	146	40	320
26	1270	49100	80	693	70	544	1510	110000	15	105	720	20900
27	927	45900	90	780	43	319	660	67000	21	151	718	29300
28	380	4630	60	488	35	232	510	18000	20	145	539	11400
29	168	1490	55	438	22	137	590	15600	---	---	518	10600
30	95	687	63	497	23	143	348	7850	---	---	240	4170
31	65	381	---	---	23	160	210	3160	---	---	130	1530
TOTAL	---	112731	---	176922	---	36396	---	419585	---	11825	---	176024
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	118	1320	125	1140	100	778	50	224	115	680	128	798
2	105	1050	65	562	90	612	46	220	130	698	128	753
3	80	747	92	802	58	377	963	22300	141	769	291	3950
4	70	639	239	6830	50	321	1490	20100	215	1640	820	13300
5	70	614	1250	66900	51	318	620	4740	450	5130	370	2910
6	75	650	480	11600	50	301	218	1310	642	9830	128	746
7	70	582	274	4360	50	321	125	672	690	11000	78	400
8	65	535	302	5010	125	915	85	422	978	25900	52	250
9	50	396	271	5520	489	7490	81	429	908	21000	40	183
10	50	394	190	3290	470	5630	70	363	660	11900	40	176
11	38	295	156	2040	220	2140	275	2870	300	3130	52	226
12	40	313	120	1350	101	764	460	3750	189	1550	95	603
13	40	310	108	1140	100	656	260	1430	341	4200	80	410
14	48	360	226	3120	92	574	170	950	480	6010	78	383
15	38	267	380	5560	62	372	328	3510	329	3180	78	388
16	40	278	360	5100	53	309	1020	25000	245	2260	72	332
17	40	276	251	2950	60	347	963	30400	185	1640	48	219
18	32	222	120	1270	60	342	640	7810	170	1310	40	174
19	42	306	105	1020	55	309	270	2600	115	807	41	176
20	65	516	91	823	52	286	160	1150	90	554	36	144
21	125	1050	65	562	80	512	100	580	68	387	55	229
22	49	344	95	777	88	556	75	401	68	364	60	254
23	36	242	51	408	148	1020	68	349	60	306	48	219
24	50	329	50	391	295	2130	68	351	58	290	67	349
25	51	372	60	504	140	816	100	543	50	243	51	242
26	463	9250	65	519	111	608	75	411	50	240	50	219
27	413	10800	70	520	85	480	70	359	106	575	46	191
28	260	4900	48	340	95	539	100	545	140	741	50	202
29	140	1840	70	478	85	441	165	1260	102	498	39	160
30	100	1070	88	661	65	311	139	848	80	382	40	159
31	---	---	89	699	---	---	95	482	80	406	---	---
TOTAL	---	40267	---	136246	---	30575	---	136379	---	117620	---	28745

TOTAL LOAD FOR YEAR: 1423315 TONS.

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	68	79	56	52	63	53	47	60	65	64	94
2	106	70	61	57	68	63	54	48	69	63	63	75
3	71	73	61	54	58	61	54	46	65	56	104	73
4	62	78	59	54	59	113	55	51	64	48	90	52
5	69	82	64	57	52	69	55	46	61	46	64	55
6	86	82	57	65	58	66	58	48	60	48	49	61
7	81	44	55	69	57	61	58	45	62	55	47	70
8	84	49	56	65	58	61	61	46	63	58	50	75
9	81	44	56	54	63	62	60	49	66	57	49	87
10	73	42	59	53	62	82	58	47	58	57	50	86
11	63	42	62	50	59	55	49	47	55	56	57	77
12	65	43	62	50	58	55	51	47	53	56	55	70
13	70	43	64	60	57	49	59	56	58	58	57	82
14	80	39	63	73	55	47	55	54	62	62	59	75
15	81	37	65	65	59	51	58	50	66	64	56	79
16	78	37	60	58	59	55	57	47	69	65	60	80
17	72	45	59	57	62	54	55	51	66	46	62	80
18	68	51	70	63	62	54	53	54	66	47	65	74
19	71	56	60	65	61	57	50	59	64	48	64	86
20	76	56	59	73	61	56	57	58	57	53	75	77
21	76	57	58	80	59	55	56	58	61	64	73	70
22	78	56	60	66	59	56	58	56	61	66	70	79
23	79	62	62	60	63	60	55	54	62	66	67	88
24	76	58	63	60	63	60	55	59	55	62	86	77
25	75	58	63	74	63	60	50	60	61	62	77	67
26	65	58	56	48	67	61	60	60	60	68	73	76
27	55	51	53	40	60	50	51	61	59	62	76	83
28	58	51	63	54	57	48	49	62	55	71	73	85
29	63	58	55	43	---	42	47	60	63	58	73	84
30	65	57	55	41	---	46	45	57	63	66	78	79
31	65	---	59	43	---	50	---	56	---	61	75	---
MEAN	73	55	61	58	60	59	55	53	61	59	66	77

WTR YR 1978 MEAN 61 MAX 113 MIN 37

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	14.0	8.0	4.0	2.0		---	15.0	21.0	26.0	26.0	26.0
2	21.0	14.0	8.0	3.0	2.0		---	14.0	24.0	27.0	27.0	25.0
3	20.0	15.0	7.0	2.0	---		---	15.0	23.0	26.0	26.0	24.0
4	18.0	17.0	8.0	2.0	---		---	16.0	22.0	24.0	25.0	23.0
5	18.0	18.0	9.0	2.0	---		---	14.0	21.0	25.0	24.0	23.0
6	18.0	18.0	9.0	3.0	---		---	15.0	24.0	24.0	26.0	23.0
7	16.0	18.0	6.0	4.0	---		---	16.0	24.0	23.0	25.0	26.0
8	17.0	17.0	5.0	5.0	---		---	15.0	23.0	24.0	24.0	25.0
9	18.0	16.0	5.0	5.0	---		---	15.0	23.0	25.0	24.0	25.0
10	16.0	17.0	5.0	3.0	---		---	16.0	22.0	26.0	25.0	26.0
11	14.0	15.0	4.0	3.0	---		---	16.0	24.0	27.0	25.0	24.0
12	15.0	14.0	4.0	2.0	---		---	18.0	25.0	24.0	25.0	24.0
13	14.0	11.0	4.0	3.0	---		17.0	18.0	25.0	24.0	25.0	24.0
14	12.0	10.0	4.0	3.0	---		16.0	17.0	24.0	24.0	24.0	24.0
15	11.0	11.0	5.0	3.0	---		16.0	15.0	22.0	24.0	24.0	23.0
16	12.0	11.0	5.0	2.0	---		16.0	14.0	22.0	23.0	25.0	22.0
17	11.0	13.0	7.0	2.0	---		16.0	15.0	23.0	22.0	25.0	22.0
18	10.0	12.0	7.0	3.0	---		15.0	15.0	23.0	22.0	25.0	23.0
19	11.0	11.0	7.0	3.0	---		14.0	18.0	24.0	23.0	25.0	26.0
20	11.0	10.0	7.0	3.0	---		14.0	19.0	25.0	24.0	26.0	25.0
21	11.0	9.0	6.0	3.0	---		13.0	20.0	25.0	25.0	25.0	24.0
22	11.0	10.0	5.0	2.0	---		12.0	20.0	24.0	26.0	24.0	25.0
23	12.0	10.0	4.0	3.0	---		13.0	20.0	24.0	27.0	23.0	24.0
24	12.0	10.0	4.0	2.0	---		15.0	21.0	24.0	27.0	26.0	22.0
25	13.0	11.0	6.0	4.0	---		16.0	20.0	24.0	27.0	25.0	21.0
26	15.0	10.0	4.0	3.0	---		14.0	20.0	26.0	26.0	25.0	20.0
27	14.0	8.0	3.0	3.0	---		11.0	20.0	26.0	27.0	25.0	21.0
28	14.0	7.0	3.0	3.0	---		13.0	22.0	27.0	26.0	25.0	22.0
29	16.0	6.0	1.0	3.0	---		14.0	21.0	27.0	25.0	25.0	20.0
30	16.0	7.0	1.0	3.0	---		15.0	22.0	27.0	25.0	26.0	20.0
31	14.0	---	4.0	3.0	---		---	22.0	---	26.0	26.0	---
MEAN	14.5	12.5	5.5	3.0	2.0		14.5	17.5	24.0	25.0	25.0	23.5

WTR YR 1978 MEAN 16.5 MAX 27.0 MIN 1.0

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 1977 to SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT									
24...	1525	1400	--	--	14.0	9.8	<10	--	10
NOV									
15...	1155	7250	--	--	11.0	11.2	13	.8	360
DEC									
15...	1030	2930	--	--	7.0	11.1	<10	2.9	850
FEB									
20...	1430	2870	--	--	5.0	11.0	<10	--	20
MAR									
23...	1630	2980	80	6.9	14.0	9.2	<10	1.9	<10
29...	1515	7360	50	6.6	14.0	9.1	16	1.6	200
APR									
26...	1455	6590	100	--	9.0	9.9	20	1.6	8500
MAY									
25...	1030	3110	140	7.5	17.0	9.6	12	.9	10
JUN									
27...	1200	2150	110	--	31.0	7.7	13	1.1	400

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. 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 273 of this report.

AVERAGE DISCHARGE.--10 years, 1.13 ft³/s (0.0320 m³/s), 14.61 in/yr (371 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 365 ft³/s (10.3 m³/s) May 30, 1975 (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 (gage height, 0.27 ft or 0.082 m); minimum daily, 0.09 ft³/s (0.003 m³/s) July 25, 31, 1977, Aug. 1, 6, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--A discharge of 0.08 ft³/s (0.002 m³/s) was measured on Sept. 23, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 40 ft³/s (1.1 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 26	0530	97	2.75	2.97	0.905	May 4	1800	*181	5.13	*4.99	1.521
Jan. 25	2400	118	3.34	3.61	1.100						

Minimum discharge, 0.20 ft³/s (0.006 m³/s) Oct. 3, gage height, 0.47 ft (0.143 m); minimum daily, 0.24 ft³/s (0.007 m³/s) Oct. 3-7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.39	.49	2.9	.69	1.0	.80	.95	.92	.53	.47	.43	.34
2	.35	.47	1.5	.63	1.0	.76	.92	.82	.50	.47	.40	.39
3	.24	.49	1.1	.59	.96	.99	.90	.75	.59	.50	.51	1.2
4	.24	.47	.97	.57	.90	.91	.83	37	.59	.42	1.4	.47
5	.24	2.3	3.1	.58	.89	.88	.79	7.8	.51	.39	1.4	.39
6	.24	2.8	2.2	.68	.87	.97	.78	2.1	.50	.38	2.8	.37
7	.24	1.7	1.2	.65	.79	.96	.77	1.7	.85	.37	1.6	.35
8	.26	1.0	.99	3.3	.78	.95	.75	3.2	2.0	.35	.82	.33
9	.39	.82	.85	5.2	.82	1.1	.73	2.4	3.1	.33	.64	.31
10	.29	.69	.80	1.7	.80	11	.74	1.6	1.2	.32	.60	.34
11	.30	.59	.75	1.2	.77	3.3	.75	1.3	.79	.36	.56	.34
12	.30	.53	.72	.98	.77	1.9	.73	1.2	.68	.32	.51	.31
13	.50	.50	.75	2.3	.80	1.5	.73	1.4	.60	.43	.52	.31
14	.45	.48	1.0	3.0	.81	1.5	.68	1.2	.55	.62	.53	.32
15	.37	.47	.90	1.9	.78	1.3	.68	1.1	.54	.61	.57	.37
16	.42	.47	.85	1.6	.77	1.1	.68	1.0	.53	4.0	.58	.43
17	.34	.54	.80	3.7	.77	.97	.68	.94	.51	.74	.42	.41
18	.29	.46	.95	2.4	.76	.91	.68	.89	.49	.55	.39	.38
19	.29	.44	.85	2.6	.83	.86	.90	.85	.48	.48	.38	.38
20	.28	.43	.75	4.9	.78	.84	.70	.79	.47	.45	.36	.43
21	.28	.42	.70	2.6	.77	.83	.68	.76	.49	.41	.34	.43
22	.28	.55	.70	1.6	.73	.79	.66	.72	.50	.40	.34	.43
23	.28	1.2	.70	1.2	.72	.78	.66	.69	.48	.39	.33	.51
24	.28	.77	.70	1.1	.72	.78	.66	.66	.46	1.8	.32	.42
25	.29	.79	.85	24	.72	1.1	1.0	.61	.44	1.0	.31	.42
26	20	.73	.70	19	.69	9.4	3.3	.59	.45	.66	.32	.38
27	1.9	.63	.64	2.9	.69	2.5	2.2	.57	.42	.52	.31	.36
28	1.0	1.2	.62	1.8	.77	1.6	1.3	.59	.38	.63	.30	.35
29	.73	1.3	.58	1.4	---	1.3	1.0	.64	.36	.47	.29	.25
30	.60	2.5	.71	1.2	---	1.1	.98	.58	.49	.43	.41	.26
31	.53	---	.76	1.1	---	1.0	---	.56	---	.47	.39	---
TOTAL	32.59	26.23	31.59	97.07	22.46	54.68	27.81	75.93	20.48	19.74	19.08	11.98
MEAN	1.05	.87	1.02	3.13	.80	1.76	.93	2.45	.68	.64	.62	.40
MAX	20	2.8	3.1	24	1.0	11	3.3	37	3.1	4.0	2.8	1.2
MIN	.24	.42	.58	.57	.69	.76	.66	.56	.36	.32	.29	.25
CFSM	1.00	.83	.97	2.98	.76	1.68	.89	2.33	.65	.61	.59	.38
IN.	1.15	.93	1.12	3.44	.79	1.94	.98	2.69	.72	.70	.68	.42

CAL YR 1977 TOTAL 290.99 MEAN .80 MAX 24 MIN .09 CFSM .76 IN 10.30
WTR YR 1978 TOTAL 439.64 MEAN 1.20 MAX 37 MIN .24 CFSM 1.14 IN 15.56

02117030 HUMPY CREEK NEAR FORK, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
JAN 26...	1430	7.5	82	1.7	35	58	70	79	89	96	98	100
APR 26...	0950	4.7	100	1.3	--	--	--	--	--	--	--	--
MAY 05...	1230	5.8	107	1.7	--	--	--	--	--	--	--	--
AUG 08...	1330	.84	15	.03	--	--	--	--	--	--	--	--

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) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those above 1,000 ft³/s, which are fair. The city of Statesville diverted an average of 7.8 ft³/s (0.22 m³/s) for water supply and waste-treatment dilution. The Alexander Water Corporation withdraws an average of 1.4 ft³/s (0.040 m³/s) for water supply. Suspended-sediment records for the current year are published on page 275 of this report.

AVERAGE DISCHARGE.--40 years, 340 ft³/s (9.629 m³/s), 14.75 in/yr (375 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,800 ft³/s (334 m³/s) Oct. 17, 1964, gage height, 18.23 ft (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)
Nov. 8	0100	*7960	225	*15.78	4.810	Jan. 27	0730	5540	157	13.61	4.148
Jan. 10	0800	4720	134	12.58	3.834	Sept. 4	0130	2980	84.4	9.97	3.039

Minimum discharge, 127 ft³/s (3.60 m³/s) Oct. 4, 5, 25, gage height, 2.01 ft (0.613 m); minimum daily, 127 ft³/s (3.60 m³/s) Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	144	232	488	334	473	304	449	346	240	183	214	166
2	159	221	476	312	449	299	416	331	230	187	230	187
3	164	217	392	292	440	322	393	307	220	374	204	1560
4	137	222	355	280	410	349	374	1080	222	365	365	1950
5	127	280	629	278	402	334	365	1540	220	227	290	458
6	133	1570	1520	279	396	331	352	780	204	192	358	299
7	131	4450	754	296	349	346	343	517	212	187	571	248
8	129	5970	515	823	362	349	334	754	562	192	571	217
9	150	1860	430	2800	349	362	331	1100	968	180	393	202
10	220	683	385	4160	346	1510	322	851	604	171	380	195
11	178	521	350	1230	340	2360	313	562	358	168	281	227
12	148	443	337	624	340	1200	325	464	296	175	257	240
13	153	384	316	580	325	655	319	455	268	166	257	209
14	164	358	326	742	331	546	301	504	246	166	358	190
15	155	329	415	632	331	658	290	437	235	304	287	202
16	157	307	392	508	319	530	284	419	230	770	254	195
17	171	311	351	519	316	458	281	393	225	641	230	187
18	153	325	372	840	313	419	287	365	220	307	238	178
19	144	288	399	649	322	396	301	343	217	227	204	168
20	140	266	363	943	328	384	313	331	204	202	204	162
21	137	267	354	1150	307	362	290	304	207	187	207	164
22	135	262	331	713	307	355	273	290	243	175	180	164
23	135	318	316	564	299	343	268	284	268	173	173	199
24	140	342	306	479	290	337	265	279	230	175	166	225
25	135	312	332	1520	290	349	349	281	204	222	166	190
26	1970	353	352	3800	288	1490	968	270	195	217	157	171
27	1670	336	315	4860	283	2250	689	257	192	183	157	162
28	482	320	297	1700	279	1060	479	251	192	192	171	168
29	336	335	280	729	---	648	390	254	178	248	157	157
30	280	345	289	585	---	530	355	251	168	204	153	146
31	254	---	328	517	---	467	---	243	---	187	157	---
TOTAL	9731	22427	13065	33738	9584	20303	11019	14843	8258	7547	7990	9186
MEAN	282	748	421	1088	342	655	367	479	275	243	258	306
MAX	1970	5970	1520	4860	473	2360	968	1540	968	770	571	1950
MIN	127	217	280	278	279	299	265	243	168	166	153	146
CFSM	.90	2.39	1.35	3.48	1.09	2.09	1.17	1.53	.88	.78	.82	.98
IN.	1.04	2.67	1.55	4.01	1.14	2.41	1.31	1.76	.98	.90	.95	1.09

CAL YR 1977 TOTAL 116529 MEAN 319 MAX 5970 MIN 68 CFSM 1.02 IN 13.85
WTR YR 1978 TOTAL 166691 MEAN 457 MAX 5970 MIN 127 CFSM 1.46 IN 19.81

02118000 SOUTH YADKIN RIVER NEAR MOCKSVILLE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
OCT							
27...	1100	2040	309	1700	--	--	--
NOV							
07...	1245	3750	580	5870	--	--	--
JAN							
26...	1110	3710	431	4320	65	70	81
APR							
25...	1100	289	14	11	--	--	--
26...	0905	1010	351	957	--	--	--
MAY							
05...	0930	1700	527	2420	--	--	--
05...	1100	1660	481	2160	--	--	--
11...	1330	556	102	153	--	--	--
JUN							
09...	1245	1000	490	1320	--	--	--
26...	1100	200	52	28	--	--	--
AUG							
08...	1145	592	259	414	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT						
27...	--	--	--	--	--	--
NOV						
07...	--	--	--	--	--	73
JAN						
26...	83	85	88	92	97	--
APR						
25...	--	--	--	--	--	--
26...	--	--	--	--	--	--
MAY						
05...	--	--	--	--	--	--
05...	--	--	--	--	--	--
11...	--	--	--	--	--	--
JUN						
09...	--	--	--	--	--	--
26...	--	--	--	--	--	--
AUG						
08...	--	--	--	--	--	--

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) National Geodetic Vertical Datum of 1929. 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 277 of this report.

AVERAGE DISCHARGE.--28 years, 205 ft³/s (5.806 m³/s), 18.20 in/yr (462 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. 26	1000	2670	75.6	10.44	3.182	Jan. 26	1000	*6120	173	*16.75	5.105
Nov. 5	2400	3610	102	12.42	3.786	Mar. 10	1630	2320	65.7	9.49	2.893
Nov. 7	0400	5240	148	15.40	4.694	Sept. 3	1300	2340	66.3	9.54	2.908
Jan. 9	0700	5240	148	15.40	4.694						

Minimum discharge, 86 ft³/s (2.44 m³/s) Oct. 24, gage height, 0.93 ft (0.283 m); minimum daily, 87 ft³/s (2.46 m³/s) Oct. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	150	313	188	303	214	274	236	176	167	123	155
2	216	147	255	177	303	211	262	221	170	190	119	118
3	129	149	220	165	289	236	253	207	170	247	126	981
4	100	170	213	159	272	225	251	761	173	168	187	309
5	95	1100	633	155	268	213	247	941	162	147	260	192
6	93	3620	635	162	262	221	238	426	159	149	214	148
7	90	3740	350	164	240	234	236	323	195	149	521	132
8	93	819	276	1080	255	234	227	528	371	142	371	124
9	158	479	255	2980	243	242	225	577	719	140	229	121
10	150	373	229	609	242	1400	221	393	289	134	211	118
11	111	313	211	369	234	832	223	311	220	179	164	172
12	102	289	202	299	231	456	227	277	202	156	171	138
13	101	272	199	299	231	352	216	331	188	142	367	126
14	115	247	223	315	231	402	207	317	174	268	323	159
15	105	229	303	277	227	406	202	276	171	285	293	137
16	106	216	240	251	227	333	200	274	168	961	232	132
17	108	232	225	340	225	301	202	256	167	313	181	124
18	96	214	258	424	227	279	207	240	162	185	153	118
19	95	195	256	356	229	272	223	229	158	156	143	114
20	92	187	234	460	221	264	218	218	173	144	137	111
21	89	184	227	453	220	258	202	213	197	134	129	114
22	88	188	206	319	220	251	195	202	242	128	123	113
23	89	245	192	277	206	243	192	202	213	125	120	224
24	87	229	188	264	213	240	192	249	170	121	117	160
25	88	214	238	1310	209	289	264	223	159	124	114	144
26	1490	242	206	4000	207	1340	598	200	156	120	120	127
27	440	200	185	734	202	756	469	192	155	120	131	120
28	255	193	179	483	207	446	319	188	144	234	119	117
29	199	195	177	393	---	356	260	193	140	161	114	111
30	173	195	179	342	---	311	243	188	144	129	110	109
31	161	---	193	323	---	287	---	184	---	124	118	---
TOTAL	5415	15226	7900	18127	6644	12104	7493	9576	6087	5942	5840	5068
MEAN	175	508	255	585	237	390	250	309	203	192	188	169
MAX	1490	3740	635	4000	303	1400	598	941	719	961	521	981
MIN	87	147	177	155	202	211	192	184	140	120	110	109
CFSM	1.14	3.32	1.67	3.82	1.55	2.55	1.63	2.02	1.33	1.26	1.23	1.11
IN.	1.32	3.70	1.92	4.41	1.62	2.94	1.82	2.33	1.48	1.44	1.42	1.23

CAL YR 1977 TOTAL 73818 MEAN 202 MAX 3740 MIN 45 CFSM 1.32 IN 17.95
WTR YR 1978 TOTAL 105422 MEAN 289 MAX 4000 MIN 87 CFSM 1.89 IN 25.63

02118500 HUNTING CREEK NEAR HARMONY, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
26...	0957	2650	1020	7300	64
31...	1412	158	24	10	--
NOV					
06...	1250	3700	1050	10500	44
MAR					
20...	1405	271	53	39	--
APR					
21...	0910	209	11	6.2	--
26...	0810	693	364	681	--
MAY					
04...	1112	262	165	117	--
04...	1717	1040	999	2810	--
08...	0930	623	369	621	--
30...	1130	185	25	12	--
JUN					
09...	1200	612	483	798	--
14...	1500	169	40	18	--
JUL					
07...	0859	147	50	20	--
17...	1130	284	199	153	--
AUG					
07...	0820	664	1090	1950	--
09...	1020	380	280	287	--
SEP					
14...	1135	169	84	38	--
29...	1510	110	19	5.6	--

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) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those below 1 ft³/s (0.03 m³/s), which are fair. Suspended-sediment records for the current year are published on page 279 of this report.

AVERAGE DISCHARGE.--24 years, 56.9 ft³/s (1.611 m³/s), 13.87 in/yr (352 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. 26	0530	8410	238	14.15	4.313	May 9	0200	2570	72.8	8.08	2.463
Jan. 26	0130	3680	104	9.66	2.944						

Minimum discharge, 0.06 ft³/s (0.002 m³/s) Aug. 30, Sept. 1, gage height, 0.65 ft (0.198 m); minimum daily 0.10 ft³/s (0.003 m³/s) Aug. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.51	10	198	40	46	21	28	27	5.1	2.6	.44	169
2	.65	8.5	88	32	47	19	24	22	4.4	34	.40	31
3	.51	8.2	50	25	45	132	20	17	5.8	6.4	.40	145
4	.45	8.1	35	20	37	193	19	146	7.0	10	.54	25
5	.40	20	130	18	34	117	18	261	4.7	6.6	1.0	8.9
6	.40	185	187	27	32	91	16	75	96	4.5	1.1	5.9
7	.44	71	64	50	25	71	15	43	50	3.3	1.2	3.8
8	.41	36	40	274	23	58	13	525	54	2.6	.97	3.0
9	.76	23	35	659	24	60	13	875	153	2.1	.68	2.2
10	.63	17	26	137	23	919	12	157	36	1.8	.77	1.7
11	.40	13	20	70	21	280	12	76	17	1.5	.61	1.6
12	.40	10	17	53	20	188	11	50	12	1.3	.55	1.4
13	.97	8.7	16	712	20	182	11	78	8.9	1.1	.57	1.1
14	1.2	8.0	19	739	23	128	11	81	7.1	1.1	120	.93
15	.93	7.5	33	246	20	94	9.7	60	6.2	2.0	16	.83
16	.71	7.2	24	115	18	69	9.0	51	5.5	17	5.3	.83
17	.59	7.5	23	269	19	52	8.7	34	4.9	9.9	2.8	.83
18	.50	7.8	64	248	18	42	8.6	25	4.5	4.8	1.7	.73
19	.50	6.7	71	418	19	37	15	21	4.1	3.0	1.1	.65
20	.43	6.1	64	1010	18	34	14	17	3.6	2.1	.89	.51
21	.40	5.9	81	290	17	30	9.9	14	30	1.4	.58	.51
22	.40	5.9	49	136	15	28	8.6	12	29	1.1	.44	.58
23	.40	19	35	95	14	25	7.9	11	23	.89	.37	6.1
24	.40	18	29	75	13	23	7.4	10	8.7	2.6	.30	1.8
25	.38	14	61	1470	13	30	143	9.6	37	4.4	.24	1.3
26	2200	22	46	1340	13	289	649	8.3	10	2.0	.20	.93
27	95	15	31	208	12	126	147	7.5	6.8	1.3	.20	.73
28	42	13	26	124	12	71	67	6.9	5.1	1.3	.20	.65
29	24	16	21	82	---	51	40	6.5	3.7	1.1	.12	.58
30	16	37	22	62	---	39	29	6.2	3.0	.84	.10	.58
31	12	---	60	54	---	32	---	5.7	---	.57	.20	---
TOTAL	2402.77	635.1	1655	9098	641	3531	1396.8	2738.7	646.1	135.20	159.97	418.67
MEAN	77.5	21.2	53.4	293	22.9	114	46.6	88.3	21.5	4.36	5.16	14.0
MAX	2200	185	198	1470	47	919	649	875	153	34	120	169
MIN	.38	5.9	16	18	12	19	7.4	5.7	3.0	.57	.10	.51
CFSM	1.39	.38	.96	5.26	.41	2.05	.84	1.59	.39	.08	.09	.25
IN.	1.60	.42	1.11	6.08	.43	2.36	.93	1.83	.43	.09	.11	.28

CAL YR 1977 TOTAL 19563.35 MEAN 53.6 MAX 3010 MIN .00 CFSM .96 IN 13.07
WTR YR 1978 TOTAL 23458.31 MEAN 64.3 MAX 2200 MIN .10 CFSM 1.15 IN 15.67

PEE DEE RIVER BASIN

02125000 BIG BEAR CREEK NEAR RICHFIELD, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
JAN				
09...	1230	598	105	170
25...	1244	2190	570	3370
MAR				
13...	1015	168	27	12
APR				
18...	1250	8.4	3	.07
MAY				
04...	1110	21	25	1.4
08...	1100	576	83	129
09...	1615	376	40	41
JUN				
01...	0900	5.1	5	.07
JUL				
12...	1145	1.2	45	.15
AUG				
18...	0900	1.7	27	.12

02126000 ROCKY RIVER NEAR NORWOOD, N. C.

LOCATION (REVISED).--Lat 35°08'54", long 80°10'33", Stanly County, Hydrologic Unit 03040105, on left bank 1,000 ft (300 m) downstream from Lanes Creek, 1.5 mi (2.4 km) upstream from bridge on Secondary Road 1935, 6 mi (10 km) southwest of Norwood, and 11.2 mi (18.0 km) upstream from mouth. Water-quality samples at medium and high stages collected at bridge on Secondary Road 1935, 1.5 mi (2.4 km) downstream.

DRAINAGE AREA.--1,370 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) National Geodetic Vertical Datum of 1929, (levels by Corps of Engineers).

REMARKS.--Water-discharge record good.

AVERAGE DISCHARGE.--49 years, 1,330 ft³/s (37.67 m³/s), 13.18 in/yr (335 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. 26	1500	*50100	1420	*28.81	8.781	Jan. 26	0800	38800	1100	24.28	7.401
Jan. 14	0300	29100	824	19.97	6.087	Mar. 10	1400	24800	702	17.90	5.456
Jan. 20	1200	30700	869	20.71	6.312	May 9	0900	23200	657	17.13	5.221

Minimum discharge, 97 ft³/s (2.75 m³/s) Sept. 22, 23, gage height, 0.49 ft (0.149 m); minimum daily, 100 ft³/s (2.83 m³/s) Sept. 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	136	488	3180	1050	1220	574	841	676	272	227	150	379
2	131	427	3500	837	1130	689	749	624	250	318	170	401
3	144	395	1730	691	1140	1590	663	560	253	464	225	717
4	151	381	1070	586	1000	5700	611	537	446	1830	239	638
5	140	505	1250	519	888	3200	589	3830	278	4390	461	346
6	125	5250	4440	540	837	2120	552	4070	1900	3920	420	217
7	124	5860	2500	1140	767	1670	519	1450	2080	541	1650	166
8	124	2950	1230	1790	695	1390	487	14200	3320	323	980	150
9	133	1370	892	11100	683	1340	454	17800	8520	251	505	141
10	140	896	790	6950	677	18100	426	8250	2910	208	741	129
11	157	681	648	2430	653	13800	419	2900	1150	187	598	303
12	152	541	560	1420	617	5360	414	1580	609	179	314	152
13	144	452	525	10800	583	5260	417	1270	458	177	243	136
14	163	396	524	22300	623	3620	430	2340	366	173	625	128
15	222	372	667	7950	635	2930	399	1750	316	1900	2810	120
16	187	359	698	3800	598	2130	356	1260	274	6200	713	113
17	151	353	628	3330	614	1540	331	981	250	6270	364	104
18	139	365	818	6480	656	1200	344	779	235	1000	264	102
19	140	354	1180	7860	629	1010	439	655	217	487	209	104
20	136	311	946	27400	610	911	584	568	206	350	191	103
21	132	283	995	11900	589	836	521	500	216	281	167	100
22	130	282	903	4390	566	788	403	448	4470	237	145	100
23	126	617	695	2810	521	722	348	411	1780	207	141	120
24	118	1260	596	2120	490	671	316	400	950	182	134	138
25	117	744	673	13000	474	709	504	440	2480	362	133	130
26	33100	809	1100	33900	456	4040	8380	375	803	534	128	135
27	22600	867	853	19500	422	6360	6310	330	478	262	120	119
28	3610	621	643	6360	423	3170	2320	299	326	231	111	120
29	1270	561	554	2630	---	1720	1160	277	263	221	124	109
30	786	775	515	1830	---	1220	814	268	225	197	135	108
31	583	---	755	1450	---	967	---	276	---	175	335	---
TOTAL	65511	29525	36058	218863	19196	95337	31100	70104	36301	32284	13545	5828
MEAN	2113	984	1163	7060	686	3075	1037	2261	1210	1041	437	194
MAX	33100	5860	4440	33900	1220	18100	8380	17800	8520	6270	2810	717
MIN	117	282	515	519	422	574	316	268	206	173	111	100
CFSM	1.54	.72	.85	5.15	.50	2.25	.76	1.65	.88	.76	.32	.14
IN.	1.78	.80	.98	5.94	.52	2.59	.84	1.90	.99	.88	.37	.16

CAL YR 1977 TOTAL 512606 MEAN 1404 MAX 33100 MIN 65 CFSM 1.03 IN 13.92
WTR YR 1978 TOTAL 653652 MEAN 1791 MAX 33900 MIN 100 CFSM 1.31 IN 17.75

02126000 ROCKY RIVER NEAR NORWOOD, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948, 1956-73, 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1955 to September 1967, October 1976 to current year.
WATER TEMPERATURES: October 1947 to September 1948, October 1955 to September 1967, October 1976 to current year.

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, 688 micromhos Oct. 4; minimum daily, 58 micromhos Jan. 27.
WATER TEMPERATURES: Maximum daily, 29.0°C July 24; minimum daily, 1.5°C Feb. 7.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
NOV												
18...	1615	365	305	7.4	12.0	35	15.1	44	0	10	4.5	37
FEB												
15...	0900	641	195	5.5	6.0	50	13.0	36	5	8.2	3.7	20
MAY												
04...	1400	517	220	7.8	16.0	40	9.6	38	0	8.8	3.9	25
05...	1000	4700	190	7.6	15.0	50	9.2	38	1	8.6	3.9	28
08...	1200	19400	90	--	16.0	190	9.8	32	14	7.5	3.1	5.8
08...	1900	17600	95	--	16.0	--	10.0	--	--	--	--	--
09...	0915	23200	90	--	16.0	200	10.2	26	14	6.2	2.6	5.0
09...	1630	16400	90	--	17.0	190	11.0	27	12	6.4	2.7	5.1
09...	1930	14400	90	--	15.5	--	10.0	--	--	--	--	--
10...	0800	10600	90	--	16.0	200	9.8	25	7	5.9	2.5	5.3

DATE	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
NOV												
18...	62	2.4	3.8	72	0	59	4.6	28	33	.2	17	179
FEB												
15...	53	1.5	2.4	37	0	30	187	20	18	.1	16	102
MAY												
04...	57	1.8	2.3	64	0	53	1.6	22	23	.1	16	134
05...	60	2.0	2.7	45	0	37	1.8	24	22	.1	16	147
08...	26	.5	3.6	21	--	17	--	13	8.4	.1	6.3	97
08...	--	--	--	19	--	16	--	--	--	--	--	--
09...	27	.4	2.6	15	--	12	--	12	6.4	.1	6.7	87
09...	27	.4	2.4	18	--	15	--	12	6.8	.1	7.7	82
09...	--	--	--	--	--	--	--	--	--	--	--	--
10...	29	.5	2.1	22	--	18	--	12	5.9	.1	8.9	86

02126000 ROCKY RIVER NEAR NORWOOD, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)
NOV												
18...	175	.24	176	--	--	--	1.2	--	.07	.09	--	.24
FEB												
15...	113	.14	177	1.2	.01	1.2	1.2	.45	.42	.54	.42	.32
MAY												
04...	138	.18	187	.93	.01	.94	.96	.04	.03	.04	.58	.61
05...	133	.20	1870	1.1	.02	1.1	1.1	.13	.09	.12	1.1	.67
08...	74	.13	5080	3.5	.04	3.5	3.4	.36	.28	.36	1.1	.92
08...	--	--	--	2.1	.03	2.1	2.1	.19	.16	.21	1.4	.83
09...	58	.12	5450	2.0	.05	2.0	2.0	.22	.11	.14	2.6	.89
09...	61	.11	3630	1.8	.04	1.8	1.8	.15	.10	.13	1.2	.71
09...	--	--	--	--	--	--	--	--	--	--	--	--
10...	59	.12	2460	1.1	.04	1.1	1.1	.09	.04	.05	1.0	.64

DATE	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)
NOV											
18...	.72	.41	.31	--	--	--	--	.30	--	.23	.71
FEB											
15...	.87	.13	.74	2.1	9.2	.24	.74	.19	.20	.16	.49
MAY											
04...	.62	.00	.64	1.6	6.9	.26	.80	.23	.21	.19	.58
05...	1.2	.44	.76	2.3	10	.51	1.6	.21	.19	.16	.49
08...	1.5	.30	1.2	5.0	22	.53	1.6	.12	.12	.08	.25
08...	1.6	.61	.99	3.7	16	.64	2.0	.09	.08	.06	.18
09...	2.8	1.8	1.0	4.8	21	.45	1.4	.09	.12	.05	.15
09...	1.3	.49	.81	3.1	14	.33	1.0	.07	.09	.04	.12
09...	--	--	--	--	--	--	--	--	--	--	--
10...	1.1	.42	.68	2.2	9.7	.24	.74	.08	.08	.04	.12

DATE	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)
NOV										
18...	40	33	7	10	2	8	710	230	9	4
FEB										
15...	<10	<8	2	7	3	4	750	160	30	12
MAY										
04...	30	14	16	10	2	8	800	230	8	0
05...	80	63	17	33	23	10	7000	290	30	16
08...	20	16	4	19	16	3	13000	270	31	23
08...	30	28	2	55	49	6	9000	290	84	60
09...	20	18	2	15	10	5	12000	250	41	29
09...	30	27	3	19	14	5	11000	220	64	48
09...	30	26	4	17	13	4	12000	330	59	36
10...	30	27	3	13	7	6	8500	210	24	12

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M
NOV										
18...	5	20	0	20	18	8.5	--	.10	.551	.472
FEB										
15...	18	20	0	20	10	7.4	--	.10	--	--
MAY										
04...	8	20	0	20	--	12	.6	.00	--	--
05...	14	60	50	10	--	8.0	.9	.00	--	--
08...	8	40	30	10	--	14	1.0	.00	--	--
08...	24	60	40	20	--	13	1.5	.00	--	--
09...	12	40	30	10	--	10	--	.00	--	--
09...	16	40	20	20	--	27	2.9	.00	--	--
09...	23	50	40	10	--	--	--	--	--	--
10...	12	40	30	10	--	10	1.8	.00	--	--

PEE DEE RIVER BASIN

02126000 ROCKY RIVER NEAR NORWOOD, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	MAY 5,78
TIME	1000
TOTAL CELLS/ML	2600
DIVERSITY: DIVISION	1.0
.CLASS	1.4
..ORDER	2.1
...FAMILY	2.6
....GENUS	2.9

ORGANISM	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)		
.CHLOROPHYCEAE		
..CHLOROCOCCALES		
...OOCYSTACEAE		
....ANKISTRODESMUS	290	11
CHRYSOPHYTA		
.BACILLARIOPHYCEAE		
..CENTRALES		
...COSCINODISCACEAE		
....CYCLOTELLA	290	11
....MELOSIRA	570#	22
..PENNALES		
...GOMPHONEMATACEAE		
....GOMPHONEMA	290	11
...NAVICULACEAE		
....NAVICULA	290	11
...NITZSCHIACEAE		
....NITZSCHIA	290	11
.CHRYSOPHYCEAE		
..CHRYSOMONADALES		
...OCHROMONADACEAE		
....DINOBRYON	290	11
EUGLENOPHYTA (EUGLENOIDS)		
.EUGLENOPHYCEAE		
..EUGLENALES		
...EUGLENACEAE		
....TRACHELOMONAS	290	11

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

02126000 ROCKY RIVER NEAR NORWOOD, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	387	170	190	145	126	196	148	145	258	245	360	441
2	480	190	128	151	152	224	152	146	295	241	390	326
3	549	211	132	147	161	120	157	157	345	317	290	230
4	688	253	147	159	154	137	156	188	385	115	230	232
5	549	278	144	186	155	126	162	174	270	131	265	288
6	518	131	139	220	147	124	190	92	93	67	300	185
7	436	113	118	220	142	123	213	102	176	75	320	171
8	434	114	132	195	153	138	233	112	92	87	100	169
9	480	131	161	97	179	153	242	87	92	116	110	200
10	545	168	181	95	194	101	242	83	92	120	130	251
11	605	187	187	112	207	82	228	99	130	140	128	340
12	600	218	182	128	209	88	206	117	125	150	161	336
13	529	240	172	110	205	92	228	136	144	160	210	399
14	436	262	187	81	174	96	264	136	158	160	247	408
15	438	240	232	86	180	112	269	122	182	155	155	399
16	529	207	227	95	212	122	276	115	230	145	101	430
17	512	227	216	103	216	135	271	146	278	64	123	434
18	441	276	221	108	208	147	261	158	326	80	160	499
19	420	294	179	106	210	149	228	173	346	92	220	567
20	425	294	167	77	207	147	236	191	346	115	155	602
21	409	305	165	77	184	145	266	203	317	160	155	653
22	409	293	186	87	180	152	262	215	143	210	336	595
23	496	273	175	97	207	176	255	208	144	250	368	522
24	556	243	192	108	235	214	266	179	159	290	404	507
25	583	163	184	106	259	203	276	213	110	308	365	640
26	76	178	154	60	259	194	119	253	130	290	359	525
27	85	166	145	58	245	129	87	255	175	285	401	514
28	99	144	141	73	222	83	103	267	149	265	462	554
29	140	144	140	95	---	97	124	279	168	255	509	494
30	163	158	145	100	---	122	141	286	206	335	536	420
31	183	---	146	107	---	147	---	268	---	355	538	---
MEAN	426	209	168	116	192	138	209	171	202	186	277	411

WTR YR 1978 MEAN 225 MAX 688 MIN 58

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	16.0	10.0	4.5	3.0	5.5	14.0	15.5	24.5	28.0	26.0	24.5
2	22.0	16.0	10.0	5.0	3.0	5.0	15.5	14.0	24.5	26.0	25.5	23.5
3	22.5	17.0	10.0	4.5	3.5	3.5	15.5	13.0	24.5	25.0	25.0	22.0
4	20.0	18.0	11.0	4.0	3.0	3.0	15.5	15.0	23.0	23.0	23.5	20.0
5	19.0	20.0	11.0	3.5	3.0	3.0	17.0	14.0	22.5	24.0	24.0	22.0
6	19.0	20.0	11.5	4.0	3.0	4.0	17.0	13.5	19.0	22.0	23.5	22.5
7	19.0	19.0	8.0	6.0	1.5	6.0	17.5	15.0	21.0	22.0	24.0	22.0
8	19.0	18.0	6.0	7.0	2.0	7.0	17.0	16.0	21.0	23.0	23.0	22.0
9	20.0	17.0	5.5	9.0	3.0	6.0	17.5	16.0	21.0	25.0	22.5	23.0
10	19.0	18.0	5.0	5.0	3.5	5.0	18.0	16.0	21.0	26.0	24.0	24.0
11	18.0	14.5	4.0	3.0	3.5	5.0	19.5	15.5	22.0	27.0	22.0	22.0
12	18.0	11.5	3.0	2.5	4.0	7.0	18.5	17.0	22.0	25.5	22.5	22.0
13	15.0	9.5	4.0	3.0	4.0	9.0	18.0	17.5	24.0	24.0	23.0	23.0
14	13.0	9.0	5.5	4.0	5.0	10.0	17.0	16.0	23.0	24.5	25.0	23.0
15	14.0	8.5	8.0	4.0	7.0	12.0	16.0	15.0	21.0	24.0	22.0	22.0
16	15.0	10.0	8.5	3.5	6.5	12.5	16.5	14.0	22.0	24.0	26.0	21.5
17	13.0	12.5	9.0	4.0	6.0	11.5	16.0	14.0	23.0	21.5	24.0	21.0
18	13.0	12.0	9.5	6.0	6.0	10.0	14.5	15.0	24.0	22.0	24.0	23.0
19	15.0	10.0	10.0	5.0	7.0	9.0	15.0	17.0	25.0	23.0	25.0	23.0
20	15.0	11.0	8.0	4.5	5.0	11.0	15.0	18.0	25.0	23.0	25.0	24.0
21	14.0	11.0	8.0	5.0	4.0	13.0	14.0	20.0	25.0	26.0	24.0	24.0
22	16.0	11.0	7.0	4.0	4.0	14.0	13.0	21.0	21.0	27.5	23.0	27.0
23	15.0	11.0	6.0	4.5	3.0	13.5	13.5	21.0	22.0	28.5	22.0	23.0
24	17.0	12.0	6.0	4.5	3.0	15.0	16.0	22.0	23.0	29.0	22.0	21.0
25	17.0	12.0	7.5	6.0	4.5	15.0	17.0	22.5	22.0	28.5	23.0	20.0
26	17.0	10.5	7.0	7.5	6.5	11.0	13.5	23.0	23.0	26.0	24.5	19.5
27	17.5	8.0	4.5	5.0	6.0	9.0	11.0	23.0	24.0	24.0	24.0	18.0
28	17.0	8.0	3.0	4.5	6.0	9.0	11.0	23.5	26.0	24.0	25.0	18.0
29	18.0	9.0	2.5	3.0	---	11.0	13.0	22.5	27.0	24.0	25.0	18.0
30	16.0	9.0	2.5	2.5	---	13.5	15.0	23.5	26.0	25.0	26.0	16.5
31	15.0	---	4.0	3.0	---	13.0	---	24.0	---	26.0	25.0	---
MEAN	17.0	13.0	7.0	4.5	4.5	9.0	15.5	18.0	23.0	25.0	24.0	22.0

WTR YR 1978 MEAN 15.0 MAX 29.0 MIN 1.5

02126000 ROCKY RIVER NEAR NORWOOD, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
18...	1615	365	11	11	100
DEC					
08...	1040	1220	87	287	96
JAN					
09...	1745	12400	405	13600	90
FEB					
15...	0900	641	28	48	35
MAR					
13...	1440	5380	197	2860	94
APR					
18...	1630	350	7	6.6	100
MAY					
04...	1400	517	12	17	100
05...	1000	4700	258	3270	84
08...	1200	19400	538	28200	87
09...	0915	23200	387	24200	90
09...	1630	16400	303	13400	89
09...	1930	14400	318	12400	92
10...	0800	10600	215	6150	84
SEP					
05...	1230	324	45	39	82

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER YEAR OCTOBER 1977 to SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT									
25...	1300	117	--	7.5	15.0	12.9	40	2.0	20
NOV									
17...	1030	354	--	7.6	17.0	8.5	16	.5	70
DEC									
14...	1300	523	--	7.0	11.0	8.9	15	1.3	20
JAN									
18...	1030	9510	--	6.5	8.0	11.9	26	3.8	2800
FEB									
14...	1430	757	--	7.5	5.0	11.5	16	1.1	10
MAR									
08...	1300	1360	--	7.2	7.0	9.8	14	1.8	130
APR									
20...	1030	600	--	7.2	17.0	9.1	20	2.1	330
MAY									
24...	1131	391	190	7.7	24.0	7.9	14	1.2	<10
JUN									
07...	1401	839	110	6.5	21.0	6.8	100	5.3	4900

02128000 LITTLE RIVER NEAR STAR, N. C.

LOCATION.--Lat 35°23'11", long 79°49'56", Montgomery County, Hydrologic Unit 03040104, on left bank 9 ft (3 m) downstream from bridge on Secondary Road 1340, 50 ft (15 m) upstream from Black Rock Branch, 0.2 mi (0.3 km) upstream from Norfolk Southern Railway bridge, 0.3 mi (0.5 km) downstream from West Fork Little River, and 3 mi (5 km) west of Star.

DRAINAGE AREA.--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) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Suspended-sediment records for the current year are published on page 287 of this report.

AVERAGE DISCHARGE.--24 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)
Oct. 26	2130	*5370	152	*11.44	3.487	Mar. 10	1200	2610	73.9	7.83	2.387
Jan. 26	0700	4180	118	9.97	3.039	May 9	1100	3280	92.9	8.80	2.682

Minimum discharge, 5.1 ft³/s (0.144 m³/s) Sept. 22, gage height, 1.19 ft (0.363 m); minimum daily, 5.3 ft³/s (0.150 m³/s) Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	26	54	79	96	80	81	90	47	28	14	7.3
2	8.7	24	81	66	95	86	78	84	44	30	16	20
3	7.8	24	52	59	100	138	74	77	44	29	19	24
4	12	25	41	54	93	326	74	175	49	32	24	85
5	10	125	44	51	86	195	74	655	46	27	24	28
6	8.7	965	283	58	84	139	72	167	43	23	187	16
7	8.0	192	90	95	80	116	71	109	108	21	71	12
8	7.6	85	58	163	76	101	69	535	132	19	57	10
9	9.2	58	50	1050	73	106	67	1700	220	19	46	9.0
10	9.4	45	48	257	73	1620	67	786	146	17	27	8.1
11	10	37	43	139	71	576	67	232	67	18	22	8.4
12	13	33	40	93	69	222	66	135	55	18	19	10
13	13	30	38	698	70	157	69	355	49	15	18	8.9
14	18	29	42	1300	73	139	71	452	43	15	16	8.1
15	26	28	73	476	72	143	65	186	39	21	31	7.4
16	21	28	71	177	70	117	60	154	36	48	24	7.3
17	14	28	56	366	76	103	58	122	34	56	18	6.8
18	11	30	118	788	75	95	63	101	34	31	14	6.2
19	10	28	143	614	73	91	76	89	33	21	12	5.7
20	9.4	27	84	1690	71	88	78	81	32	17	11	5.4
21	9.2	27	106	603	69	85	73	75	32	15	10	5.5
22	9.0	27	87	242	73	83	63	69	34	14	9.1	5.3
23	9.2	29	67	158	70	81	58	66	40	13	8.6	9.7
24	8.2	31	59	128	69	80	55	66	35	12	8.1	16
25	8.8	32	74	1140	68	84	172	68	31	206	7.7	12
26	2700	34	96	2860	65	229	1210	66	29	121	7.7	12
27	604	32	67	385	62	212	728	60	29	39	21	9.6
28	80	31	56	198	64	118	210	58	28	29	10	8.9
29	50	30	53	143	---	100	121	55	25	23	8.6	7.6
30	37	33	53	117	---	93	97	53	24	18	8.6	7.0
31	31	---	76	105	---	85	---	51	---	15	7.8	---
TOTAL	3780.5	2173	2303	14352	2116	5888	4187	6972	1608	1010	777.2	387.2
MEAN	122	72.4	74.3	463	75.6	190	140	225	53.6	32.6	25.1	12.9
MAX	2700	965	283	2860	100	1620	1210	1700	220	206	187	85
MIN	7.3	24	38	51	62	80	55	51	24	12	7.7	5.3
CFSM	1.16	.69	.71	4.41	.72	1.81	1.33	2.14	.51	.31	.24	.12
IN.	1.34	.77	.82	5.08	.75	2.09	1.48	2.47	.57	.36	.28	.14

CAL YR 1977 TOTAL 34422.5 MEAN 94.3 MAX 2760 MIN 1.8 CFSM .90 IN 12.20
WTR YR 1978 TOTAL 45553.9 MEAN 125 MAX 2860 MIN 5.3 CFSM 1.19 IN 16.14

PEE DEE RIVER BASIN

02128000 LITTLE RIVER NEAR STAR, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
JAN				
11...	1600	116	27	8.5
21...	1105	596	43	69
FEB				
13...	1645	72	7	1.4
MAR				
14...	1600	140	18	6.8
APR				
19...	1430	80	12	2.6
MAY				
08...	1230	772	134	279
08...	1450	807	136	296
JUN				
01...	1430	46	8	.99
AUG				
17...	1430	17	17	.78
SEP				
20...	1550	5.3	8	.11

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) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). August 1906 to January 1912 nonrecording gage at site 3.3 mi (5.3 km) upstream at different datum. September 1927 to Sept. 30, 1931, water-stage recorder at present site at datum 1.00 ft (0.305 m) higher.

REMARKS.--Water-discharge record good. Flow regulated since 1928 by Blewett Falls Lake and five other reservoirs upstream. (See p. 353).

AVERAGE DISCHARGE.--56 years (1906-11, 1927-78), 7,997 ft³/s (226.5 m³/s), 15.81 in/yr (402 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, 104,000 ft³/s (2,950 m³/s) Jan. 27, gage height, 15.73 ft (4.795 m); minimum, 190 ft³/s (5.38 m³/s) Sept. 30, gage height, 0.71 ft (0.216 m); minimum daily, 214 ft³/s (6.06 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	438	9350	10100	5520	13200	8780	11200	11600	8680	2890	5670	5310
2	1340	8480	10500	2180	14200	7730	11200	10800	8490	389	2750	611
3	5490	8540	12600	5160	13700	9830	11000	10100	2300	4840	7340	2060
4	4840	9110	11000	7870	10800	10100	10800	12500	4470	4610	9330	5070
5	5800	9330	11900	8680	11600	9390	10600	19200	5560	5060	6320	8950
6	5950	8910	11300	8080	10700	7610	10300	33800	6470	7780	5560	8680
7	2350	18200	13600	8700	11200	9490	10100	25800	8740	8800	10300	9180
8	636	24300	12400	3590	9470	11100	9730	31000	8690	5670	11200	6390
9	410	22700	10900	11000	8460	11300	9670	45900	13400	1660	11500	1920
10	5760	22700	10200	26800	8800	29000	9140	41100	17700	4850	10800	464
11	5110	15600	10100	19400	5980	43700	8420	25700	13000	2270	10500	3420
12	4540	11300	10100	17100	9410	26600	5930	16000	10000	4830	10500	5800
13	5560	11300	10000	16900	10400	19400	7130	15600	7850	4750	10400	5150
14	5920	11400	9940	53000	10000	18100	8820	15300	3210	7590	9500	4370
15	1900	11100	9940	39500	9840	15200	7740	11600	4230	2600	5210	6350
16	392	10900	9910	22300	9880	14700	1880	10400	5000	10400	9950	430
17	4470	10100	9830	17300	9880	12900	6160	11500	863	19700	10100	435
18	1490	9480	9880	23400	9740	12100	8770	10300	2640	12500	9180	4580
19	5330	9750	9980	27500	9260	11300	8740	10200	4870	10400	3640	4280
20	5640	9520	10100	54500	9370	11000	6070	10000	2970	10100	535	5110
21	5760	9510	10400	53300	9860	10900	8250	9710	5540	7360	5430	5250
22	681	9680	10600	32300	9660	9870	2460	8130	7410	310	4820	5490
23	344	9370	10100	18700	8860	9960	277	5800	6920	326	5310	934
24	5780	6150	9870	14400	8020	9720	4430	6530	6390	4620	5200	460
25	5720	6770	5920	21200	2680	9660	5880	8790	2220	5340	5190	5260
26	17500	8810	1060	80600	403	9740	16100	8880	6890	5660	602	2990
27	64900	9970	5580	100000	6240	14200	26200	7220	7700	7560	695	4530
28	33900	9440	8930	86500	9290	18800	18600	891	7050	5170	5210	5410
29	10200	10100	9040	41700	---	17000	13600	266	2680	2090	6030	5230
30	9480	10100	9360	24800	---	14200	12600	4710	2840	551	5020	214
31	9610	---	9960	14800	---	12600	---	6460	---	5260	5580	---
TOTAL	237241	341970	305100	866780	260903	435980	281797	445787	194773	175936	209372	124328
MEAN	7653	11400	9842	27960	9318	14060	9393	14380	6492	5675	6754	4144
MAX	64900	24300	13600	100000	14200	43700	26200	45900	17700	19700	11500	9180
MIN	344	6150	1060	2180	403	7610	277	266	863	310	535	214
(†)	+621	-353	-1189	+2232	-2166	+1995	-372	-167	-170	+264	-781	-219

CAL YR 1977 TOTAL 2865300 MEAN 7850 MAX 70300 MIN 277 MEAN‡ 7784 CFSM‡ 1.13 IN‡ 15.34
WTR YR 1978 TOTAL 3879967 MEAN 10630 MAX 100000 MIN 214 MEAN‡ 10625 CFSM‡ 1.55 IN‡ 21.04

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 140 micromhos May 25, 1967; minimum daily, 48 micromhos July 15, 1975.
WATER TEMPERATURES: Maximum daily, 33.0°C July 11, 1977; minimum daily, 0.0°C on many days in 1961-62.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 111 micromhos Oct. 13; minimum daily, 58 micromhos Jan. 25.
WATER TEMPERATURES: Maximum daily, 30.0°C July 29, Aug. 19, 20, 27; minimum daily, 4.5°C Jan. 29, 30, Feb. 2, 7, 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT										
25...	1000	8170	100	5.8	15.5	7	--	8.0	K8	47
NOV										
15...	1115	11000	85	6.2	12.0	35	--	11.0	32	K740
DEC										
05...	1400	11300	70	6.8	12.5	40	--	--	--	K240
JAN										
31...	1045	15200	65	6.4	2.0	85	--	13.6	--	--
FEB										
27...	1300	8590	70	6.5	4.0	120	--	12.6	--	--
MAR										
28...	1100	20400	80	6.5	8.0	50	--	11.8	K680	360
APR										
24...	1015	6460	75	6.8	15.0	40	--	8.0	K14	140
MAY										
10...	0800	43700	74	7.0	15.0	90	--	10.2	K3300	K6600
JUN										
13...	1300	8540	71	6.9	23.5	--	60	7.1	190	70
JUL										
24...	1400	8260	75	6.4	27.0	--	12	5.9	K280	K140
AUG										
08...	1445	10600	80	6.3	28.0	--	30	7.5	--	--
SEP										
05...	1200	9150	98	6.5	27.0	--	15	6.1	K18	K280

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

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)
OCT 25...	20	0	4.9	1.9	10	48	1.0	3.1	30	0
NOV 15...	19	0	4.7	1.8	7.4	41	.7	3.1	29	0
DEC 05...	21	5	5.0	2.1	6.4	36	.6	2.9	20	0
JAN 31...	18	5	4.1	1.8	4.5	33	.5	1.9	16	0
FEB 27...	18	3	4.1	1.8	4.7	33	.5	2.1	18	0
MAR 28...	19	0	4.8	1.8	6.6	40	.7	1.7	25	0
APR 24...	20	2	4.9	1.8	6.6	40	.6	1.8	22	0
MAY 10...	21	8	5.1	2.0	4.5	30	.4	1.8	16	0
JUN 13...	20	3	4.7	1.9	5.3	34	.5	2.3	20	0
JUL 24...	22	1	5.3	2.2	5.5	32	.5	2.5	26	0
AUG 08...	20	0	4.6	2.0	7.0	40	.7	2.4	28	0
SEP 05...	21	0	5.0	2.0	10	48	1.0	2.5	32	0

DATE	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)
OCT 25...	25	76	8.1	8.0	.1	10	77	61	.10	1700
NOV 15...	24	29	7.9	6.6	.1	11	67	57	.09	1990
DEC 05...	16	5.1	9.1	6.5	.1	10	76	52	.10	2320
JAN 31...	13	10	7.8	5.7	.1	10	63	44	.09	2590
FEB 27...	15	9.1	8.2	5.0	.0	9.3	50	44	.07	1160
MAR 28...	21	13	8.2	5.4	.1	11	64	52	.09	3530
APR 24...	18	5.6	7.6	5.9	.1	10	62	50	.08	1080
MAY 10...	13	2.6	6.9	4.1	.1	8.8	60	41	.08	7080
JUN 13...	16	4.0	5.8	5.4	.1	9.0	74	45	.10	1710
JUL 24...	21	17	5.9	5.0	.1	9.7	60	49	.08	1340
AUG 08...	23	22	6.0	5.5	.1	11	72	53	.10	2060
SEP 05...	26	16	9.3	8.3	.2	11	70	64	.10	1730

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)
OCT 25...	.62	.04	--	--	--	.34	--	--	.05	.03
NOV 15...	.60	.06	--	--	--	.31	--	--	.07	.04
DEC 05...	.64	.03	--	--	--	.13	--	--	.09	.05
JAN 31...	.58	.13	--	--	--	.73	--	--	.18	.03
FEB 27...	.58	.15	--	--	--	.24	--	--	.14	.04
MAR 28...	.59	.10	.22	.32	.00	.36	.91	4.0	.10	.04
APR 24...	.62	.05	.29	.34	.07	.27	.96	4.2	.07	.04
MAY 10...	1.0	.10	.60	.70	.25	.45	1.7	7.5	.16	.03
JUN 13...	.86	.09	.51	.60	.09	.51	1.5	6.5	.12	.06
JUL 24...	.42	.10	.48	.58	.02	.56	1.0	4.4	.05	.02
AUG 08...	.42	.04	.40	.44	.00	.52	.86	3.8	.05	.03
SEP 05...	--	--	--	--	--	.41	--	--	.05	.04

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUSPENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)
OCT 25...	--	--	--	--	--	--	--	--	--	--	--
NOV 15...	1	0	1	0	0	0	0	0	0	<10	<10
JAN 31...	0	0	0	0	0	0	0	0	0	<10	<8
FEB 27...	--	--	--	--	--	--	--	--	--	--	--
MAR 28...	--	--	--	--	--	--	--	--	--	--	--
APR 24...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	1	1	0	0	0	0	0	0	0	10	8
JUN 13...	--	--	--	--	--	--	--	--	--	--	--
JUL 24...	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	1	0	1	0	0	0	3	1	2	10	8
SEP 05...	--	--	--	--	--	--	--	--	--	--	--

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
OCT 25...	--	--	--	--	--	--	--	--	--	--	--
NOV 15...	0	1	0	4	5	3	2	1500	--	180	5
JAN 31...	2	2	2	0	7	6	1	4000	--	110	8
FEB 27...	--	--	--	--	--	--	--	--	--	--	--
MAR 28...	--	--	--	--	--	--	--	--	--	--	--
APR 24...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	2	4	4	0	5	4	1	6100	--	140	7
JUN 13...	--	--	--	--	--	--	--	--	--	--	--
JUL 24...	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	2	0	0	0	3	1	2	1500	1400	130	22
SEP 05...	--	--	--	--	--	--	--	--	--	--	--

DATE	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)
OCT 25...	--	--	--	--	--	--	--	--	--	--	--
NOV 15...	5	0	70	40	30	<.5	.0	<.5	0	0	0
JAN 31...	8	0	80	70	10	<.5	.0	<.5	0	0	0
FEB 27...	--	--	--	--	--	--	--	--	--	--	--
MAR 28...	--	--	--	--	--	--	--	--	--	--	--
APR 24...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	5	2	110	90	20	<.5	.0	<.5	0	0	0
JUN 13...	--	--	--	--	--	--	--	--	--	--	--
JUL 24...	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	18	4	160	90	70	<.5	.0	<.5	0	0	0
SEP 05...	--	--	--	--	--	--	--	--	--	--	--

PEE DEE RIVER BASIN

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M
OCT 25...	--	--	--	--	--	--	7.0	--	--	--	--
NOV 15...	0	0	0	10	10	0	--	4.6	7.4	--	--
JAN 31...	0	0	0	10	10	0	--	10	1.0	--	--
FEB 27...	--	--	--	--	--	--	9.0	--	--	3.07	2.28
MAR 28...	--	--	--	--	--	--	7.2	--	--	--	--
APR 24...	--	--	--	--	--	--	8.5	--	--	--	--
MAY 10...	0	0	0	20	20	0	--	9.7	.9	--	--
JUN 13...	--	--	--	--	--	--	8.2	--	--	--	--
JUL 24...	--	--	--	--	--	--	9.2	--	--	--	--
AUG 08...	0	0	0	40	40	0	--	5.4	--	10.4	9.21
SEP 05...	--	--	--	--	--	--	7.9	--	--	--	--

DATE	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	LENGTH OF EXPO-SURE (DAYS)
FEB 27...	.260	.000	26
AUG 08...	1.44	.000	14

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ATRAZINE, TOTAL (UG/L)	ATRAZINE, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL (UG/L)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL (UG/L)	P,P' DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL (UG/L)
NOV 15...	1115	ND	ND	ND	ND	ND	ND	ND	.5	ND
FEB 27...	1300	ND	--	ND	--	ND	--	ND	--	ND

DATE	P,P' DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL (UG/L)	P,P' DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL (UG/L)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN TOTAL (UG/L)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL (UG/L)
NOV 15...	.6	ND	.5	ND	ND	ND	ND	ND	ND	ND
FEB 27...	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOTAL (UG/L)
NOV 15...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 27...	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	SIMAZINE TOTAL COULSON COND. (UG/L)	SIMAZINE IN BOTTOM MATERIAL (UG/KG DRY SOLIDS)	TOXAPHENE, TOTAL (UG/L)
NOV 15...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 27...	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOTTOM MATERIAL (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOTTOM MATERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 15...	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 27...	--	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 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	NOV 15,77	MAR 28,78	MAY 10,78	JUN 13,78	SEP 5,78
TIME	1115	1100	0800	1300	1200
TOTAL CELLS/ML	400	230	2100	3100	1700
DIVERSITY: DIVISION	0.7	0.0	1.4	0.6	1.3
.CLASS	0.7	0.0	1.4	0.6	1.3
..ORDER	1.5	1.0	2.4	0.6	1.4
...FAMILY	1.5	2.1	2.9	0.6	1.9
....GENUS	1.5	2.1	3.2	0.7	2.6

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...CHARACIACEAE										
....SCHROEDERIA	--	-	--	-	29	1	--	-	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	7	2	--	-	29	1	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	72	3	--	-	--	-
....FRANCEIA	--	-	--	-	--	-	--	-	15	1
....KIRCHNERIELLA	--	-	--	-	--	-	23	1	--	-
....OOCYSTIS	--	-	--	-	57	3	--	-	--	-
....SELENASTRUM	--	-	--	-	*	0	--	-	--	-
...SCENEDESMACEAE										
....CRUCIGENIA	--	-	--	-	57	3	93	3	230	14
....SCENEDESMUS	--	-	--	-	29	1	140	4	--	-
..TETRASPORALES										
...PALMELLACEAE										
....SPHAEROCYSTIS	--	-	--	-	110	6	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	7	2	--	-	43	2	--	-	--	-
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	--	-	--	-	57	3	--	-	180	11
....MELOSIRA	7	2	95#	41	57	3	--	-	29	2
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	7	2	--	-	--	-	--	-	--	-
...FRAGILARIACEAE										
....SYNEDRA	--	-	27	12	14	1	--	-	--	-
...GOMPHONEMATACEAE										
....GOMPHONEMA	*	0	27	12	29	1	23	1	15	1
...NAVICULACEAE										
....NAVICULA	--	-	27	12	72	3	--	-	29	2
....PINNULARIA	--	-	--	-	43	2	--	-	--	-
...NITZSCHIACEAE										
....NITZSCHIA	7	2	55#	24	86	4	46	1	44	3
...SURIRELLACEAE										
....SURIRELLA	*	0	--	-	--	-	--	-	--	-
...TABELLARIACEAE										
....TABELLARIA	--	-	--	-	--	-	--	-	15	1
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROCCOCCALES										
...CHROCCOCCACEAE										
....AGMENELLUM	--	-	--	-	--	-	2800#	90	--	-
....ANACYSTIS	100#	25	--	-	820#	39	--	-	--	-
..HORMOGONALES										
...NOSTOCACEAE										
....ANABAENA	--	-	--	-	310#	15	--	-	120	7
...OSCILLATORIACEAE										
....LYNGBYA	--	-	--	-	--	-	--	-	440#	27
....OSCILLATORIA	250#	64	--	-	--	-	--	-	540#	33
...RIVULARIACEAE										
....RAPHIDIOPSIS	--	-	--	-	140	7	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....TRACHELOMONAS	7	2	--	-	14	1	--	-	--	-

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

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	84	70	76	67	77	71	68	79	77	88	84
2	105	84	71	80	69	72	76	70	79	79	78	78
3	101	83	87	77	73	68	73	66	76	77	87	82
4	101	82	81	77	69	70	75	68	75	76	84	96
5	102	81	78	89	75	71	80	70	72	83	83	102
6	107	86	75	83	72	98	73	76	72	95	86	94
7	104	102	80	83	73	102	78	73	77	91	82	86
8	102	91	84	84	72	84	78	70	76	74	74	84
9	101	87	78	84	75	70	78	74	82	84	86	82
10	101	83	77	84	72	67	78	72	73	81	82	81
11	100	83	76	81	67	65	77	67	73	80	88	82
12	101	87	79	77	69	65	80	65	75	76	71	80
13	111	87	77	71	72	65	78	68	70	77	76	81
14	103	86	78	82	70	67	79	69	76	74	77	82
15	102	86	76	70	70	67	77	66	74	75	79	86
16	103	88	73	72	72	70	78	73	72	73	78	83
17	105	82	73	75	64	73	77	72	75	68	84	85
18	102	84	77	75	73	72	84	67	73	70	84	82
19	103	82	77	73	71	72	80	71	72	71	78	82
20	102	84	77	66	67	73	81	75	73	71	79	81
21	103	85	84	66	72	75	78	75	77	73	74	87
22	104	83	80	67	62	72	80	80	79	80	76	90
23	105	77	85	68	67	73	82	80	71	90	75	88
24	106	79	82	67	68	71	80	78	90	76	78	84
25	106	80	84	58	67	73	81	73	85	78	82	88
26	88	94	83	64	67	75	89	81	85	78	78	86
27	70	87	81	59	68	77	86	80	85	80	76	88
28	75	76	84	60	67	78	80	79	84	97	84	92
29	85	80	91	62	---	73	73	77	79	86	86	96
30	80	73	81	64	---	73	75	72	79	100	91	97
31	84	---	77	68	---	75	---	76	---	86	88	---
MEAN	99	84	79	73	70	74	79	73	77	80	81	86

WTR YR 1978 MEAN 80 MAX 111 MIN 58

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

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

WTR YR 1978 MEAN 17.5 MAX 30.0 MIN 4.5

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 25...	1000	8170	15	331	100
NOV 15...	1115	11000	30	891	100
DEC 05...	1400	11300	32	976	92
JAN 31...	1045	15200	59	2420	100
FEB 27...	1300	8590	81	1880	100
MAR 28...	1100	20400	48	2640	98
APR 24...	1015	6460	25	436	99
MAY 10...	0800	43700	97	11400	100
JUN 13...	1300	8540	63	1450	97
JUL 24...	1400	8260	34	758	98
AUG 08...	1445	10600	40	1150	97
SEP 05...	1200	9150	18	445	100

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER YEAR OCTOBER 1977 to SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT 20...	1345	9520	90	6.8	17.0	8.7	<10	.9	<10
NOV 21...	1330	10500	70	6.7	15.0	7.0	15	<.1	<10
DEC 28...	1515	9570	60	6.8	6.0	10.8	12	2.2	20
JAN 30...	1300	21900	40	7.0	4.0	13.4	16	1.3	80
FEB 21...	1400	10500	50	--	6.0	11.9	14	1.4	30
MAR 28...	1440	17900	60	6.7	12.0	10.2	14	1.5	750
APR 26...	1430	15200	70	6.8	17.0	7.8	15	1.0	50
MAY 30...	1430	8540	82	7.1	23.2	5.6	11	1.0	140
JUN 28...	1440	8490	103	7.1	28.0	5.2	17	--	80

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. Suspended-sediment records for the current year are published on page 299 of this report.

AVERAGE DISCHARGE.--39 years, 261 ft³/s (7.392 m³/s), 19.91 in/yr (506 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. 22	1000	966	27.4	6.22	1.896	Mar. 12	2000	878	24.9	6.11	1.862
Jan. 27	2200	*1290	36.5	*6.60	2.012	Apr. 28	0200	958	27.1	6.21	1.893

Minimum discharge, 56 ft³/s (1.59 m³/s) Sept. 20, 21, 22, gage height, 1.83 ft (0.558 m); minimum daily, 57 ft³/s (1.61 m³/s) Sept. 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	163	143	269	457	259	254	401	110	98	75	74
2	78	147	167	249	429	300	234	333	110	128	105	82
3	84	142	168	196	413	332	219	302	106	216	162	97
4	76	145	143	168	402	379	209	292	165	280	190	131
5	69	154	145	156	392	414	204	335	219	288	190	112
6	70	204	193	160	378	422	199	373	215	246	222	87
7	70	267	211	197	354	400	192	341	284	132	230	80
8	71	294	180	228	332	362	185	390	399	110	254	76
9	83	245	144	300	317	333	179	557	446	98	246	72
10	123	176	142	372	308	465	172	642	475	91	146	68
11	124	151	137	386	300	644	170	621	502	86	124	70
12	100	138	129	353	291	831	176	520	535	87	126	71
13	122	131	127	352	283	767	205	413	401	83	125	69
14	193	127	143	404	282	587	273	333	244	81	115	65
15	234	126	225	490	282	493	289	329	160	90	117	62
16	199	126	291	551	284	432	230	340	139	170	126	64
17	130	126	284	513	302	391	179	339	128	271	106	64
18	113	125	238	465	335	355	203	297	121	317	108	63
19	104	121	244	467	343	326	330	248	115	316	97	60
20	98	117	237	643	324	309	378	211	108	209	90	57
21	95	116	221	823	293	297	339	186	101	112	83	57
22	93	117	230	928	282	286	281	169	123	97	77	58
23	92	119	221	757	283	275	207	158	136	89	73	60
24	90	124	190	571	284	272	184	152	120	84	72	67
25	90	134	209	576	276	279	203	155	126	83	69	69
26	153	159	253	766	269	329	481	168	137	85	68	69
27	297	180	254	1150	253	411	859	146	125	88	67	66
28	436	160	201	1140	240	451	925	135	110	90	79	63
29	458	137	170	790	---	435	741	133	100	108	86	60
30	400	131	168	595	---	375	531	130	96	95	75	60
31	245	---	227	505	---	296	---	133	---	81	82	---
TOTAL	4663	4602	6035	15520	8988	12507	9231	9282	6156	4409	3785	2153
MEAN	150	153	195	501	321	403	308	299	205	142	122	71.8
MAX	458	294	291	1150	457	831	925	642	535	317	254	131
MIN	69	116	127	156	240	259	170	130	96	81	67	57
CFSM	.84	.86	1.10	2.82	1.80	2.26	1.73	1.68	1.15	.80	.69	.40
IN.	.97	.96	1.26	3.24	1.88	2.61	1.93	1.94	1.29	.92	.79	.45

CAL YR 1977 TOTAL 78142 MEAN 214 MAX 1020 MIN 47 CFSM 1.20 IN 16.33
WTR YR 1978 TOTAL 87331 MEAN 239 MAX 1150 MIN 57 CFSM 1.34 IN 18.25

02133500 DROWNING CREEK NEAR HOFFMAN, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
DEC				
08...	1700	170	4	1.8
JAN				
10...	1340	360	5	4.9
21...	1415	756	5	10
FEB				
14...	1345	276	3	2.2
MAR				
14...	1200	585	4	6.3
MAY				
08...	1330	388	10	10
10...	1030	642	7	12
SEP				
21...	1350	55	11	1.6

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 mi² (3,160 km²), 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) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Sept. 30, 1936, nonrecording gage at site 100 ft (30 m) downstream at same datum. Sept. 30, 1936, to June 8, 1943, nonrecording gage at present site and datum.

REMARKS.--Water-stage record excellent.

AVERAGE DISCHARGE.--49 years, 1,339 ft³/s (37.92 m³/s), 14.90 in/yr (378 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,400 ft³/s (379 m³/s) Sept. 24, 1945, gage height, 10.64 ft (3.243 m); minimum, 66 ft³/s (1.87 m³/s) Oct. 9, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1928 reached a stage of 11.8 ft (3.60 m), from floodmark witnessed by local resident, discharge, 25,000 ft³/s (708 m³/s). Flood of July 22, 1901, the highest during the period 1896-1913, reached a stage of 10.8 ft (3.29 m), from observations by Butters Lumber Co., discharge, 14,800 ft³/s (419 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge,6,260 ft³/s (177 m³/s) May 13, gage height, 8.88 ft (2.707 m); minimum, 194 ft³/s (5.49 m³/s) Sept. 30, gage height, 1.85 ft (0.564 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	375	581	711	2340	4450	1480	2150	3570	752	875	651	347
2	357	613	719	2330	4260	1440	2050	3780	677	1070	625	321
3	330	646	731	2300	4070	1450	1960	3780	631	1480	606	323
4	302	672	740	2240	3890	1490	1860	3810	859	1670	588	430
5	286	693	762	2170	3690	1510	1780	3810	959	1730	542	513
6	271	885	795	2110	3360	1530	1690	3780	1090	1730	501	564
7	262	954	803	2070	3050	1540	1580	3670	1230	1660	626	633
8	254	1050	811	2010	2760	1530	1460	3890	1410	1540	648	673
9	252	1180	815	2020	2530	1540	1330	4640	1480	1400	636	656
10	246	1220	811	2030	2340	1860	1210	5560	1520	1290	620	604
11	239	1220	803	2020	2180	2180	1090	6010	1580	1190	648	598
12	243	1260	795	1970	2060	2810	1030	6210	1610	1090	798	590
13	307	1280	788	1980	1970	3020	1060	6230	1630	976	800	553
14	414	1270	873	2080	1900	3180	1200	6030	1630	871	779	536
15	510	1230	1040	2270	1830	3280	1320	5530	1600	1670	788	511
16	559	1170	1310	2450	1760	3320	1400	4880	1560	724	790	473
17	618	1120	1500	2550	1710	3320	1390	4220	1480	898	759	423
18	654	1060	1700	2660	1660	3260	1380	3640	1360	1040	692	377
19	672	974	1810	2790	1630	3120	1470	3180	1210	1210	630	340
20	680	883	1930	3240	1590	2970	1620	2820	998	1430	592	309
21	685	807	2160	3730	1580	2790	1800	2490	910	1550	565	283
22	690	746	2300	4160	1570	2570	1900	2220	811	1530	539	262
23	687	699	2450	4390	1570	2350	1960	2000	740	1410	515	244
24	669	667	2560	4490	1560	2130	2020	1860	722	1310	483	226
25	618	646	2660	4650	1550	1940	2050	1700	685	1260	440	218
26	564	674	2690	4950	1540	1850	2540	1530	643	1240	395	214
27	547	674	2660	5110	1530	2030	2700	1360	680	1150	375	208
28	545	672	2620	5210	1500	2200	2890	1220	734	1030	464	203
29	536	672	2520	5140	---	2290	3090	1090	784	896	500	200
30	538	687	2420	4950	---	2300	3260	969	839	794	489	197
31	552	---	2390	4700	---	2240	---	855	---	709	382	---
TOTAL	14462	26905	47677	97110	65090	70520	54240	106334	32814	38423	18466	12029
MEAN	467	897	1538	3133	2325	2275	1808	3430	1094	1239	596	401
MAX	690	1280	2690	5210	4450	3320	3260	6230	1630	1730	800	673
MIN	239	581	711	1970	1500	1440	1030	855	631	709	375	197
CFSM	.38	.74	1.26	2.57	1.91	1.87	1.48	2.81	.90	1.02	.49	.33
IN.	.44	.82	1.45	2.96	1.98	2.15	1.65	3.24	1.00	1.17	.56	.37

CAL YR 1977 TOTAL 460436 MEAN 1261 MAX 4560 MIN 141 CFSM 1.03 IN 14.04
WTR YR 1978 TOTAL 584070 MEAN 1600 MAX 6230 MIN 197 CFSM 1.31 IN 17.81

02134500 LUMBER RIVER AT BOARDMAN, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947, 1957, 1968-73, 1975 to September 1978 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to September 1978.
WATER TEMPERATURES: October 1946 to September 1947, October 1974 to September 1978.

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, Feb. 7, 8, 1978.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 216 micromhos Sept. 30; minimum daily, 43 micromhos May 17.
WATER TEMPERATURES: Maximum daily, 26.5°C Aug. 31, Sept. 1; minimum daily, 1.0°C Feb. 7, 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
DEC												
28...	1300	2650	58	4.7	3.0	110	10.7	11	8	2.3	1.2	5.1
JAN												
31...	1315	4690	57	5.6	.5	80	12.6	11	10	2.5	1.2	5.4
MAY												
09...	1600	4600	47	5.8	17.0	150	7.5	9	7	2.3	.9	4.4
15...	1330	5580	42	5.0	16.0	250	6.6	9	6	2.0	.9	3.8
AUG												
15...	1415	792	63	5.8	24.0	300	6.4	10	0	2.4	.9	8.7

DATE	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
DEC												
28...	47	.7	1.3	3	0	2	96	8.8	8.5	.0	8.1	64
JAN												
31...	48	.7	1.4	2	0	2	8.0	9.1	8.0	.0	4.4	56
MAY												
09...	47	.6	1.2	3	0	2	7.6	7.1	6.0	.0	3.4	53
15...	45	.6	1.1	3	0	2	48	7.9	6.7	.0	3.5	59
AUG												
15...	62	1.2	1.4	12	0	10	30	7.4	9.7	.0	7.9	76

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
DEC												
28...	38	.09	458	.12	.00	.12	.13	2.1	.00	.00	.00	.45
JAN												
31...	36	.08	709	.59	.00	.59	.54	--	.00	.00	.00	.43
MAY												
09...	29	.07	658	.26	.01	.27	.28	--	.02	.03	.04	.50
15...	28	.08	889	.20	.01	.21	.20	--	.02	.01	.01	.56
AUG												
15...	46	.10	163	.11	.01	.12	.12	--	.01	.01	.01	.77

02134500 LUMBER RIVER AT BOARDMAN, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO. TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO. DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)
DEC 28...	.38	.45	.07	.38	.57	2.5	.03	.09	.05	.01	.02	.06
JAN 31...	.44	.43	.00	.44	1.0	4.5	.03	.09	.03	.01	.00	.00
MAY 09...	.57	.52	.00	.60	.79	3.5	.07	.21	.06	.04	.03	.09
15...	.50	.58	.07	.51	.79	3.5	.05	.15	.05	.03	.03	.09
AUG 15...	--	.78	--	--	.90	4.0	.12	.37	.13	.09	.09	.28

DATE	PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)
DEC 28...	560	1	<10	10	9	1	30	<10	5	3	2
JAN 31...	--	--	--	<10	<9	1	--	--	4	3	1
MAY 09...	--	--	--	<10	<8	2	--	--	3	1	2
15...	--	--	--	10	7	3	--	--	3	1	2
AUG 15...	--	--	--	20	15	5	--	--	3	0	3

DATE	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/L AS HG)
DEC 28...	100	370	--	290	720	4	--	--	60	<10	.0
JAN 31...	--	150	--	130	--	5	0	8	--	--	--
MAY 09...	--	480	--	390	--	5	2	3	--	--	--
15...	--	600	--	530	--	3	2	1	--	--	--
AUG 15...	--	800	220	580	--	--	--	--	--	--	--

DATE	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
DEC 28...	0	10	0	10	80	9.2	--	--	127	.00
JAN 31...	--	10	0	10	--	--	19	.3	--	.00
MAY 09...	--	10	0	10	--	--	14	.7	--	.00
15...	--	20	10	10	--	--	17	1.1	--	.00
AUG 15...	--	10	0	20	--	--	13	--	--	.10

02134500 LUMBER RIVER AT BOARDMAN, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	DEC 28,77
TIME	1300
TOTAL CELLS/ML	7
DIVERSITY: DIVISION	0.0
.CLASS	0.0
..ORDER	0.0
...FAMILY	0.0
....GENUS	0.0

ORGANISM	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)		
.CHLOROPHYCEAE		
..VOLVOCALES		
...CHLAMYDOMONADACEAE		
....CHLAMYDOMONAS	7	*100

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

02134500 LUMBER RIVER AT BOARDMAN, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	91	81	71	60	67	69	53	69	73	72	156
2	130	79	86	71	60	67	69	50	77	75	74	154
3	139	86	81	63	60	71	63	48	77	59	84	159
4	104	90	81	62	58	71	61	48	83	54	86	142
5	114	90	79	66	57	70	63	48	71	50	96	116
6	142	93	73	70	57	77	63	50	74	52	96	91
7	165	86	71	68	60	69	69	50	65	50	85	91
8	168	81	76	71	62	64	67	51	65	48	83	92
9	167	86	80	74	66	66	65	48	63	50	76	96
10	167	75	78	76	66	69	68	47	64	47	82	92
11	165	76	78	73	67	66	69	51	67	44	87	99
12	121	76	79	76	68	66	70	50	62	48	80	92
13	147	76	74	79	71	64	70	48	57	51	82	95
14	163	78	73	79	70	51	71	48	52	52	78	107
15	134	71	73	72	68	63	77	46	53	59	67	115
16	128	71	78	78	70	65	81	45	55	61	72	117
17	103	71	82	73	71	62	72	43	61	62	78	119
18	86	75	86	68	70	58	71	44	57	56	77	131
19	87	75	81	71	73	62	65	45	59	56	89	133
20	92	78	89	65	76	58	72	50	55	54	91	144
21	97	88	77	65	73	56	72	50	59	56	91	165
22	95	88	76	61	69	55	67	54	67	56	84	185
23	95	87	80	65	70	60	71	50	68	57	93	185
24	97	91	82	64	73	62	65	55	73	58	104	186
25	82	96	81	63	75	68	63	56	82	60	106	202
26	83	89	74	63	74	64	56	59	86	55	119	185
27	98	85	79	65	72	61	58	56	78	63	124	169
28	108	84	68	58	69	59	61	61	78	61	121	191
29	108	77	62	60	---	58	58	61	78	67	100	206
30	101	72	64	60	---	63	58	58	72	69	93	216
31	102	---	74	60	---	65	---	59	---	78	132	---
MEAN	120	82	77	68	67	64	67	51	68	57	90	141

WTR YR 1978 MEAN 79 MAX 216 MIN 43

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

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

WTR YR 1978 MEAN 16.0 MAX 26.5 MIN 1.0

02134500 LUMBER RIVER AT BOARDMAN, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JAN					
31...	1315	4690	15	190	97
MAY					
09...	1600	4600	14	174	45
15...	1330	5580	4	60	100
AUG					
15...	1415	792	4	8.6	90

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER YEAR OCTOBER 1977 to SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT									
06...	1245	271	130	6.4	18.0	8.2	39	1.3	20
NOV									
08...	1210	1050	80	6.0	19.0	5.4	55	2.7	190
DEC									
08...	1200	811	50	6.0	6.0	9.8	32	.6	40
JAN									
11...	1215	1990	40	5.7	3.0	--	32	.8	60
FEB									
15...	1200	1830	45	6.0	6.0	10.4	20	.8	10
MAR									
09...	1120	1530	48	6.7	6.0	10.5	27	1.0	30
APR									
10...	1230	1210	62	6.5	20.0	6.6	39	.5	<10
MAY									
16...	1200	4880	40	6.4	16.1	7.4	39	.6	70
JUL									
17...	1245	713	79	6.3	24.0	5.0	36	.7	80

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) National Geodetic Vertical Datum of 1929.

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 307 of this report.

AVERAGE DISCHARGE.--37 years, 343 ft³/s (9.714 m³/s), 27.24 in/yr (692 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft³/s (708 m³/s) Nov. 6, 1977, gage height, 17.04 ft (5.194 m), from rating curve extended as explained below; minimum, 28 ft³/s (0.79 m³/s) Sept. 30, Oct. 1, 5, 1954, gage height, 0.50 ft (0.152 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 13, 1940 reached a stage of 19.34 ft (5.895 m), discharge, 71,400 ft³/s (2,020 m³/s), from rating curve extended above 10,000 ft³/s (283 m³/s), on basis of contracted opening measurements at gage height, 15.02 ft (4.578 m) and 19.34 ft (5.895 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,400 ft³/s (96 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 26	0400	4670	132	8.03	2.448	Jan. 26	0330	7100	201	10.71	3.264
Nov. 6	1000	*25000	708	*17.04	5.194	Aug. 7	0900	5160	146	8.62	2.627

Minimum discharge, 134 ft³/s (3.79 m³/s) July 31, gage height, 1.22 ft (0.372 m); minimum daily, 142 ft³/s (4.02 m³/s) July 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	175	259	444	316	466	287	403	397	270	181	311	187
2	179	261	398	307	448	287	380	368	260	203	166	387
3	163	353	373	290	421	315	357	338	259	200	152	248
4	148	652	353	283	397	301	345	674	255	180	150	201
5	152	1380	486	279	386	281	337	611	244	175	447	194
6	152	7970	514	293	368	288	325	513	238	189	343	189
7	150	3420	424	310	333	302	318	495	301	188	2740	187
8	201	1130	381	608	344	342	308	800	378	177	867	181
9	436	762	371	1070	336	355	304	842	410	181	508	175
10	239	668	341	611	330	1080	302	607	302	183	343	171
11	197	598	327	502	323	702	313	523	273	176	340	194
12	185	537	318	456	322	574	320	501	273	162	347	184
13	170	483	314	444	320	529	309	594	284	173	602	176
14	170	444	342	414	317	567	297	511	256	188	457	820
15	167	417	344	378	307	542	294	471	240	169	367	433
16	167	397	314	349	307	488	293	449	230	211	301	323
17	162	465	305	410	308	439	302	423	220	173	260	265
18	159	392	366	416	313	411	321	394	215	157	237	240
19	157	375	336	413	312	392	402	370	210	153	224	238
20	153	351	346	570	301	372	325	351	237	150	232	233
21	151	348	337	498	299	361	305	343	230	146	239	232
22	153	357	319	436	295	355	295	323	224	142	205	230
23	155	437	311	398	280	340	290	320	212	158	203	241
24	148	389	316	384	281	330	281	344	202	238	200	230
25	357	387	357	1350	284	743	401	314	202	209	197	227
26	2330	395	322	3460	286	869	1040	297	201	163	195	236
27	611	353	305	844	274	648	776	291	195	157	208	227
28	407	353	296	678	284	537	551	287	187	191	199	220
29	335	347	291	598	---	515	450	320	181	153	197	197
30	300	354	306	541	---	462	413	307	180	145	194	188
31	274	---	317	504	---	425	---	293	---	218	191	---
TOTAL	8903	25034	10874	18410	9242	14439	11357	13671	7369	5489	11622	7454
MEAN	287	834	351	594	330	466	379	441	246	177	375	248
MAX	2330	7970	514	3460	466	1080	1040	842	410	238	2740	820
MIN	148	259	291	279	274	281	281	287	180	142	150	171
CFSM	1.68	4.88	2.05	3.47	1.93	2.73	2.22	2.58	1.44	1.04	2.19	1.45
IN.	1.94	5.45	2.37	4.00	2.01	3.14	2.47	2.97	1.60	1.19	2.53	1.62

CAL YR 1977 TOTAL 137607 MEAN 377 MAX 7970 MIN 108 CFSM 2.21 IN 29.94
WTR YR 1978 TOTAL 143864 MEAN 394 MAX 7970 MIN 142 CFSM 2.30 IN 31.30

02138000 CATAWBA RIVER NEAR MARION, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
17...	1330	154	4	1.7
NOV				
07...	1110	3130	365	3090
07...	1535	2290	365	2260
08...	1055	1130	122	372
25...	0920	408	18	20
DEC				
13...	1430	310	7	5.9
JAN				
03...	1120	286	3	2.3
24...	1520	374	7	7.1
25...	1630	901	203	494
MAR				
01...	1000	283	4	3.1
APR				
12...	1445	305	13	11
MAY				
18...	1030	395	20	21
JUN				
27...	1445	198	10	5.3
JUL				
13...	1530	168	12	5.4
31...	1445	133	10	3.6
SEP				
14...	1240	1210	610	1990

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) National Geodetic Vertical Datum of 1929. May 1907 to August 1908 nonrecording gage about 1.2 mi (1.9 km) downstream at different datum. June 1922 to Aug. 27, 1937, nonrecording gage, and Aug. 28, 1937 to Sept. 30, 1970, water-stage recorder at site on right bank 20 ft (6.1 m) downstream from bridge on State Highway 126 at datum 1.00 ft (0.305 m) higher. Oct. 1, 1970 to Sept. 30, 1973 at present site at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records fair. In May 1978, local residents placed a low-water, loose-rock dam across the river 1,500 ft (460 m) upstream. Suspended-sediment records for the current year are published on page 309 of this report.

AVERAGE DISCHARGE.--56 years, (1922-78), 148 ft³/s (4.191 m³/s), 29.91 in/yr (760 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. 26	0800	3400	96.3	5.41	1.649	Jan. 26	0130	3150	89.2	4.76	1.451
Nov. 6	0800	*17700	501	*9.64	2.938	Sept. 2	1030	1610	45.6	3.46	1.055

Minimum discharge, 32 ft³/s (0.91 m³/s) July 23, 24, gage height, 0.39 ft (0.119 m); minimum daily, 37 ft³/s (1.05 m³/s) July 22, 23, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	150	226	123	183	86	200	174	97	49	64	174
2	78	160	207	118	185	84	178	156	87	64	61	566
3	81	347	185	93	162	84	161	139	81	64	50	258
4	66	759	178	91	142	90	150	210	80	62	47	146
5	58	1320	233	108	143	69	139	315	75	67	45	109
6	55	8500	318	108	126	86	132	230	69	65	93	93
7	53	2390	259	104	118	94	122	198	79	65	499	82
8	57	1030	222	213	115	94	120	279	116	64	331	73
9	207	655	158	950	115	102	115	286	115	62	218	67
10	177	508	155	300	113	648	112	241	96	48	142	62
11	117	405	152	220	101	451	109	204	79	45	118	65
12	97	339	144	180	105	307	112	183	79	44	119	85
13	86	292	136	170	106	288	148	230	80	42	175	79
14	79	260	152	160	102	433	93	262	74	42	165	543
15	76	229	201	140	98	525	78	222	65	41	133	226
16	72	202	164	130	96	370	76	203	62	47	114	141
17	78	297	148	150	96	288	84	182	61	45	98	110
18	77	244	172	160	96	239	93	165	59	43	84	94
19	72	202	170	150	96	209	110	151	132	41	113	123
20	71	188	159	200	95	194	110	139	218	39	83	95
21	67	177	152	150	89	182	97	129	159	38	70	82
22	63	172	138	130	81	173	91	120	109	37	63	80
23	63	206	131	115	74	161	87	114	87	37	58	83
24	62	190	132	110	95	147	84	118	76	38	53	74
25	71	190	163	530	89	631	97	128	70	136	51	72
26	1640	200	140	1860	96	851	484	109	67	73	50	68
27	429	191	116	555	86	596	407	101	62	52	47	63
28	265	182	111	371	86	399	263	97	58	57	70	61
29	207	178	110	279	---	314	211	114	53	44	61	57
30	177	173	127	235	---	259	185	119	50	37	52	54
31	156	---	125	214	---	222	---	111	---	38	73	---
TOTAL	4918	20336	5184	8417	3089	8676	4448	5429	2595	1626	3400	3885
MEAN	159	678	167	272	110	280	148	175	86.5	52.5	110	130
MAX	1640	8500	318	1860	185	851	484	315	218	136	499	566
MIN	53	150	110	91	74	69	76	97	50	37	45	54
CFSM	2.37	10.1	2.49	4.05	1.64	4.17	2.20	2.60	1.29	.78	1.64	1.94
IN.	2.72	11.26	2.87	4.66	1.71	4.80	2.46	3.01	1.44	.90	1.88	2.15

CAL YR 1977 TOTAL 74560 MEAN 204 MAX 8500 MIN 37 CFSM 3.04 IN 41.27
WTR YR 1978 TOTAL 72003 MEAN 197 MAX 8500 MIN 37 CFSM 2.93 IN 39.86

SANTEE RIVER BASIN

02138500 LINVILLE RIVER NEAR NEBO, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
26...	1140	1930	134	698
NOV				
06...	1730	6330	255	4360
07...	1655	1880	51	259
JAN				
25...	1630	491	43	57
26...	1435	1360	142	521
MAY				
01...	1100	176	1	.48
JUN				
27...	1500	60	1	.16
JUL				
24...	1200	38	1	.10
AUG				
07...	1445	791	217	463
29...	1650	55	2	.30
SEP				
29...	1200	55	2	.30

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 September 1978 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,071.45 ft (326.578 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those above 1,000 ft³/s (28.3 m³/s), 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 311 of this report.

AVERAGE DISCHARGE.--12 years, 42.5 ft³/s (1.204 m³/s), 18.15 in/yr (461 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,480 ft³/s (155 m³/s) Nov. 7, 1977, gage height, 12.72 ft (3.877 m), from floodmark in gage well, from rating extended above 3,500 ft³/s (99.1 m³/s); 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)
Nov. 6	1145	3680	104	11.35	3.459	Mar. 10	1400	958	27.1	6.19	1.887
Nov. 7	0100	*5480	155	*12.72	3.877	Mar. 26	0700	1050	29.7	6.63	2.021
Jan. 8	2000	1320	37.4	7.74	2.359	June 8	2230	2670	75.6	10.33	3.149
Jan. 26	0130	1870	53.0	9.24	2.816	Aug. 7	1330	777	22.0	5.15	1.570

Minimum discharge, 15 ft³/s (0.42 m³/s) Oct. 3, 4, gage height, 0.82 ft (0.250 m); minimum daily 15 ft³/s (0.42 m³/s) Oct. 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	20	41	32	42	27	41	35	25	23	30	25
2	17	20	34	30	43	27	39	33	25	33	24	34
3	15	21	32	27	39	34	37	32	25	40	67	34
4	15	29	32	26	37	31	35	184	24	25	39	25
5	16	180	158	26	35	30	34	99	24	24	29	23
6	16	2020	85	27	33	31	33	55	51	25	34	23
7	16	1390	51	27	33	33	32	65	114	24	392	22
8	21	148	42	474	30	36	31	121	779	23	182	21
9	40	73	38	359	29	36	31	98	416	24	112	21
10	21	54	33	81	29	492	30	60	75	23	63	21
11	19	42	31	57	28	124	31	48	52	22	77	25
12	18	38	29	50	28	68	31	46	45	21	95	21
13	17	34	29	47	28	53	29	108	40	25	107	21
14	17	32	42	43	28	64	28	67	36	28	83	21
15	17	30	39	40	27	53	28	55	34	28	72	21
16	17	30	33	37	28	46	27	47	33	140	48	21
17	16	38	33	42	28	41	29	42	32	36	39	20
18	16	30	44	45	28	38	31	39	31	28	34	19
19	16	27	37	43	29	36	36	35	38	26	34	19
20	16	27	37	50	28	47	31	33	35	25	32	19
21	16	26	34	40	28	42	29	32	32	24	30	19
22	16	29	31	41	27	32	28	31	32	23	28	19
23	16	36	29	38	26	30	27	30	30	23	27	65
24	16	31	32	37	27	29	27	31	28	23	26	25
25	28	35	49	399	26	200	42	30	28	22	26	23
26	180	36	35	755	26	649	86	27	27	22	25	21
27	40	30	32	113	25	137	56	26	26	22	32	21
28	30	31	30	74	27	73	42	26	24	83	28	21
29	25	30	30	58	---	58	37	27	23	27	24	20
30	23	32	32	51	---	49	37	27	23	25	26	20
31	22	---	33	47	---	44	---	27	---	36	25	---
TOTAL	775	4599	1267	3216	842	2690	1055	1416	2207	973	1890	710
MEAN	25.0	153	40.9	104	30.1	86.8	35.2	52.1	73.6	31.4	61.0	23.7
MAX	180	2020	158	755	43	649	86	184	779	140	392	65
MIN	15	20	29	26	25	27	27	26	23	21	24	19
CFSM	.79	4.81	1.29	3.27	.95	2.73	1.11	1.64	2.31	.99	1.92	.75
IN.	.91	5.38	1.48	3.76	.98	3.15	1.23	1.89	2.58	1.14	2.21	.83

CAL YR 1977 TOTAL 15312 MEAN 42.0 MAX 2020 MIN 11 CFSM 1.32 IN 17.91
WTR YR 1978 TOTAL 21840 MEAN 59.8 MAX 2020 MIN 15 CFSM 1.88 IN 25.55

SANTEE RIVER BASIN

02141150 LOWER CREEK AT MULBERRY STREET AT LENOIR, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
NOV				
06...	1200	3500	915	8650
07...	1450	390	771	812
11...	1530	41	44	4.9
JAN				
23...	1115	40	24	2.6
APR				
26...	0945	86	338	78
MAY				
01...	1130	35	22	2.1
JUN				
27...	1230	26	31	2.2

02142000 LOWER LITTLE RIVER NEAR ALL HEALING SPRINGS, N. C.

LOCATION.--Lat 35°56'44", long 81°14'13", Alexander County, Hydrologic Unit 03050101, on left bank at upstream side of bridge on Secondary Road 1313, 0.3 mi (0.5 km) downstream from Grassy Creek, 0.4 mi (0.6 km) upstream from Lambert Creek, 2.2 mi (3.5 km) northeast of All Healing Springs, and 4 mi (6.4 km) northwest of Taylorsville.

DRAINAGE AREA.--31.2 mi² (80.8 km²).

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, nonrecording gage at same site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 313 of this report.

AVERAGE DISCHARGE.--26 years, 37.8 ft³/s (1.070 m³/s), 16.45 in/yr (418 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,850 ft³/s (137 m³/s) Aug. 10, 1970, gage height, 15.68 ft (4.779 m); minimum, 2.9 ft³/s (0.082 m³/s) Sept. 20, 21, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 550 ft³/s (16 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 6	1230	*4120	117	*13.78	4.200	Mar. 26	0700	575	16.3	5.20	1.585
Jan. 8	2030	1360	38.5	8.30	2.530	Aug. 7	1500	561	15.9	5.13	1.564
Jan. 26	0130	2100	59.5	10.31	3.142	Aug. 13	0030	754	21.4	6.04	1.841

Minimum discharge, 17 ft³/s (0.48 m³/s) part or all of each day Oct. 3-8, 20-25, Sept. 28-30; minimum gage height, 1.27 ft (0.387 m) Oct. 6, 7, 8, 23, 24, 25; minimum daily, 17 ft³/s (0.48 m³/s) Oct. 7, 23, 24, Sept. 29.30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	24	47	34	60	34	60	38	29	21	23	27
2	21	23	42	32	59	34	55	36	28	26	22	24
3	18	23	38	31	55	39	52	34	28	84	34	81
4	18	36	37	30	51	37	50	120	27	28	36	31
5	18	153	106	30	50	36	48	113	26	25	32	27
6	18	1580	104	31	48	38	47	70	25	25	79	25
7	17	508	69	30	48	39	45	60	29	23	278	23
8	21	164	55	394	44	41	43	95	106	22	111	22
9	47	104	50	378	43	40	42	109	83	21	56	21
10	26	74	43	131	42	235	41	76	43	20	42	21
11	22	53	39	88	41	144	42	60	36	20	38	26
12	21	48	37	71	40	90	41	55	33	19	128	22
13	20	43	36	69	40	70	39	72	30	20	247	24
14	21	41	49	65	40	80	37	61	28	23	82	23
15	19	39	52	56	38	72	36	57	27	35	69	23
16	20	37	44	51	38	63	36	53	27	137	52	22
17	19	43	42	87	37	55	37	48	26	41	41	20
18	19	36	47	83	38	51	39	44	25	29	34	20
19	18	34	42	79	38	48	43	40	26	26	31	20
20	18	32	41	99	37	45	38	38	26	24	29	19
21	18	31	39	86	37	44	36	36	33	22	27	20
22	18	33	36	70	36	42	35	34	30	21	26	20
23	17	41	35	61	35	40	34	34	26	20	25	25
24	17	37	34	58	35	39	34	37	24	21	24	22
25	18	37	48	341	34	98	41	34	29	20	23	21
26	127	38	38	658	33	405	75	32	29	19	22	19
27	46	34	36	160	32	176	58	31	24	19	22	19
28	34	35	34	108	34	108	46	31	22	60	23	18
29	29	34	33	85	---	85	40	31	22	24	22	17
30	27	36	34	73	---	72	39	34	21	22	23	17
31	25	---	35	66	---	65	---	31	---	22	28	---
TOTAL	797	3451	1422	3635	1163	2465	1309	1644	968	939	1729	719
MEAN	25.7	115	45.9	117	41.5	79.5	43.6	53.0	32.3	30.3	55.8	24.0
MAX	127	1580	106	658	60	405	75	120	106	137	278	81
MIN	17	23	33	30	32	34	34	31	21	19	22	17
CFSM	.82	3.69	1.47	3.75	1.33	2.55	1.40	1.70	1.04	.97	1.79	.77
IN.	.95	4.11	1.70	4.33	1.39	2.94	1.56	1.96	1.15	1.12	2.06	.86

CAL YR 1977 TOTAL 14885.0 MEAN 40.8 MAX 1580 MIN 7.2 CFSM 1.31 IN 17.75
WTR YR 1978 TOTAL 20241.0 MEAN 55.5 MAX 1580 MIN 17 CFSM 1.78 IN 24.13

SANTEE RIVER BASIN

02142000 LOWER LITTLE RIVER NEAR ALL HEALING SPRINGS, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
06...	1600	2180	1890	11100	40
06...	1700	1150	5600	17400	67
11...	1250	54	53	7.7	--
JAN					
23...	1630	62	18	3.0	--
25...	1005	250	1000	675	--
26...	0900	482	1730	2250	--
MAR					
20...	0800	45	124	15	--
APR					
26...	0900	71	88	17	--
MAY					
04...	1400	200	1250	675	--
JUN					
08...	1000	44	92	11	--
AUG					
07...	1020	167	402	181	--
SEP					
19...	1015	20	18	.97	--

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) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Occasional diversions for irrigation by upstream golf course. Suspended-sediment records for the current year are published on page 315 of this report.

AVERAGE DISCHARGE.--13 years, 18.0 ft³/s (0.510 m³/s), 15.18 in/yr (386 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. 26	0545	1080	30.6	8.23	2.509	Mar. 26	0745	888	25.2	7.57	2.307
Nov. 6	1030	1100	31.2	8.26	2.518	Apr. 25	2400	1250	35.4	8.65	2.637
Jan. 26	0400	*1550	43.9	9.25	2.819	May 8	0230	921	26.1	7.70	2.347
Mar. 10	0545	712	20.2	6.82	2.079						

Minimum discharge, 1.2 ft³/s (0.034 m³/s) Sept. 29, gage height, 1.19 ft (0.363 m); minimum daily, 1.5 ft³/s (0.042 m³/s) Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	4.0	80	10	13	13	13	14	5.1	4.4	2.2	7.1
2	2.4	3.8	28	9.3	14	9.5	12	12	4.8	4.4	2.8	10
3	2.6	3.8	17	8.0	13	38	11	10	4.4	4.4	7.8	8.6
4	1.7	7.1	13	7.3	12	35	11	129	4.5	4.2	18	3.4
5	1.7	6.9	76	9.8	11	26	10	63	4.0	4.1	6.1	4.4
6	1.8	315	51	20	11	24	9.7	23	6.8	4.0	29	8.9
7	1.7	54	19	17	9.5	23	9.3	47	5.1	3.9	16	2.7
8	1.8	21	13	126	9.6	21	8.7	326	25	3.7	22	2.3
9	3.6	13	12	114	10	22	8.4	147	109	3.5	5.4	5.5
10	2.3	9.5	9.7	29	9.8	302	8.2	33	46	3.1	5.7	2.2
11	1.9	7.3	8.5	17	9.2	55	8.4	20	13	2.6	4.1	3.4
12	1.9	6.8	7.8	14	9.0	71	8.0	15	8.2	2.7	3.7	4.2
13	3.2	5.5	7.7	70	9.5	55	8.0	36	7.5	2.6	6.4	2.0
14	4.6	5.1	12	87	10	41	7.0	25	5.3	3.1	11	2.0
15	2.5	4.8	13	44	9.1	29	6.8	18	6.5	8.4	5.9	2.0
16	3.0	4.8	10	23	8.8	21	6.4	15	12	18	3.8	2.1
17	2.7	7.2	10	59	8.9	17	7.0	12	5.4	5.1	3.3	2.1
18	2.2	5.7	13	42	8.9	14	13	11	3.6	3.7	2.9	1.9
19	2.1	4.7	11	67	9.4	13	13	9.7	7.5	3.2	2.7	1.7
20	2.0	4.4	11	188	9.0	12	9.2	8.6	5.3	3.0	2.6	1.7
21	2.0	4.3	11	50	8.5	12	7.7	7.8	19	2.8	2.5	1.8
22	2.0	5.9	8.9	26	8.1	12	6.8	7.0	30	2.9	2.3	1.7
23	2.0	43	7.8	20	7.7	11	6.4	6.7	15	2.9	2.2	1.6
24	1.9	15	7.8	17	7.8	10	6.2	6.7	7.7	2.7	2.2	1.7
25	3.5	19	22	407	7.7	30	151	6.1	38	2.6	2.1	1.9
26	372	24	13	530	7.5	335	362	5.5	10	2.6	2.1	1.7
27	21	11	9.6	43	7.2	53	53	5.0	7.8	2.5	2.5	1.6
28	9.5	11	8.5	26	8.5	29	23	4.9	6.5	4.1	4.5	1.6
29	6.8	16	7.7	19	---	21	16	4.9	5.5	2.8	2.3	1.4
30	5.3	72	9.3	16	---	17	13	4.8	5.0	2.5	3.2	1.5
31	4.4	---	14	14	---	15	---	5.4	---	2.4	2.8	---
TOTAL	478.5	715.6	542.3	2129.4	267.7	1386.5	833.2	1039.1	433.5	122.9	190.1	94.7
MEAN	15.4	23.9	17.5	68.7	9.56	44.7	27.8	33.5	14.5	3.96	6.13	3.16
MAX	372	315	80	530	14	335	362	326	109	18	29	10
MIN	1.7	3.8	7.7	7.3	7.2	9.5	6.2	4.8	3.6	2.4	2.1	1.4
CFSM	.96	1.48	1.09	4.27	.59	2.78	1.73	2.08	.90	.25	.38	.20
IN	1.11	1.65	1.25	4.92	.62	3.20	1.93	2.40	1.00	.28	.44	.22

CAL YR 1977 TOTAL 5849.75 MEAN 16.0 MAX 823 MIN .77 CFSM .99 IN 13.52
WTR YR 1978 TOTAL 8233.50 MEAN 22.6 MAX 530 MIN 1.4 CFSM 1.40 IN 19.02

02142900 LONG CREEK NEAR PAW CREEK, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
26...	1100	585	351	554	86
26...	1545	111	244	73	--
JAN					
25...	0925	565	1320	2010	--
27...	1210	39	62	6.5	--
MAR					
02...	0940	8.7	8	.19	--
APR					
20...	1400	8.6	17	.39	--
26...	0905	187	185	93	--
MAY					
04...	1440	53	727	104	--
04...	2015	397	1150	1230	--
05...	0922	63	88	15	--
JUL					
17...	1100	5.0	75	1.0	--
AUG					
15...	1100	5.5	138	2.0	--
SEP					
13...	1350	2.2	64	.38	--

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) National Geodetic Vertical Datum of 1929. July 1925 to November 1931, at site 450 ft (137 m) upstream at same datum.

REMARKS.--Records good. The 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 317 of this report.

AVERAGE DISCHARGE.--42 years (1925-31, 1942-78), 132 ft³/s (3.738 m³/s), 22.41 in/yr (569 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)
Nov. 6	1200	*11600	329	*18.06	5.505	Jan. 8	2300	2850	80.7	7.16	2.182
Nov. 7	0400	9450	268	16.05	4.892	Jan. 26	0230	5830	165	11.66	3.554

Minimum discharge, 47 ft³/s (1.33 m³/s) Oct. 7, 23, gage height, 1.08 ft (0.329 m); minimum daily, 48 ft³/s (1.36 m³/s) Oct. 4, 5, 7, 20, 21, 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	70	170	99	179	115	183	150	100	73	149	77
2	57	69	159	97	174	112	174	141	98	89	93	81
3	52	73	133	91	164	128	162	131	97	84	149	90
4	48	140	120	87	155	118	159	614	95	76	158	80
5	48	270	276	87	151	112	157	566	90	72	101	72
6	49	4650	355	90	148	116	154	269	90	74	119	71
7	48	3200	196	90	137	127	149	220	112	75	680	69
8	53	504	150	858	141	137	147	481	147	73	382	66
9	102	294	134	1440	137	141	142	569	184	73	246	65
10	79	211	119	382	136	611	142	329	119	81	158	63
11	59	170	109	233	132	455	145	236	102	71	821	83
12	55	146	104	188	129	263	142	206	98	69	319	71
13	52	133	102	180	129	206	138	240	96	66	394	79
14	53	121	115	174	129	215	131	227	90	66	338	81
15	51	114	137	153	124	227	129	203	87	69	554	79
16	52	108	118	138	122	194	126	183	86	209	232	71
17	51	123	112	196	122	159	129	169	87	106	163	63
18	50	107	127	217	122	152	131	157	85	79	131	61
19	49	100	121	204	127	147	149	149	84	71	117	60
20	48	96	116	324	123	140	134	142	112	69	121	60
21	48	91	112	304	120	135	125	135	121	66	111	60
22	49	94	104	207	118	133	121	131	116	65	97	60
23	48	114	98	175	113	128	118	128	92	65	92	63
24	48	110	97	162	114	124	118	131	86	87	88	66
25	53	107	116	868	112	416	151	129	85	93	85	64
26	508	119	104	2460	111	1390	300	118	102	71	82	66
27	176	106	98	489	108	531	293	113	90	68	80	72
28	113	105	94	317	112	307	190	109	82	145	80	70
29	91	113	90	248	---	246	158	111	77	87	77	68
30	80	114	95	213	---	212	150	109	74	71	81	64
31	73	---	105	195	---	194	---	107	---	93	94	---
TOTAL	2398	11772	4086	10966	3689	7701	4647	6703	2984	2556	6392	2095
MEAN	77.4	392	132	354	132	248	155	216	99.5	82.5	206	69.8
MAX	508	4650	355	2460	179	1390	300	614	184	209	821	90
MIN	48	69	90	87	108	112	118	107	74	65	77	60
CFSM	.97	4.90	1.65	4.43	1.65	3.10	1.94	2.70	1.24	1.03	2.58	.87
IN.	1.12	5.47	1.90	5.10	1.72	3.58	2.16	3.12	1.39	1.19	2.97	.97

CAL YR 1977 TOTAL 49090 MEAN 134 MAX 4650 MIN 32 CFSM 1.68 IN 22.83
WTR YR 1978 TOTAL 65989 MEAN 181 MAX 4650 MIN 48 CFSM 2.26 IN 30.68

02143000 HENRY FORK NEAR HENRY RIVER, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
06...	1445	8000	381	8230	97
FEB					
14...	1100	129	1	.35	--
MAY					
04...	1415	501	39	53	--
04...	1520	750	118	239	--
AUG					
15...	1125	521	70	98	--
SEP					
19...	1230	59	8	1.3	--

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) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 468 of this report.

AVERAGE DISCHARGE.--17 years, 50.2 ft³/s (1.422 m³/s), 26.84 in/yr (682 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,220 ft³/s (204 m³/s) Oct. 17, 1975, gage height, 19.74 ft (6.017 m), from rating curve extended above 3,400 ft³/s (96.3 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 7.3 ft³/s (0.21 m³/s) July 28, 29, 1966; minimum gage height, 1.58 ft (0.482 m) Sept. 3, 4, 5, 6, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1940 reached a stage of about 39 ft (11.9 m), from information by local resident. Flood of July 1916 reached a stage of about 19 ft (5.8 m), from information by North Carolina State Highway Commission

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 6	2200	*5760	163	*17.80	5.425	Jan. 26	0030	2450	69.4	11.67	3.557
Jan. 8	2130	1030	29.2	6.40	1.951						

Minimum discharge, 12 ft³/s (0.34 m³/s) Oct. 4, 5, 6, 7, 19, 20, 21, gage height, 1.69 ft (0.515 m); minimum daily, 13 ft³/s (0.37 m³/s) Oct. 4-7, 18-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	23	86	36	57	37	56	51	34	32	51	26
2	17	23	70	36	56	37	53	47	33	42	29	32
3	16	27	54	33	53	41	49	43	33	32	44	56
4	13	147	48	32	50	37	48	247	32	28	39	30
5	13	201	138	31	49	35	47	189	32	28	30	27
6	13	1730	145	33	47	37	46	86	32	28	42	26
7	13	624	71	32	50	41	44	90	37	27	259	25
8	15	151	55	369	47	47	43	276	56	26	154	23
9	47	85	50	426	44	48	43	206	65	24	172	23
10	23	65	43	122	43	296	42	114	40	23	61	23
11	18	52	41	83	42	149	43	79	35	22	71	28
12	16	44	39	61	42	90	43	70	33	21	115	24
13	15	40	39	60	42	75	41	101	32	23	98	23
14	15	37	51	58	42	87	39	104	30	27	141	25
15	15	36	60	50	40	90	38	80	30	28	219	25
16	15	35	52	45	40	67	38	68	30	93	79	24
17	14	41	49	57	39	56	40	60	30	36	54	22
18	13	36	55	60	40	50	42	56	29	28	43	21
19	13	33	53	66	42	47	50	53	30	25	38	20
20	13	32	48	93	40	45	42	50	57	23	52	20
21	13	32	44	83	39	43	40	49	37	22	40	20
22	13	34	40	62	37	43	38	46	34	21	34	19
23	13	48	37	55	36	41	37	46	31	21	32	20
24	13	49	36	53	36	40	36	46	29	26	30	21
25	32	46	47	409	36	174	70	44	30	29	28	21
26	261	51	42	735	36	449	217	42	34	23	28	19
27	61	44	38	149	34	178	132	41	30	21	27	19
28	39	44	36	95	37	98	71	41	27	40	27	19
29	32	43	36	75	---	75	56	41	26	25	28	18
30	28	48	36	63	---	65	53	39	25	21	30	18
31	25	---	37	61	---	59	---	38	---	63	28	---
TOTAL	862	3901	1676	3623	1196	2677	1637	2543	1033	928	2123	717
MEAN	27.8	130	54.1	117	42.7	86.4	54.6	82.0	34.4	29.9	68.5	23.9
MAX	261	1730	145	735	57	449	217	276	65	93	259	56
MIN	13	23	36	31	34	35	36	38	25	21	27	18
CFSM	1.09	5.12	2.13	4.61	1.68	3.40	2.15	3.23	1.35	1.18	2.70	.94
IN.	1.26	5.71	2.45	5.31	1.75	3.92	2.40	3.72	1.51	1.36	3.11	1.05

CAL YR 1977 TOTAL 16715.3 MEAN 45.8 MAX 1730 MIN 9.3 CFSM 1.80 IN 24.48
WTR YR 1978 TOTAL 22916.0 MEAN 62.8 MAX 1730 MIN 13 CFSM 2.47 IN 33.56

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. Suspended-sediment records for the current year are published on page 320 of this report.

AVERAGE DISCHARGE.--27 years, 92.0 ft³/s (2.605 m³/s), 18.27 in/yr (464 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)
Nov. 6	2230	*4160	118	*7.38	2.249	Jan. 26	1300	2350	66.6	5.74	1.750
Jan. 9	0700	2690	76.2	6.09	1.856						

Minimum discharge, 27 ft³/s (0.76 m³/s) Oct. 7, 20, 21, 23, 24, 25, July 13; minimum daily, 28 ft³/s (0.79 m³/s) Oct. 4-7, 21, 23, 24, July 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	47	221	66	109	77	100	80	51	35	76	38
2	34	45	129	62	108	70	94	76	48	36	41	36
3	31	45	96	60	102	90	88	70	49	40	80	59
4	28	51	87	58	101	90	82	387	52	37	73	47
5	28	78	167	59	93	83	85	365	44	35	42	40
6	28	2370	199	65	92	83	80	154	44	37	43	36
7	28	1680	104	65	87	86	77	138	178	35	138	34
8	29	287	88	675	87	91	74	381	129	34	85	32
9	40	160	82	1790	85	96	74	211	312	33	50	31
10	36	123	69	304	85	559	71	142	160	31	48	33
11	30	96	64	167	84	297	74	110	91	29	42	173
12	30	82	62	135	83	186	77	98	75	28	42	55
13	29	70	63	142	84	200	74	131	61	28	803	44
14	29	65	77	160	82	170	69	106	54	36	185	38
15	30	62	95	134	75	164	63	92	52	80	129	40
16	29	60	73	106	73	126	63	89	50	188	82	41
17	29	71	66	206	74	107	63	82	48	67	64	38
18	29	62	93	225	75	97	66	77	46	45	55	36
19	29	57	90	206	83	91	94	74	46	39	50	34
20	29	55	82	659	79	88	71	71	44	35	47	34
21	28	53	77	394	74	85	64	67	96	33	45	33
22	29	54	68	187	71	82	62	62	85	30	42	32
23	28	79	64	144	69	80	62	61	79	29	40	31
24	28	66	63	127	72	77	59	63	50	70	38	35
25	33	79	88	783	67	234	113	61	46	61	37	36
26	761	82	70	1780	68	1010	271	57	52	39	36	32
27	157	64	63	358	66	427	175	54	45	32	35	31
28	91	134	62	197	69	206	109	52	41	89	37	31
29	66	141	59	151	---	157	89	56	37	44	36	30
30	57	117	64	131	---	130	83	59	36	32	42	31
31	49	---	74	118	---	110	---	63	---	30	53	---
TOTAL	1934	6435	2759	9714	2297	5449	2626	3589	2201	1417	2615	1241
MEAN	62.4	215	89.0	313	82.0	176	87.5	116	73.4	45.7	84.4	41.4
MAX	761	2370	221	1790	109	1010	271	387	312	188	803	173
MIN	28	45	59	58	66	70	59	52	36	28	35	30
CFSM	.91	3.14	1.30	4.58	1.20	2.57	1.28	1.70	1.07	.67	1.23	.61
IN.	1.05	3.50	1.50	5.28	1.25	2.96	1.43	1.95	1.20	.77	1.42	.67

CAL YR 1977 TOTAL 30321.0 MEAN 83.1 MAX 2370 MIN 9.0 CFSM 1.22 IN 16.49
WTR YR 1978 TOTAL 42277.0 MEAN 116 MAX 2370 MIN 28 CFSM 1.70 IN 22.99

02143500 INDIAN CREEK NEAR LABORATORY, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
07...	1145	1540	385	1600	60
MAY					
04...	1240	264	62	44	--
08...	1240	386	204	213	--

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 mi² (81.3 km²).

PERIOD OF RECORD.--October 1952 to current year. Monthly discharge only for some periods, published in WSP 1723.

REVISED RECORDS.--WSP 1723: 1959-60(M). WSP 1904: 1959-60.

GAGE.--Water-stage recorder. Datum of gage is 706.1 ft (215.22 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Bessemer City diverts water supply from above gaging station and returns waste water to South Fork Catawba River below mouth of Long Creek, causing some diurnal fluctuation; an average of 1.8 ft³/s (0.051 m³/s) was diverted during the year. Suspended-sediment records for the current year are published on page 322 of this report.

AVERAGE DISCHARGE.--26 years, 36.4 ft³/s (1.031 m³/s), 15.74 in/yr (400 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,500 ft³/s (184 m³/s) Oct. 16, 1971, gage height, 9.10 ft (2.774 m), from rating curve extended above 2,100 ft³/s (59.5 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 0.4 ft³/s (0.011 m³/s) Oct. 7, 1954; minimum daily, 0.8 ft³/s (0.023 m³/s) Oct. 7, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of 26 ft (7.92 m) at site on left bank 1,500 ft (460 m) upstream, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (23 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 26	0500	854	24.2	5.01	1.527	Jan. 26	0800	1490	42.2	6.47	1.972
Nov. 6	1100	*4930	140	*8.77	2.673	Mar. 26	0600	1050	29.7	5.52	1.683
Jan. 8	2100	1090	30.9	5.62	1.713	May 4	1730	1140	32.3	5.74	1.750

Minimum discharge, 7.1 ft³/s (0.20 m³/s) Sept. 29, gage height, 1.17 ft (0.357 m); minimum daily, 7.4 ft³/s (0.21 m³/s) Oct. 6, 20-24, Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	14	90	28	37	29	37	28	21	12	15	15
2	9.5	13	49	26	38	26	34	29	19	16	12	12
3	11	14	37	25	36	38	33	26	19	16	13	14
4	7.5	15	32	24	34	39	32	447	19	13	34	12
5	7.5	16	118	23	33	35	31	205	18	12	17	11
6	7.4	1860	76	30	32	35	30	60	18	12	19	11
7	7.5	212	43	28	29	34	28	58	19	11	28	9.9
8	8.0	66	35	468	31	34	27	196	23	11	20	9.5
9	13	45	33	434	31	36	27	216	38	11	13	8.9
10	9.7	34	29	72	30	247	26	66	24	17	13	8.8
11	8.3	27	27	48	28	71	27	49	20	12	13	14
12	8.2	24	25	40	27	56	26	42	19	12	13	17
13	7.8	21	25	63	29	52	26	50	17	11	17	12
14	8.2	20	35	78	28	51	25	42	15	25	75	12
15	8.1	20	42	55	27	44	24	41	15	111	29	10
16	8.6	19	31	43	27	39	23	38	15	67	14	10
17	8.5	28	30	99	27	35	24	35	14	24	13	9.5
18	7.9	22	39	72	27	33	25	32	14	17	12	9.0
19	7.7	19	34	87	30	32	53	30	14	14	11	8.6
20	7.4	18	32	298	29	31	30	29	13	13	11	8.5
21	7.4	17	30	92	27	31	26	27	14	12	11	8.8
22	7.4	18	26	57	26	30	24	26	19	11	10	8.3
23	7.4	29	25	48	25	29	23	25	25	11	9.7	7.9
24	7.4	23	25	43	25	28	23	26	14	11	9.4	8.7
25	8.0	24	44	497	25	144	60	24	14	12	9.2	9.2
26	401	26	32	883	24	679	102	23	13	11	9.1	8.2
27	46	21	28	84	24	107	52	22	13	11	9.5	8.3
28	26	36	25	59	26	64	37	21	12	26	10	8.1
29	20	48	24	48	---	51	31	21	12	13	8.9	7.4
30	17	47	28	42	---	44	28	27	17	12	76	7.6
31	15	---	33	39	---	40	---	28	---	11	59	---
TOTAL	732.4	2796	1182	3933	812	2244	994	1989	527	578	613.8	305.2
MEAN	23.6	93.2	38.1	127	29.0	72.4	33.1	64.2	17.6	18.6	19.8	10.2
MAX	401	1860	118	883	38	679	102	447	38	111	76	17
MIN	7.4	13	24	23	24	26	23	21	12	11	8.9	7.4
CFSM	.75	2.97	1.21	4.05	.92	2.31	1.05	2.05	.56	.59	.63	.33
IN.	.87	3.31	1.40	4.66	.96	2.66	1.18	2.36	.62	.68	.73	.36

CAL YR 1977 TOTAL 13535.9 MEAN 37.1 MAX 1860 MIN 2.5 CFSM 1.18 IN 16.04
WTR YR 1978 TOTAL 16706.4 MEAN 45.8 MAX 1860 MIN 7.4 CFSM 1.46 IN 19.79

02144000 LONG CREEK NEAR BESSEMER CITY, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
26...	1245	492	612	813	74
NOV					
07...	1055	192	298	154	--
APR					
20...	1100	30	24	1.9	--
26...	1010	83	227	51	--
MAY					
08...	1120	378	153	156	--
AUG					
16...	1345	15	48	1.9	--
SEP					
14...	1050	11	60	1.8	--

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 mi² (79.0 km²).

PERIOD OF RECORD.--May 1962 to current year. Prior to October 1963, published as Sugar (Irwin) Creek at Charlotte.

GAGE.--Water-stage recorder. Datum of gage is 591.53 ft (180.298 m) National Geodetic Vertical Datum of 1929 (levels by city of Charlotte).

REMARKS.--Records good. Fluctuation at low flow caused by wash water, from city of Charlotte water filtration plants and industry, diverted into the basin from the Catawba River (city water supply). Wash water from city water plants averaged 0.95 ft³/s (0.027 m³/s). Creek channel improved by dredging in 1917 and maintained by Mecklenburg County Drainage Commission to present time. The drainage area is urbanized and has an impervious area of about 20 percent. Suspended-sediment records for the current year are published on page 324 of this report.

AVERAGE DISCHARGE.--16 years, 43.6 ft³/s (1.235 m³/s), 19.41 in/yr (493 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,880 ft³/s (251 m³/s) May 30, 1975, gage height, 18.04 ft (5.499 m); minimum, 3.9 ft³/s (0.11 m³/s) Aug. 7, 8, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 6, 1936 reached a stage of about 17.3 ft (5.27 m) at site 400 ft (122 m) downstream, from information by plant employee. Peak may have been affected by failure of Lakewood Dam 5 mi (8.0 km) upstream. Flood of Jan. 6, 1962 reached a stage of 14.32 ft (4.365 m), from floodmarks, discharge, 4,120 ft³/s (117 m³/s). Flood of Apr. 11, 1962 reached a stage of 15.18 ft (4.627 m), from floodmarks, discharge, 4,740 ft³/s (134 m³/s), on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 26	0315	3130	88.6	12.30	3.749	Mar. 26	0630	1400	39.6	8.09	2.466
Nov. 6	0815	2490	70.5	11.00	3.353	Apr. 25	2230	2220	62.9	10.33	3.149
Jan. 25	2345	*3180	90.1	*12.39	3.776	May 7	2400	2090	59.2	10.01	3.051
Mar. 10	0230	1350	38.2	7.90	2.408						

Minimum discharge, 7.1 ft³/s (0.20 m³/s) Sept. 20, gage height, 0.56 ft (0.171 m); minimum daily, 8.2 ft³/s (0.23 m³/s) Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	14	86	25	30	32	24	31	14	16	11	44
2	33	13	32	25	33	19	23	31	12	46	12	18
3	20	14	25	25	28	155	22	27	21	15	100	102
4	8.5	51	23	25	26	54	22	164	16	23	141	13
5	9.4	83	141	25	24	42	21	53	13	42	54	11
6	8.5	494	52	65	24	37	20	36	82	12	120	11
7	8.4	59	32	32	23	35	20	243	29	11	60	10
8	8.9	33	29	271	23	33	19	451	196	12	30	11
9	36	29	30	152	24	56	18	235	206	12	80	9.0
10	11	26	25	46	24	428	20	45	39	12	70	11
11	8.8	24	24	36	22	67	20	35	27	12	35	19
12	9.2	24	24	34	23	77	23	30	26	35	33	12
13	38	20	23	209	27	47	22	102	21	11	60	11
14	32	21	39	99	24	51	18	39	15	40	90	11
15	11	20	28	54	24	40	16	38	15	118	23	8.4
16	17	21	27	42	24	36	16	35	15	139	15	8.6
17	9.9	34	29	114	24	33	22	33	14	25	14	9.4
18	9.3	22	31	54	23	31	19	30	15	22	13	8.6
19	9.6	21	21	188	23	27	42	25	13	13	12	9.4
20	9.4	20	48	276	23	27	18	19	13	12	13	8.2
21	9.1	21	26	63	23	27	17	18	109	11	12	10
22	8.9	37	24	44	22	27	15	17	109	10	12	17
23	8.6	54	23	43	21	27	16	18	72	10	12	33
24	9.1	24	23	46	21	26	17	19	26	11	11	9.8
25	32	29	60	868	22	123	371	17	69	10	12	9.3
26	816	25	25	504	21	463	317	16	20	11	11	9.6
27	38	20	25	150	21	72	57	15	17	11	67	9.7
28	26	24	25	60	46	42	38	15	18	27	31	9.8
29	22	22	25	43	---	36	33	20	18	9.9	13	9.8
30	15	101	40	35	---	28	31	25	17	9.9	12	9.3
31	15	---	31	31	---	26	---	17	---	9.8	14	---
TOTAL	1308.6	1400	1096	3684	693	2224	1337	1899	1277	758.6	1193	472.9
MEAN	42.2	46.7	35.4	119	24.8	71.7	44.6	61.3	42.6	24.5	38.5	15.8
MAX	816	494	141	868	46	463	371	451	206	139	141	102
MIN	8.4	13	21	25	21	19	15	15	12	9.8	11	8.2
CFSM	1.38	1.53	1.16	3.90	.81	2.35	1.46	2.01	1.40	.80	1.26	.52
IN.	1.60	1.71	1.34	4.49	.85	2.71	1.63	2.32	1.56	.93	1.46	.58

CAL YR 1977 TOTAL 14556.4 MEAN 39.9 MAX 1510 MIN 7.1 CFSM 1.31 IN 17.75
WTR YR 1978 TOTAL 17343.1 MEAN 47.5 MAX 868 MIN 8.2 CFSM 1.56 IN 21.15

02146300 IRWIN CREEK NEAR CHARLOTTE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
26...	0735	1140	5280	16300	14
JAN					
25...	1445	314	2150	1820	--
27...	1235	58	77	12	--
MAR					
06...	1000	36	17	1.7	--
APR					
20...	1520	18	8	.39	--
26...	1230	227	873	535	--
MAY					
04...	1500	560	2810	4250	--
04...	1940	304	717	589	--
04...	2205	182	689	339	--
08...	2400	1180	1970	6280	--
AUG					
04...	0915	41	394	44	--
09...	2230	500	991	1340	--
10...	1000	13	18	.63	--
15...	1325	19	23	1.2	--
SEP					
13...	1545	9.1	12	.29	--

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 December 1977 (discontinued).

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) National Geodetic Vertical Datum of 1929 (levels by city of Charlotte). 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 indefinite gage-height record, Dec. 2 to Dec. 31, which are fair. 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 468 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 PERIOD OCTOBER TO DECEMBER 1977.--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. 26	0330	*4410	125	12.57	3.831	Nov. 6	0815	3370	95.4	10.97	3.344

Minimum daily discharge, 5.6 ft³/s (0.159 m³/s) Oct. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	8.3	106									
2	24	8.2	33									
3	28	8.4	21									
4	6.7	59	18									
5	6.0	92	196									
6	5.9	533	76									
7	5.8	45	25									
8	5.8	23	20									
9	51	18	26									
10	8.3	14	19									
11	6.1	11	16									
12	5.8	10	17									
13	70	9.4	17									
14	64	9.3	75									
15	10	9.5	32									
16	14	9.8	16									
17	7.9	44	19									
18	6.5	13	34									
19	6.3	9.5	26									
20	6.0	9.0	80									
21	5.9	9.0	31									
22	5.8	42	21									
23	5.6	151	26									
24	6.4	21	25									
25	28	46	105									
26	1100	25	24									
27	28	15	20									
28	18	25	20									
29	13	20	20									
30	9.9	110	41									
31	8.9	---	77									
TOTAL	1573.7	1407.4	1282									
MEAN	50.8	46.9	41.4									
MAX	1100	533	196									
MIN	5.6	8.2	16									

CAL YR 1977 TOTAL 18060.8 MEAN 49.5 MAX 2150 MIN 3.2

02146507 LITTLE SUGAR CREEK AT ARCHDALE ROAD AT CHARLOTTE, N. C.

LOCATION.--Lat 35°08'52", long 80°51'29", Mecklenburg County, Hydrologic Unit 03050103, on left bank at downstream side of bridge on Secondary Road 3657 (Archdale Drive) in Charlotte, 0.7 mi (1.1 km) downstream from Little Hope Creek, and 5.3 mi (8.5 km) south of City Hall, Charlotte.

DRAINAGE AREA.--42.6 mi² (110.3 km²)

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

GAGE.--Water-stage recorder. Datum of gage is 564.46 ft (172.047 m) National Geodetic Vertical Datum of 1929 (levels by city of Charlotte).

REMARKS.--Records good except those for period of indefinite gage-height record Oct. 1 to Dec. 15, which are fair. The city of Charlotte diverted an average of 65.8 ft³/s (1.86 m³/s) for municipal water supply from Catawba River at Mountain Island Lake. An average of 19.4 ft³/s (0.55 m³/s) of sewage effluent from Little Sugar Creek waste treatment plant was discharged into the stream 0.4 mi (0.6 km) upstream from gage. Since 1911 the creek channel has been dredged and improved. The drainage area is urbanized and has an impervious area of about 20 percent. Suspended-sediment records for the current year are published on page 327 of this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft³/s (142 m³/s) Jan. 25, 1978, gage height, 11.00 ft (3.353 m); minimum, 16 ft³/s (0.45 m³/s) Sept. 18, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 22, 1975 reached a stage of about 12.7 ft (3.87 m), from flood-marks, discharge, 7,360 ft³/s (208 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,100 ft³/s (59 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 26	0330	4410	125	10.48	3.914	Apr. 25	2200	2350	66.6	8.27	2.521
Nov. 6	0815	3370	95.4	9.46	2.883	May 8	0015	3530	100	9.63	2.935
Jan. 25	2330	*5000	142	*11.00	3.353	June 23	0045	2220	62.9	8.09	2.466
Mar. 10	0230	2570	72.8	8.55	2.606	Aug. 14	1445	2510	71.1	8.47	2.582

Minimum discharge, 16 ft³/s (0.45 m³/s) Sept. 18, gage height, 1.93 ft (0.588 m); minimum daily, 23 ft³/s (0.65 m³/s) Sept. 17, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	25	125	38	46	71	47	36	34	24	37	40
2	38	25	50	37	52	43	44	37	29	201	32	37
3	43	25	37	37	46	350	43	32	31	26	117	188
4	22	77	33	40	42	95	44	270	33	60	267	30
5	20	110	214	44	40	63	44	65	28	82	198	28
6	21	559	94	137	41	56	44	37	163	34	230	27
7	22	65	42	56	40	52	44	376	64	31	67	26
8	21	42	36	683	40	54	43	755	360	31	63	26
9	67	36	43	298	40	107	40	395	320	30	173	25
10	24	32	36	73	40	779	43	84	52	31	147	24
11	22	29	30	55	39	107	41	56	31	31	35	25
12	22	27	34	49	37	179	45	48	31	55	34	25
13	88	25	37	468	49	98	50	179	30	28	49	28
14	82	26	96	213	46	91	39	61	28	228	486	26
15	26	26	50	91	48	63	36	62	28	381	77	26
16	29	27	37	61	53	54	34	48	28	288	40	25
17	25	62	38	211	48	50	46	43	27	41	36	23
18	23	29	52	92	46	47	40	40	25	56	33	25
19	24	25	36	363	49	45	130	40	27	34	30	25
20	22	23	101	492	46	45	40	37	27	31	29	25
21	23	25	51	98	47	44	38	34	138	30	34	25
22	22	59	40	64	50	44	37	35	293	29	28	25
23	21	172	37	56	54	43	34	35	394	27	29	25
24	23	37	37	54	58	40	36	36	38	28	28	23
25	45	72	124	1470	57	288	520	34	279	28	27	25
26	1130	41	41	815	56	680	397	34	29	28	27	25
27	46	30	37	106	59	106	69	32	25	28	50	25
28	36	41	37	70	117	69	44	30	25	58	72	25
29	29	34	37	58	---	57	37	38	24	27	28	24
30	26	127	75	48	---	52	34	37	24	26	32	24
31	25	---	60	49	---	50	---	40	---	27	29	---
TOTAL	2087	1933	1797	6426	1386	3922	2183	3086	2665	2059	2564	950
MEAN	67.3	64.4	58.0	207	49.5	127	72.8	99.5	88.8	66.4	82.7	31.7
MAX	1130	559	214	1470	117	779	520	755	394	381	486	188
MIN	20	23	30	37	37	40	34	30	24	24	27	23

WTR YR 1978 TOTAL 31058 MEAN 85.1 MAX 1470 MIN 20

02146507 LITTLE SUGAR CREEK AT ARCHDALE ROAD AT CHARLOTTE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
JAN												
25...	1545	193	457	238	--	--	--	--	--	--	--	--
25...	2240	3900	2340	24600	12	18	25	33	42	57	70	89
25...	2350	4600	1840	22900	8	19	25	35	42	63	75	92
APR												
20...	1505	332	348	312	--	--	--	--	--	--	--	--
MAY												
04...	1530	730	1040	2050	--	--	--	--	--	--	--	--
04...	1915	730	1150	2270	--	--	--	--	--	--	--	--
04...	2140	421	879	999	--	--	--	--	--	--	--	--
09...	2020	1700	2210	10100	--	--	--	--	--	--	--	--
AUG												
09...	2150	1300	2480	8710	--	--	--	--	--	--	--	--
15...	1445	58	237	37	--	--	--	--	--	--	--	--
SEP												
15...	1445	272	30	22	--	--	--	--	--	--	--	--

02146600 McALPINE CREEK AT SARDIS ROAD NEAR CHARLOTTE, N. C.

LOCATION.--Lat 35°08'13", long 80°46'06", Mecklenburg County, Hydrologic Unit 03050103, near left bank on downstream end of bridge pier at Sardis Road (Secondary Road 3356), 1.7 mi (2.7 km) downstream from Irvins Creek, and 7 mi (11 km) southeast of city hall, Charlotte.

DRAINAGE AREA.--38.3 mi² (99.2 km²).

PERIOD OF RECORD.--April 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 553.39 ft (168.673 m) National Geodetic Vertical Datum of 1929 (levels by city of Charlotte).

REMARKS.--Records good 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 329 of this report.

AVERAGE DISCHARGE.--16 years, 39.3 ft³/s (1.113 m³/s), 13.93 in/yr (354 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. 26	0715	2820	79.9	12.48	3.804	May 9	0130	1960	55.5	10.87	3.313
Jan. 26	0200	*3000	85.0	*12.73	3.880	July 5	0330	1340	37.9	9.15	2.789
Mar. 10	0300	1760	49.8	10.39	3.167	July 14	2345	2460	69.7	11.91	3.630
May 8	0245	2420	68.5	11.83	3.606						

Minimum discharge, 1.9 ft³/s (0.054 m³/s) Sept. 27, gage height, 0.89 ft (0.271 m); minimum daily, 2.7 ft³/s (0.076 m³/s) Sept. 27, 29, 30.

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	7.6	86	16	23	32	23	19	8.2	7.8	6.1	5.2
2	6.0	7.7	35	14	25	19	21	18	7.1	62	6.5	5.2
3	7.1	8.0	21	12	23	189	19	15	11	13	21	20
4	4.7	19	17	11	20	104	21	141	9.8	43	36	11
5	4.6	32	73	11	20	59	19	77	7.1	283	20	8.6
6	4.4	197	60	34	19	46	20	31	15	22	94	8.4
7	4.3	48	23	26	17	37	17	190	15	14	27	7.9
8	4.8	21	16	362	16	32	15	882	76	11	15	7.2
9	15	15	17	336	16	48	15	522	124	10	32	7.2
10	5.8	13	14	60	16	671	14	65	33	8.9	41	7.2
11	4.1	12	12	34	16	117	14	35	14	8.4	13	7.2
12	4.0	9.7	11	27	15	135	14	27	11	8.6	15	7.4
13	20	9.3	11	308	17	116	18	75	9.5	7.3	8.9	12
14	8.7	9.0	17	228	19	73	14	41	7.9	353	39	13
15	5.1	8.9	16	92	16	50	12	30	7.3	533	13	7.6
16	5.4	8.9	13	44	17	37	13	25	7.0	347	8.5	6.6
17	4.7	15	12	102	17	29	15	20	6.6	70	7.8	5.9
18	4.2	9.9	17	75	17	25	14	17	6.5	33	6.9	4.7
19	4.1	8.6	14	221	19	23	38	16	6.1	21	6.3	3.8
20	3.9	8.4	22	407	17	22	16	14	5.9	17	5.2	3.2
21	3.8	8.4	18	94	16	21	13	13	53	13	4.7	3.1
22	4.1	23	13	50	15	20	12	13	127	12	4.2	3.0
23	3.6	270	12	36	14	19	11	12	88	10	4.0	3.0
24	3.4	36	11	30	14	18	11	13	18	10	3.8	3.1
25	4.6	32	37	998	14	82	192	11	220	9.3	3.8	3.3
26	1040	32	17	1010	13	370	269	12	24	7.8	3.8	3.1
27	32	17	13	81	13	81	72	9.2	16	8.8	3.8	2.7
28	15	17	12	48	23	48	35	8.9	12	16	6.7	2.8
29	9.8	14	11	34	---	35	24	8.9	9.6	8.0	6.0	2.7
30	8.1	31	18	30	---	29	20	8.4	9.0	6.7	5.2	2.7
31	8.0	---	25	27	---	25	---	9.7	---	6.3	4.9	---
TOTAL	1259.0	948.4	694	4858	487	2612	1011	2379.1	964.6	1980.9	473.1	188.8
MEAN	40.6	31.6	22.4	157	17.4	84.3	33.7	76.7	32.2	63.9	15.3	6.29
MAX	1040	270	86	1010	25	671	269	882	220	533	94	20
MIN	3.4	7.6	11	11	13	18	11	8.4	5.9	6.3	3.8	2.7
CFSM	1.06	.83	.59	4.10	.45	2.20	.88	2.00	.84	1.67	.40	.16
IN.	1.22	.92	.67	4.72	.47	2.54	.98	2.31	.94	1.92	.46	.18

CAL YR 1977 TOTAL 14584.5 MEAN 40.0 MAX 2390 MIN 1.2 CFSM 1.04 IN 14.17
WTR YR 1978 TOTAL 17855.9 MEAN 48.9 MAX 1040 MIN 2.7 CFSM 1.28 IN 17.34

02146600 McALPINE CREEK AT SARDIS ROAD NEAR CHARLOTTE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
26...	0630	2680	1420	10300	72
JAN					
25...	1630	425	354	406	--
MAR					
07...	1100	37	23	2.3	--
APR					
26...	1815	185	185	92	--
MAY					
04...	1640	88	631	150	--
04...	2303	326	796	701	--
09...	1200	245	272	180	--
JUL					
06...	1030	24	57	3.7	--
17...	0915	57	61	9.4	--
AUG					
16...	1330	8.7	12	.28	--
SEP					
22...	1230	3.4	6	.06	--

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) National Geodetic Vertical Datum of 1929 (levels by city of Charlotte. Prior to Oct. 13, 1970, at site 73 ft (22.2 m) upstream at same datum. Oct. 13, 1970 to Dec. 30, 1971 at site 154 ft (47 m) downstream at datum 2.00 ft (0.610 m) lower.

REMARKS.--Records good except those for period of no gage-height record, Aug. 21 to Sept. 30, which are poor. 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 331 of this report.

AVERAGE DISCHARGE.--16 years, 7.61 ft³/s (0.216 m³/s), 14.81 in/yr (376 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. 26	0315	*925	26.2	*6.62	2.018	May 4	1730	623	17.6	5.02	1.530
Nov. 6	0730	636	18.0	5.09	1.551	May 7	2345	864	24.5	6.32	1.926
Jan. 25	2245	884	25.0	6.42	1.957	July 14	2300	662	18.7	5.24	1.597
Mar. 10	0200	661	18.7	5.23	1.594	Aug. 14	1415	754	21.4	5.75	1.753

Minimum discharge, 0.09 ft³/s (0.003 m³/s) Oct. 4-7, gage height, 0.70 ft (0.213 m); minimum daily, 0.13 ft³/s (0.004 m³/s) Oct. 4-7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.48	.42	15	2.3	2.6	5.4	2.5	2.1	.93	.42	.29	7.2
2	.51	.42	3.3	2.0	4.3	2.7	2.3	1.9	.71	24	.69	1.4
3	.32	.51	2.1	1.7	3.4	70	2.2	1.4	3.2	1.1	14	18
4	.13	5.7	1.7	1.5	3.1	15	2.0	101	.92	1.5	30	1.0
5	.13	16	26	1.5	3.0	7.0	2.0	10	.60	14	26	.58
6	.13	83	6.3	14	3.0	5.2	2.0	3.1	16	.97	13	.58
7	.13	4.0	2.2	3.9	2.7	4.2	1.9	81	13	.71	4.2	.54
8	.14	1.9	1.8	156	2.7	4.4	1.6	177	63	.58	3.4	.54
9	5.8	1.3	2.6	40	2.8	21	1.6	77	43	.51	46	.47
10	.47	1.0	1.5	5.2	2.8	153	1.6	6.8	2.7	.45	10	.60
11	.26	.93	1.3	3.1	2.6	13	1.6	3.8	1.5	.42	3.6	1.0
12	.24	.93	1.2	2.8	2.6	39	1.6	2.7	1.4	1.7	3.8	.64
13	11	.84	1.2	96	4.4	13	3.0	28	1.2	.41	1.2	.60
14	2.3	.84	4.4	31	4.0	11	1.5	6.4	.87	88	88	.60
15	.50	.84	2.3	8.4	3.1	5.6	1.3	4.2	.74	77	5.7	.45
16	1.1	.84	1.5	4.0	4.1	4.2	1.3	3.7	.73	44	1.9	.45
17	.43	4.2	1.7	30	3.6	3.3	2.5	3.0	.69	3.3	.92	.45
18	.22	.94	3.1	8.3	3.7	3.0	1.5	2.5	.64	6.0	.21	.45
19	.21	.64	1.7	70	4.6	2.8	14	2.2	.61	2.1	.19	.45
20	.20	.60	7.3	86	3.2	3.0	1.8	1.9	.60	1.1	23	.45
21	.18	.60	2.6	9.2	2.9	2.9	1.3	1.7	9.6	.85	.63	.45
22	.24	38	1.8	4.8	2.9	2.8	1.1	1.6	17	.71	.63	.56
23	.21	37	1.5	3.5	2.7	3.0	1.1	1.4	3.8	.60	.63	.52
24	.17	3.1	1.5	3.3	2.8	3.0	1.1	1.3	1.2	2.0	.60	.45
25	6.1	4.6	14	326	2.7	66	58	1.3	8.3	2.3	.62	.44
26	209	2.7	2.3	101	2.7	107	32	1.2	1.0	.91	.60	.43
27	2.3	1.4	1.7	7.8	2.6	10	4.5	.98	.80	.62	4.0	.43
28	1.2	2.9	1.5	4.9	11	5.2	2.3	.93	.62	4.3	1.5	.43
29	.76	1.8	1.5	3.7	---	3.6	1.9	1.5	.50	.92	1.0	.43
30	.58	14	7.4	3.1	---	2.9	1.6	1.2	.47	.52	.90	.43
31	.49	---	4.8	3.0	---	2.7	---	1.0	---	.40	1.2	---
TOTAL	245.93	231.95	128.8	1038.0	96.6	594.9	154.7	533.81	196.33	282.40	288.41	41.02
MEAN	7.93	7.73	4.15	33.5	3.45	19.2	5.16	17.2	6.54	9.11	9.30	1.37
MAX	209	83	26	326	11	153	58	177	63	88	88	18
MIN	.13	.42	1.2	1.5	2.6	2.7	1.1	.93	.47	.40	.19	.43
CFSM	1.14	1.11	.60	4.80	.49	2.75	.74	2.46	.94	1.31	1.33	.20
IN.	1.31	1.24	.69	5.53	.51	3.17	.82	2.84	1.05	1.50	1.54	.22

CAL YR 1977 TOTAL 2889.33 MEAN 7.92 MAX 396 MIN .06 CFSM 1.14 IN 15.40
WTR YR 1978 TOTAL 3832.85 MEAN 10.5 MAX 326 MIN .13 CFSM 1.50 IN 20.42

02146700 McMULLEN CREEK AT SHARON VIEW ROAD NEAR CHARLOTTE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
OCT							
26...	0615	726	761	1490	--	--	--
JAN							
25...	1608	58	1400	219	--	--	--
26...	0013	754	894	1820	16	25	31
MAR							
06...	1530	4.7	13	.16	--	--	--
APR							
26...	1840	12	70	2.3	--	--	--
MAY							
04...	1550	118	1000	319	--	--	--
04...	1830	600	3490	5650	--	--	--
04...	2115	165	7500	3340	--	--	--
09...	0035	680	1240	2280	--	--	--
JUL							
05...	1445	2.3	45	.28	--	--	--
17...	1415	2.5	20	.13	--	--	--
AUG							
09...	2125	346	3510	3280	--	--	--
16...	1500	2.1	24	.14	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT						
26...	--	--	--	--	--	57
JAN						
25...	--	--	--	--	--	--
26...	41	48	68	76	86	--
MAR						
06...	--	--	--	--	--	--
APR						
26...	--	--	--	--	--	--
MAY						
04...	--	--	--	--	--	--
04...	--	--	--	--	--	--
04...	--	--	--	--	--	--
09...	--	--	--	--	--	--
JUL						
05...	--	--	--	--	--	--
17...	--	--	--	--	--	--
AUG						
09...	--	--	--	--	--	--
16...	--	--	--	--	--	--

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) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for period of indefinite gage-height record Aug. 16 to Sept. 30, which are poor. 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 333 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. 26	1630	4130	117	9.73	2.966	Mar. 10	1245	2940	83.3	8.04	2.451
Nov. 6	1145	2320	65.7	6.98	2.128	Mar. 26	1130	2230	63.2	6.82	2.079
Nov. 23	1000	1610	45.6	5.83	1.777	Apr. 26	0900	1560	44.2	5.74	1.750
Jan. 9	0700	2440	69.1	7.20	2.195	May 8	1300	3700	105	9.17	2.795
Jan. 14	0515	2120	60.0	6.63	2.021	July 5	1600	1490	42.2	5.65	1.722
Jan. 20	0845	2520	71.4	7.35	2.240	July 15	1930	2810	79.6	7.84	2.390
Jan. 26	0945	*5520	156	*11.23	3.423						

Minimum discharge, 3.5 ft³/s (0.099 m³/s) Sept. 30, gage height, 1.02 ft (0.311 m); minimum daily, 3.6 ft³/s (0.102 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	18	267	41	56	72	52	41	18	13	13	9.0
2	7.5	17	128	36	57	41	47	41	17	106	14	11
3	10	18	67	31	54	436	42	35	18	28	23	30
4	7.0	36	50	28	48	482	41	250	26	50	144	15
5	5.6	61	151	27	46	148	42	437	16	859	97	11
6	5.3	1340	273	64	45	108	38	71	41	85	134	10
7	5.2	333	71	71	39	86	38	91	33	32	132	9.5
8	5.2	71	48	793	37	73	33	2890	130	23	39	9.5
9	22	46	46	1860	38	79	32	2300	368	19	33	9.3
10	14	35	41	227	37	2190	31	298	74	17	151	9.2
11	6.6	28	33	90	35	688	30	91	29	14	30	9.5
12	5.6	24	31	67	34	211	30	64	23	14	53	9.5
13	32	22	29	661	37	425	36	136	20	12	23	20
14	25	21	38	1490	45	161	33	124	16	107	268	14
15	11	20	44	374	37	123	27	66	15	2260	68	12
16	7.5	20	33	119	36	86	26	58	14	2160	25	11
17	8.8	29	31	230	40	67	30	47	14	543	17	10
18	6.1	26	36	312	37	58	31	39	13	80	14	9.1
19	5.7	19	36	431	42	52	76	36	13	49	13	8.0
20	5.5	18	42	2120	39	49	38	32	11	33	13	6.7
21	5.1	18	45	467	35	47	29	29	11	26	12	5.6
22	5.1	31	33	129	34	45	25	27	169	21	12	5.3
23	5.3	1120	29	90	31	42	24	25	166	18	11	4.9
24	4.6	124	28	74	32	40	23	31	32	17	10	4.8
25	4.8	80	76	1910	30	137	216	30	263	29	9.5	5.4
26	2720	117	45	4450	30	1680	1160	24	41	18	9.5	5.1
27	585	55	33	496	28	366	218	21	24	16	9.5	4.4
28	53	45	30	132	32	125	82	20	18	33	9.5	4.0
29	32	41	27	90	---	86	55	21	16	19	9.5	4.0
30	23	53	34	72	---	68	44	20	14	15	9.4	3.6
31	20	---	65	62	---	57	---	22	---	13	9.2	---
TOTAL	3660.2	3886	1940	17044	1091	8348	2629	7417	1663	6729	1415.1	280.4
MEAN	118	130	62.6	550	39.0	269	87.6	239	55.4	217	45.6	9.35
MAX	2720	1340	273	4450	57	2190	1160	2890	368	2260	268	30
MIN	4.6	17	27	27	28	40	23	20	11	12	9.2	3.6
CFSM	1.28	1.41	.68	5.95	.42	2.91	.95	2.59	.60	2.35	.49	.10
IN.	1.47	1.56	.78	6.86	.44	3.36	1.06	2.99	.67	2.71	.57	.11

CAL YR 1977 TOTAL 37571.3 MEAN 103 MAX 5330 MIN 2.4 CFSM 1.12 IN 15.13
WTR YR 1978 TOTAL 56102.7 MEAN 154 MAX 4450 MIN 3.6 CFSM 1.67 IN 22.59

02146750 McALPINE CREEK BELOW McMULLEN CREEK NEAR PINEVILLE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
26...	0655	570	667	1030
MAR				
07...	1330	86	32	7.4
APR				
26...	1530	1180	345	1100
MAY				
04...	1755	215	542	315
05...	0010	1270	980	3360
05...	1100	236	2130	1360
08...	1510	3500	344	3250
08...	2255	1980	136	727
09...	1100	2780	2220	16700
JUL				
06...	1145	60	87	14
AUG				
04...	1200	80	259	56
24...	1200	9.8	13	.34
SEP				
22...	1450	6.2	15	.25

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) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge record fair. City of Charlotte diverted an average of 65.8 ft³/s (1.86 m³/s) for municipal 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. 26	2300	6610	187	17.29	5.270	Mar. 10	1700	5240	148	14.84	4.253
Nov. 6	2400	4820	137	14.30	4.359	Mar. 26	2000	5000	142	14.53	4.429
Jan. 26	1300	*12000	340	*21.03	6.410	May 8	1500	6550	185	16.44	5.011

Minimum discharge, 89 ft³/s (2.52 m³/s) Sept. 20, 24-30; minimum daily, 91 ft³/s (2.58 m³/s) Sept. 25, 28, 29,30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	155	205	1040	233	362	423	259	205	193	107	111	156
2	161	202	614	199	351	263	236	212	187	285	133	159
3	186	197	341	188	349	781	217	197	188	174	127	363
4	162	284	288	181	313	1370	212	407	203	182	1140	200
5	148	310	405	178	298	580	211	1160	189	551	367	112
6	148	2390	1160	254	289	424	202	318	430	395	674	107
7	146	2560	403	432	280	369	199	277	243	130	961	102
8	146	485	272	1400	283	330	189	5020	403	116	652	100
9	212	331	254	3510	271	344	176	4320	1910	105	237	95
10	227	275	238	1020	267	3670	171	1130	407	105	1070	90
11	154	236	197	414	257	2020	176	466	190	102	265	90
12	149	216	188	328	248	633	177	357	150	144	234	108
13	215	201	190	934	247	968	180	458	140	105	200	96
14	363	192	237	3060	295	539	186	676	130	129	453	128
15	211	197	290	1060	259	482	160	349	120	1440	1070	96
16	157	194	210	496	252	357	152	334	117	3500	211	93
17	170	241	199	515	265	305	144	280	115	1170	167	91
18	151	247	220	1140	248	273	174	254	112	294	149	87
19	150	188	235	698	255	252	290	238	111	236	136	89
20	149	178	232	4140	253	237	201	223	110	174	130	89
21	148	173	349	1730	240	234	158	209	110	154	125	87
22	145	185	219	575	236	228	146	198	645	141	124	89
23	142	1290	194	414	226	220	137	198	780	130	120	136
24	136	561	184	358	227	216	134	202	188	122	116	91
25	145	302	386	2790	224	498	420	211	514	140	112	82
26	3710	422	269	9820	219	3490	2500	196	192	129	111	88
27	3070	259	201	2720	208	1810	985	191	138	124	108	86
28	405	223	191	733	219	558	363	186	124	170	233	84
29	289	254	180	530	---	391	262	191	114	152	132	84
30	239	249	190	437	---	322	220	191	112	115	111	82
31	211	---	357	393	---	282	---	227	---	106	129	---
TOTAL	12200	13247	9933	40880	7441	22869	9237	19081	8565	10927	9908	3360
MEAN	394	442	320	1319	266	738	308	616	286	352	320	112
MAX	3710	2560	1160	9820	362	3670	2500	5020	1910	3500	1140	363
MIN	136	173	180	178	208	216	134	186	110	102	108	82

CAL YR 1977 TOTAL 134601 MEAN 369 MAX 10400 MIN 76
WTR YR 1978 TOTAL 167648 MEAN 459 MAX 9820 MIN 82

02146800 SUGAR CREEK NEAR FORT MILL, S. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to September 1978 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1973 to September 1978.
WATER TEMPERATURES: July 1973 to September 1978.

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, June 28, 29, 1978; 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, 472 micromhos Sept. 30; minimum daily, 57 micromhos Jan. 26.
WATER TEMPERATURES: Maximum daily, 30.0°C June 28, 29; minimum daily, 4.0°C Jan. 11, 29.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
DEC 29...	1030	184	240	7.3	3.0	37	9.3	63	1	16	5.6	24
MAR 20...	1100	227	290	7.4	14.0	50	7.8	59	0	15	5.2	23
JUN 27...	1030	137	290	7.5	27.0	25	4.8	52	0	14	4.2	20
AUG 30...	1100	119	321	7.2	28.0	10	4.5	66	0	18	5.0	34

DATE	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
DEC 29...	43	1.3	4.3	76	0	62	6.1	25	20	.3	20	160
MAR 20...	44	1.3	4.2	104	0	85	6.6	35	18	.3	20	168
JUN 27...	42	1.2	5.4	80	0	66	4.0	21	18	.3	17	168
AUG 30...	50	1.8	7.5	120	0	98	12	31	27	.5	19	223

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)
DEC 29...	182	.22	79.5	4.3	.22	4.5	4.4	3.3	3.3	4.3	.90	.40
MAR 20...	185	.23	103	.68	.12	.80	.81	4.0	4.0	5.2	2.3	.70
JUN 27...	157	.23	62.1	1.7	.29	2.0	2.0	.75	--	--	3.9	--
AUG 30...	224	.30	71.6	2.2	.03	2.2	2.2	--	8.3	11	--	3.7

02146800 SUGAR CREEK NEAR FORT MILL, S. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)
DEC 29...	4.2	.50	3.7	8.7	39	1.8	5.5	1.6	1.8	1.7	5.2
MAR 20...	6.3	1.6	4.7	7.1	31	1.3	4.0	1.1	1.2	1.2	3.7
JUN 27...	4.6	.50	4.1	6.6	29	1.6	4.9	1.6	.31	--	--
AUG 30...	--	--	12	--	--	3.2	9.8	3.0	2.6	.61	1.9

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUSPENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)
DEC 29...	1	0	1	30	25	5	10	5	5	1300	--
MAR 20...	1	0	1	<10	<8	2	8	3	5	1800	--
JUN 27...	7	0	7	10	10	0	5	0	6	1300	1100
AUG 30...	11	1	10	10	10	0	6	2	4	870	750

DATE	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
DEC 29...	30	23	13	10	60	50	10	9.0	--	.20
MAR 20...	150	9	4	5	20	10	10	4.0	.7	.60
JUN 27...	180	21	0	28	20	0	20	14	.9	.10
AUG 30...	120	13	0	18	30	0	30	9.2	1.4	.20

02146800 SUGAR CREEK NEAR FORT MILL, S. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	MAR 20,78
TIME	1100
TOTAL CELLS/ML	470
DIVERSITY: DIVISION	1.7
.CLASS	1.7
..ORDER	2.0
...FAMILY	2.3
....GENUS	2.3

ORGANISM	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)		
.CHLOROPHYCEAE		
..CHLOROCOCCALES		
...OOCYSTACEAE		
....ANKISTRODESMUS	22	3
...SCENEDESMACEAE		
....CRUCIGENIA	120#	18
..VOLVOCALES		
...CHLAMYDOMONADACEAE		
....CHLAMYDOMONAS	15	2
CHRYSOPHYTA		
.BACILLARIOPHYCEAE		
..CENTRALES		
...COSCINODISCACEAE		
....MELOSIRA	150#	22
..PENNALES		
...DIATOMACEAE		
....DIATOMA	7	1
...FRAGILARIACEAE		
....SYNEDRA	7	1
...GOMPHONEMATACEAE		
....GOMPHONEMA	7	1
...SURIRELLACEAE		
....SURIRELLA	15	2
CYANOPHYTA (BLUE-GREEN ALGAE)		
.CYANOPHYCEAE		
..CHROCCOCCALES		
...CHROCCOCCACEAE		
....ANACYSTIS	300#	44
EUGLENOPHYTA (EUGLENOIDS)		
.EUGLENOPHYCEAE		
..EUGLENALES		
...EUGLENACEAE		
....EUGLENA	7	1
....TRACHELOMONAS	22	3

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

02146800 SUGAR CREEK NEAR FORT MILL, S. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	419	308	162	242	198	209	235	257	274	328	285	395
2	389	331	179	220	264	268	233	249	307	250	290	306
3	335	364	230	276	238	263	242	255	346	212	340	168
4	302	369	240	264	275	273	237	236	350	268	110	215
5	367	275	255	292	232	199	255	107	208	127	175	281
6	400	100	135	275	264	199	280	245	192	153	220	304
7	432	141	194	209	264	206	285	235	230	224	130	342
8	432	221	246	99	292	235	295	69	206	260	200	368
9	285	257	270	59	331	264	285	71	95	280	200	378
10	283	278	272	143	314	126	280	119	163	280	115	418
11	367	316	275	206	323	88	285	169	245	286	205	415
12	389	326	295	242	275	124	304	208	250	296	235	337
13	272	328	284	165	275	125	304	209	269	265	300	346
14	270	319	305	92	258	169	288	181	307	316	210	399
15	286	320	259	142	297	189	285	189	298	181	200	397
16	283	356	295	170	331	224	314	225	317	182	250	418
17	268	364	309	187	331	245	318	273	355	197	275	430
18	335	278	300	134	330	268	280	284	384	171	330	406
19	376	348	254	182	286	265	223	274	346	204	310	418
20	421	353	266	87	280	260	257	292	346	250	335	376
21	437	357	305	128	270	251	313	267	300	286	320	410
22	448	319	274	165	308	276	318	265	154	347	295	427
23	459	114	310	187	324	296	323	268	125	326	315	429
24	454	193	319	198	374	293	323	287	202	306	350	410
25	410	246	198	84	365	291	216	337	134	275	335	423
26	80	209	205	57	336	100	95	323	192	296	360	407
27	138	225	232	101	330	133	141	328	240	291	385	400
28	227	229	248	165	319	164	200	310	288	316	190	430
29	281	246	300	192	---	194	257	294	217	331	265	466
30	300	273	418	198	---	235	266	274	250	326	320	472
31	335	---	216	209	---	260	---	273	---	321	335	---
MEAN	338	279	260	173	296	216	265	238	253	263	264	380

WTR YR 1978 MEAN 268 MAX 472 MIN 57

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

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

WTR YR 1978 MEAN 17.5 MAX 30.0 MIN 4.0

02146800 SUGAR CREEK NEAR FORT MILL, S. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC					
29...	1030	184	17	8.4	--
MAR					
20...	1100	227	19	12	99
APR					
26...	1730	3030	514	4210	55
MAY					
04...	1735	195	55	29	82
04...	2356	1730	1070	5000	88
05...	1027	1300	1420	4980	--
08...	1145	6500	292	5130	90
08...	2230	5360	164	2370	94
09...	1040	4800	346	4480	91
JUN					
27...	1030	137	46	17	93
AUG					
04...	1155	1450	691	2710	--
16...	0945	215	86	50	--
30...	1100	119	19	6.1	--
SEP					
20...	1515	86	13	3.0	100

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER YEAR OCTOBER 1977 to SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT									
25...	1430	94	--	6.8	16.0	5.2	25	5.5	1600
NOV									
08...	--	403	--	7.0	18.0	6.8	24	8.0	4600
DEC									
13...	1300	192	205	6.9	7.0	9.4	18	4.3	740
JAN									
30...	0930	450	120	7.5	4.0	11.4	22	5.0	380
FEB									
15...	1500	247	205	7.4	10.0	10.3	30	6.6	350
MAR									
21...	1410	232	225	7.3	16.0	6.2	24	>8.2	140
APR									
25...	1400	248	255	7.4	18.0	5.3	29	7.0	2500
MAY									
24...	1001	168	300	7.5	22.0	4.3	22	>8.3	5900
JUN									
26...	1330	166	200	7.3	25.0	4.7	26	5.2	1400
JUL									
26...	1345	131	340	--	26.0	5.6	23	4.4	1500

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) National Geodetic Vertical Datum of 1929. Prior to Mar. 13, 1962, water-stage recorder at site 70 ft (21 m) downstream at same datum.

REMARKS.--Records good. Suspended-sediment records for the water year are published on page 341 of this report.

AVERAGE DISCHARGE.--18 years, 70.7 ft³/s (2.002 m³/s), 13.26 in/yr (337 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. 26	1500	*6870	195	*18.80	5.730	Mar. 10	1330	1840	52.1	12.42	3.786
Jan. 14	0030	1510	42.8	11.53	3.514	May 8	1230	2620	74.2	13.94	4.249
Jan. 20	0930	2070	58.6	12.91	3.935	July 5	1500	2540	71.9	13.80	4.206
Jan. 26	1100	2610	73.9	13.92	4.243	July 16	2000	3860	109	15.81	4.819

Minimum discharge, 1.8 ft³/s (0.051 m³/s) Oct. 8, gage height, 1.47 ft (0.448 m); minimum daily, 1.8 ft³/s (0.051 m³/s) Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	19	127	40	52	37	40	29	21	12	16	7.3
2	3.6	17	77	31	52	35	38	29	18	19	15	7.4
3	2.8	16	39	26	53	151	35	27	17	21	14	7.7
4	2.4	17	29	23	45	295	33	54	17	51	39	8.8
5	1.9	20	35	22	42	112	32	97	16	1550	22	7.7
6	1.9	228	112	25	41	76	31	40	16	101	25	7.2
7	2.0	109	44	57	36	62	30	69	26	38	25	6.9
8	1.8	43	29	105	34	53	28	2130	271	27	20	6.7
9	3.2	29	26	622	33	66	27	713	684	22	16	6.4
10	4.4	24	27	124	33	1470	27	183	107	20	14	6.8
11	3.6	21	24	61	32	301	27	84	38	18	14	24
12	3.3	19	22	45	31	133	26	58	28	15	14	9.2
13	3.6	18	21	770	31	133	27	153	24	15	14	6.8
14	6.5	17	21	962	36	94	28	177	21	118	218	7.4
15	5.3	17	24	248	33	87	25	71	19	1180	56	6.0
16	3.8	17	23	106	31	65	24	57	18	2700	22	5.8
17	3.1	16	22	142	39	54	23	45	17	878	16	5.5
18	3.3	18	23	230	36	47	27	39	16	79	14	5.3
19	4.0	17	31	423	34	46	54	35	15	44	13	4.6
20	4.5	16	25	1650	33	44	38	31	15	31	12	4.2
21	3.9	16	23	289	31	41	27	29	14	26	11	3.9
22	3.7	16	23	122	31	39	25	26	49	23	11	3.7
23	3.7	78	21	84	29	37	23	24	20	21	10	3.4
24	5.2	45	20	69	29	36	23	24	16	48	9.7	3.2
25	13	29	27	1260	28	69	51	25	153	181	9.1	3.4
26	4110	29	35	2120	28	375	282	23	25	30	8.8	4.2
27	672	25	24	250	27	136	99	21	18	22	8.6	3.9
28	61	21	21	135	27	80	50	20	16	25	8.6	3.7
29	34	20	20	87	---	61	36	20	14	20	8.4	3.4
30	26	21	20	68	---	52	31	20	13	17	8.1	3.1
31	21	---	51	58	---	44	---	23	---	16	7.5	---
TOTAL	5020.9	998	1066	10254	987	4331	1267	4376	1742	7368	699.8	187.6
MEAN	162	33.3	34.4	331	35.3	140	42.2	141	58.1	238	22.6	6.25
MAX	4110	228	127	2120	53	1470	282	2130	684	2700	218	24
MIN	1.8	16	20	22	27	35	23	20	13	12	7.5	3.1
CFSM	2.24	.46	.48	4.57	.49	1.93	.58	1.95	.80	3.29	.31	.09
IN.	2.58	.51	.55	5.27	.51	2.23	.65	2.25	.90	3.79	.36	.10

CAL YR 1977 TOTAL 29104.63 MEAN 79.7 MAX 4110 MIN .93 CFSM 1.10 IN 14.95
WTR YR 1978 TOTAL 38297.30 MEAN 105 MAX 4110 MIN 1.8 CFSM 1.45 IN 19.68

SANTEE RIVER BASIN

02146900 TWELVE MILE CREEK NEAR WAXHAW, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
26...	1320	6730	524	9520	99
27...	1340	132	143	51	--
JAN					
25...	1655	1760	497	2360	--
MAR					
07...	1230	62	19	3.2	--
APR					
26...	1745	242	152	99	--
MAY					
04...	2330	143	252	97	--
08...	1340	2550	904	6220	--
08...	2215	1240	141	472	--
09...	0945	960	645	1670	--
JUL					
06...	1500	74	139	28	--
17...	1010	406	263	288	--
18...	1145	76	56	11	--
AUG					
16...	1220	21	62	3.5	--
SEP					
20...	1315	7.3	21	.41	--

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) National Geodetic Vertical Datum of 1929. 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 343 of this report.

AVERAGE DISCHARGE.--28 years, 132 ft³/s (3.738 m³/s), 23.28 in/yr (591 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. 26	0200	2230	63.2	9.69	2.954	Jan. 26	0100	3500	99.1	12.98	3.956
Nov. 6	1000	*6050	171	*17.76	5.413	Aug. 7	0800	1850	52.4	8.53	2.600

Minimum discharge, 62 ft³/s (1.76 m³/s) July 27, gage height, 2.11 ft (0.643 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	109	187	121	188	129	183	151	129	87	177	84
2	79	105	167	117	183	129	174	148	125	89	138	111
3	70	108	152	112	175	141	167	139	124	89	119	108
4	67	120	143	110	168	136	163	445	122	83	103	91
5	67	158	257	110	164	131	159	357	117	82	103	84
6	67	2450	251	113	160	133	155	223	114	88	192	81
7	66	634	198	111	153	137	152	206	119	86	1030	78
8	78	335	174	312	151	148	147	493	138	80	457	76
9	201	242	166	570	150	149	145	606	162	77	266	74
10	106	204	149	247	148	500	144	303	126	110	172	73
11	89	175	143	192	145	309	145	232	117	79	165	106
12	83	158	137	170	144	230	143	207	115	75	150	80
13	77	147	135	165	144	211	140	317	123	76	192	77
14	76	141	149	156	143	234	135	260	110	87	146	384
15	74	136	147	144	139	222	133	223	108	79	141	145
16	73	134	134	137	139	196	132	203	107	139	136	115
17	72	155	130	177	138	178	133	188	107	92	121	100
18	71	134	153	189	138	166	139	177	104	81	107	91
19	71	127	140	183	138	160	162	169	104	77	103	86
20	69	123	138	304	136	154	137	161	117	76	104	82
21	69	121	133	249	135	150	131	156	119	73	105	81
22	69	126	126	201	134	148	128	149	105	70	94	78
23	69	154	123	177	130	143	126	148	100	71	90	75
24	69	141	122	167	131	141	125	150	97	76	87	78
25	158	144	139	774	129	616	155	143	95	73	85	78
26	974	152	123	1380	128	660	314	140	94	69	82	82
27	231	137	118	415	125	398	241	136	92	66	110	75
28	165	150	116	288	130	271	180	135	89	173	88	73
29	139	157	115	239	---	230	159	138	90	85	88	71
30	125	157	121	214	---	207	151	151	89	76	105	70
31	114	---	125	199	---	193	---	141	---	84	94	---
TOTAL	3813	7334	4611	8043	4086	6950	4698	6795	3358	2648	5150	2887
MEAN	123	244	149	259	146	224	157	219	112	85.4	166	96.2
MAX	974	2450	257	1380	188	660	314	606	162	173	1030	384
MIN	66	105	115	110	125	129	125	135	89	66	82	70
CFSM	1.60	3.17	1.94	3.36	1.90	2.91	2.04	2.84	1.46	1.11	2.16	1.25
IN.	1.84	3.54	2.23	3.89	1.97	3.36	2.27	3.28	1.62	1.28	2.49	1.39

CAL YR 1977 TOTAL 52273 MEAN 143 MAX 2450 MIN 50 CFSM 1.86 IN 25.25
WTR YR 1978 TOTAL 60373 MEAN 165 MAX 2450 MIN 66 CFSM 2.14 IN 29.17

02149000 COVE CREEK NEAR LAKE LURE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
OCT												
12...	1700	82	6	1.3	--	--	--	--	--	--	--	--
NOV												
07...	1840	504	170	231	--	--	--	--	--	--	--	--
18...	1700	131	7	2.5	--	--	--	--	--	--	--	--
JAN												
23...	1115	165	46	20	--	--	--	--	--	--	--	--
25...	1005	763	538	1110	--	--	--	--	--	--	--	--
MAR												
02...	1005	119	4	1.3	--	--	--	--	--	--	--	--
APR												
19...	1100	185	24	12	--	--	--	--	--	--	--	--
MAY												
04...	1830	866	920	2150	--	--	--	--	--	--	--	--
19...	1100	165	30	13	--	--	--	--	--	--	--	--
JUL												
31...	1600	75	43	8.7	--	--	--	--	--	--	--	--
AUG												
07...	1010	1480	1050	4200	34	41	51	60	70	80	91	99
07...	1325	904	805	1970	--	--	--	--	--	--	--	--
07...	1615	904	559	1360	--	--	--	--	--	--	--	--
SEP												
12...	0945	83	108	24	--	--	--	--	--	--	--	--

02151000 SECOND BROAD RIVER AT CLIFFSIDE, N. C.

LOCATION.--Lat 35°14'08", long 81°45'57", Rutherford County, Hydrologic Unit 03050105, on left bank 0.2 mi (0.3 km) downstream from dam at Cliffside Mills, at Cliffside, and 1.3 mi (2.1 km) upstream from mouth.

DRAINAGE AREA.--211 mi² (546 km²).

PERIOD OF RECORD.--June 1925 to current year.

REVISED RECORDS.--WSP 892: 1928(M), drainage area. WSP 1553: 1935-39(m).

GAGE.--Water-stage recorder. Datum of gage is 670.5 ft (204.37 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).

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

AVERAGE DISCHARGE.--53 years, 312 ft³/s (8.836 m³/s), 20.08 in/yr (510 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)
Nov. 7	1200	*8060	228	*10.47	3.191	Jan. 26	2400	4980	141	7.39	2.252

Minimum discharge, 17 ft³/s (0.48 m³/s) Mar. 12, gage height, 0.70 ft (0.213 m); minimum daily, 90 ft³/s (2.55 m³/s) Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	163	222	400	261	419	266	408	327	271	221	317	208
2	132	215	384	251	401	256	388	315	257	213	293	140
3	206	210	339	238	381	286	364	295	252	216	253	226
4	160	214	318	230	355	293	349	438	260	207	416	203
5	157	201	368	230	342	277	339	1290	257	232	253	217
6	90	2230	559	239	336	270	335	635	246	149	250	137
7	191	6290	425	246	307	272	319	493	266	214	762	208
8	145	1290	357	803	313	292	311	1070	303	201	1970	126
9	213	659	332	2510	301	318	312	1270	569	137	720	151
10	281	498	293	1010	297	770	308	832	347	221	420	153
11	206	410	274	602	290	827	304	584	289	218	353	198
12	169	356	267	477	282	580	308	487	271	141	359	135
13	170	312	256	443	288	603	300	509	270	204	837	200
14	163	292	270	454	288	512	290	615	256	140	521	133
15	160	274	323	395	282	541	275	488	243	197	936	211
16	125	261	283	351	276	454	280	441	236	281	450	135
17	209	296	268	410	274	401	280	402	231	282	370	167
18	130	279	296	590	271	361	286	366	233	216	304	193
19	175	243	304	508	272	334	356	332	240	157	259	162
20	163	234	282	1130	276	325	328	324	238	207	267	135
21	154	241	279	869	266	309	280	313	253	171	251	155
22	131	238	259	602	266	304	270	303	241	116	225	146
23	130	300	251	496	258	291	273	307	237	152	215	149
24	195	319	252	430	257	283	273	308	204	237	206	106
25	185	303	291	1410	256	840	321	290	230	249	201	198
26	1600	313	276	4230	246	2650	547	278	219	208	182	130
27	675	283	257	2600	245	1580	638	267	229	194	190	154
28	387	298	243	832	253	818	439	273	215	346	204	164
29	300	347	240	622	---	609	362	281	199	271	209	124
30	260	327	246	524	---	515	338	292	196	195	163	151
31	247	---	265	457	---	455	---	287	---	181	215	---
TOTAL	7672	17955	9457	24450	8298	16892	10181	14712	7758	6374	12571	4915
MEAN	247	599	305	789	296	545	339	475	259	206	406	164
MAX	1600	6290	559	4230	419	2650	638	1290	569	346	1970	226
MIN	90	201	240	230	245	256	270	287	196	116	163	106
CFSM	1.17	2.84	1.45	3.74	1.40	2.58	1.61	2.25	1.23	.98	1.92	.78
IN.	1.35	3.17	1.67	4.31	1.46	2.98	1.79	2.59	1.37	1.12	2.22	.87

CAL YR 1977 TOTAL 115691 MEAN 317 MAX 6290 MIN 52 CFSM 1.50 IN 20.40
WTR YR 1978 TOTAL 141235 MEAN 387 MAX 6290 MIN 90 CFSM 1.83 IN 24.90

02151000 SECOND BROAD RIVER AT CLIFFSIDE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
12...	1400	194	9	4.7
NOV				
18...	1500	271	19	14
JAN				
23...	1345	502	20	27
25...	1059	1090	161	474
FEB				
27...	1000	249	7	4.7
APR				
06...	1445	330	56	50
JUN				
22...	1230	224	26	16
AUG				
07...	1110	423	45	51

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) National Geodetic Vertical Datum of 1929 (Duke Power Co. bench mark). Prior to July 20, 1934, at site 500 ft (152 m) upstream at datum 1 ft (0.305 m) higher.

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 347 of this report.

AVERAGE DISCHARGE.--53 years, 1,505 ft³/s (42.62 m³/s), 23.65 in/yr (601 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)
Nov. 7	1330	*22300	632	*13.27	4.045	Mar. 26	0700	9000	255	7.50	2.286
Jan. 9	0430	9590	272	7.80	2.377	Aug. 8	0730	9840	279	7.92	2.414
Jan. 26	2130	17700	501	11.47	3.496						

Minimum discharge, 396 ft³/s (11.2 m³/s) Oct. 25, gage height, 1.67 ft (0.509 m); minimum daily, 535 ft³/s (15.2 m³/s) Oct. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	796	1160	2000	1140	2330	1450	1840	1550	1430	885	972	918
2	946	1110	2050	1430	2230	1350	1770	1610	1390	885	1150	899
3	861	993	1700	1550	2260	1520	1500	1500	1210	965	1130	1220
4	735	1150	1580	1550	2180	1540	1320	2310	1220	919	1440	1220
5	721	1470	1840	1330	1920	1460	1750	3990	1310	1060	1100	980
6	695	10100	2420	1410	1790	1410	1600	2570	1330	840	1420	887
7	731	18600	2070	1470	2200	1440	1690	2190	1370	930	3810	930
8	641	5150	1800	3220	1640	1410	1610	3560	1350	930	8170	808
9	818	3150	1700	8850	1580	1600	1640	4190	1890	670	3340	808
10	1290	2580	1480	5290	1850	3020	1610	3350	1660	908	2330	701
11	998	2190	1430	3140	1680	3350	1620	2610	1680	1010	2380	786
12	811	2020	1280	2510	1570	2660	1560	2080	1280	797	1780	722
13	887	1890	1350	2140	1340	2830	1600	2420	1390	818	1630	988
14	779	1740	1520	2320	1690	2090	1590	2790	1180	764	1660	1750
15	752	1650	1900	2110	1860	2230	1310	2260	1110	852	2840	3350
16	729	1420	1760	1860	1450	2320	1480	1830	1230	1220	1910	1980
17	791	1450	1380	1920	1480	1790	1500	1990	1060	1110	1740	1450
18	711	1720	1120	2180	1490	1740	1510	1820	1050	1040	1380	1050
19	645	1520	1560	2380	1470	1490	1730	1710	1050	840	1230	978
20	659	1420	1430	4550	1480	1360	1670	1640	1050	919	1140	860
21	745	1350	1470	3440	1360	1450	1460	1600	1210	754	1310	778
22	661	1350	1380	2660	1560	1300	1380	1570	1360	670	1370	852
23	535	1470	1340	1960	1460	1300	1460	1590	1330	607	1100	879
24	592	1810	1340	2120	1410	1270	1280	1550	1080	775	1050	900
25	680	1640	1420	5180	1390	3490	1580	1740	942	1050	1090	866
26	6700	1680	1760	17000	1340	7990	2260	1470	1040	919	878	688
27	3790	1610	1290	9460	1400	4510	2920	1300	1010	818	874	761
28	2190	1540	1440	4510	1340	2910	2010	1280	1070	1550	821	815
29	1820	1800	1260	3650	---	2450	1700	1220	1040	1200	913	806
30	1500	1590	1310	3210	---	1880	1590	1460	885	919	928	767
31	1200	---	1250	2520	---	2020	---	1580	---	734	1310	---
TOTAL	36409	78323	48630	108060	46750	68630	49540	64330	37207	28358	54196	31397
MEAN	1174	2611	1569	3486	1670	2214	1651	2075	1240	915	1748	1047
MAX	6700	18600	2420	17000	2330	7990	2920	4190	1890	1550	8170	3350
MIN	535	993	1120	1140	1340	1270	1280	1220	885	607	821	688
CFSM	1.36	3.02	1.82	4.04	1.93	2.56	1.91	2.40	1.44	1.06	2.02	1.21
IN.	1.57	3.37	2.09	4.65	2.01	2.95	2.13	2.77	1.60	1.22	2.33	1.35

CAL YR 1977 TOTAL 549646 MEAN 1506 MAX 18600 MIN 482 CFSM 1.74 IN 23.67
WTR YR 1978 TOTAL 651830 MEAN 1786 MAX 18600 MIN 535 CFSM 2.07 IN 28.06

02151500 BROAD RIVER NEAR BOILING SPRINGS, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
04...	1300	1020	40	110	--
NOV					
07...	2050	12700	1710	58600	18
18...	1410	1730	36	168	--
DEC					
29...	1430	1200	8	26	--
JAN					
25...	1140	4520	516	6300	--
FEB					
27...	1455	1250	15	51	--
MAY					
04...	1930	3120	426	3590	--
31...	1515	1430	165	637	--
JUN					
22...	1105	1400	34	129	--
AUG					
07...	1210	2860	508	3920	--

02152100 FIRST BROAD RIVER NEAR CASAR, N. C.

LOCATION.--Lat 35°29'35", long 81°40'56", Cleveland County, Hydrologic Unit 03050105, on right bank 570 ft (174 m) upstream from bridge on Secondary Road 1530, 0.5 mi (0.8 km) upstream from No Business Creek, and 4.0 mi (6.4 km) southwest of Casar.

DRAINAGE AREA.--59.5 mi² (154.1 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1949-56, March 1959 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 890 ft (271 m), from topographic map.

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

AVERAGE DISCHARGE.--19 years, 96.0 ft³/s (2.719 m³/s), 21.91 in/yr (557 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,760 ft³/s (220 m³/s) Oct. 17, 1975, gage height, 16.70 ft (5.090 m); minimum, 17 ft³/s (0.48 m³/s) July 20, 1970, gage height, 0.97 ft (0.296 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1916 and August 1940 reached a stage of about 25 ft (7.6 m), from information by local resident. A discharge of 14.5 ft³/s (0.41 m³/s) was measured on Sept. 21, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 6	2230	*6210	176	*14.81	4.514	Jan. 26	0330	2580	73.1	9.17	2.795
Jan. 8	Unknown	1540	43.6	6.58	2.006	Aug. 14	2300	1540	43.6	6.59	2.009

Minimum discharge, 37 ft³/s (1.05 m³/s) Oct. 3, 4, 7; minimum gage height, 0.72 ft (0.219 m) Oct. 4, 7, Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	45	112	70	114	77	113	96	81	61	71	55
2	42	44	103	68	111	78	107	92	79	68	59	57
3	39	44	90	65	105	85	101	85	77	84	76	93
4	38	49	82	64	101	84	99	240	76	62	82	60
5	38	66	166	62	98	80	99	259	74	62	59	55
6	38	2030	197	64	95	81	93	150	73	62	70	54
7	38	1410	123	65	93	85	90	135	80	60	296	53
8	40	252	100	606	94	94	88	307	127	57	220	51
9	79	156	91	537	89	98	86	348	162	55	155	50
10	51	122	80	199	88	374	86	202	95	54	93	50
11	44	102	74	140	86	239	87	149	83	53	89	52
12	42	87	71	118	84	175	87	130	79	51	112	50
13	40	80	69	118	84	165	83	165	77	51	294	49
14	40	74	79	116	83	168	80	150	73	56	308	50
15	40	71	89	103	81	165	78	133	72	71	464	52
16	40	68	77	92	80	137	78	122	70	161	157	53
17	40	77	73	126	80	117	81	114	69	71	110	49
18	39	67	85	145	80	107	82	108	68	59	89	48
19	38	63	79	134	81	101	102	104	67	56	81	47
20	38	60	78	222	79	97	86	99	75	57	79	46
21	38	60	75	181	78	93	81	97	79	53	74	46
22	38	63	70	141	77	91	79	93	70	51	68	45
23	38	86	67	121	75	87	77	93	67	50	65	46
24	38	83	67	112	75	85	76	99	64	51	62	47
25	44	78	82	474	75	300	117	95	73	52	60	48
26	312	85	72	1170	73	689	209	89	87	50	59	46
27	89	75	68	290	72	321	181	87	67	49	58	45
28	64	77	68	189	75	190	122	86	62	89	58	44
29	55	82	69	153	---	152	104	89	60	55	56	43
30	50	81	69	133	---	132	98	86	58	51	57	43
31	46	---	71	123	---	121	---	86	---	51	58	---
TOTAL	1657	5737	2696	6201	2406	4868	2950	4188	2344	1913	3639	1527
MEAN	53.5	191	87.0	200	85.9	157	98.3	135	78.1	61.7	117	50.9
MAX	312	2030	197	1170	114	689	209	348	162	161	464	93
MIN	38	44	67	62	72	77	76	85	58	49	56	43
CFSM	.90	3.21	1.46	3.36	1.44	2.64	1.65	2.27	1.31	1.04	1.97	.86
IN.	1.04	3.59	1.69	3.88	1.50	3.04	1.84	2.62	1.47	1.20	2.28	.95

CAL YR 1977 TOTAL 33133 MEAN 90.8 MAX 2030 MIN 32 CFSM 1.53 IN 20.71
WTR YR 1978 TOTAL 40126 MEAN 110 MAX 2030 MIN 38 CFSM 1.85 IN 25.09

02152100 FIRST BROAD RIVER NEAR CASAR, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
12...	1030	42	2	.23
NOV				
17...	1505	93	7	1.8
JAN				
18...	1135	146	11	4.3
25...	1520	415	253	283
MAR				
02...	1515	71	5	.96
APR				
19...	1455	108	19	5.5
MAY				
30...	1215	86	6	1.4
JUN				
26...	1605	71	31	5.9
JUL				
20...	1615	56	202	31
AUG				
01...	1340	69	44	8.2
07...	1450	368	545	542
SEP				
12...	1530	48	3	.39

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 Highway 150, 0.5 mi (0.8 km) upstream from mouth, and 2.8 mi (4.5 km) east of Boiling Springs.

DRAINAGE AREA.--1.49 mi² (3.86 km²).

PERIOD OF RECORD.--Annual maximum, water years 1954-68, June 1968 to current year.

REVISED RECORDS.--WRD N. C. 1970: 1968(M).

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 696.83 ft (212.394 m) National Geodetic Vertical Datum of 1929. June 10, 1953 to May 31, 1968, crest-stage gage on left bank 31 ft (9 m) upstream from culvert entrance at datum 16.37 ft (4.990 m) higher.

REMARKS.--Records fair. Suspended-sediment records for the current year are published on page 351 of this report.

AVERAGE DISCHARGE.--10 years, 2.35 ft³/s (0.0666 m³/s), 21.42 in/yr (544 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,110 ft³/s (31.4 m³/s) Oct. 16, 1971, gage height, 6.58 ft (2.01 m), from rating curve extended above 120 ft³/s (3.40 m³/s) on basis of computation of peak flow through culvert; minimum, 0.13 ft³/s (0.004 m³/s) Aug. 13, 14, 1977, gage height, 0.91 ft (0.277 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.2 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 25	2300	*191	5.41	*3.18	0.969	Jan. 25	2245	178	5.04	3.07	0.936
Jan. 8	1115	172	4.87	3.02	0.920						

Minimum discharge, 0.33 ft³/s (0.009 m³/s) July 12, 14; minimum gage height, 1.09 ft (0.332 m) Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.50	.91	2.8	1.2	3.3	2.1	3.3	2.6	1.6	1.8	1.5	.68
2	.65	.89	2.0	1.2	3.3	2.0	3.1	2.5	1.4	.53	.61	.74
3	.43	.88	1.6	1.1	3.1	2.9	3.0	2.3	1.5	.55	1.2	11
4	.42	.89	1.5	1.1	3.0	2.6	2.8	18	1.4	.52	1.0	1.5
5	.44	.88	4.1	1.1	2.9	2.4	2.8	5.3	1.3	.52	1.0	1.1
6	.44	17	2.3	1.3	2.8	2.3	2.7	3.6	1.3	.50	12	.99
7	.43	2.9	1.8	1.2	2.6	2.3	2.5	7.0	1.6	.51	3.0	.83
8	.52	2.1	1.5	63	2.6	2.5	2.5	6.3	3.7	.48	1.5	.83
9	.73	1.6	1.4	14	2.6	2.8	2.5	4.8	3.7	.45	5.1	.78
10	.48	1.3	1.2	3.5	2.6	10	2.3	3.6	1.7	.44	2.5	1.9
11	.48	1.2	1.2	2.7	2.5	4.6	2.3	3.1	1.5	.44	1.6	2.2
12	.48	1.1	1.1	2.4	2.5	7.7	2.2	3.0	1.4	.41	2.0	1.0
13	.45	1.0	1.1	3.3	2.5	4.5	2.3	3.9	1.3	.42	2.3	4.4
14	.48	.98	1.5	3.1	2.5	4.7	2.0	2.8	1.2	.42	2.3	2.4
15	.46	.95	1.3	2.4	2.4	3.1	2.0	2.8	1.2	2.5	1.8	1.3
16	.47	.95	1.2	2.1	2.3	2.6	1.9	2.6	1.1	7.7	1.3	1.2
17	.45	1.4	1.2	6.9	2.3	2.1	2.0	2.4	1.1	.80	1.1	1.0
18	.45	.95	1.8	3.3	2.3	2.0	2.2	2.3	1.0	.63	1.0	.95
19	.44	.91	1.4	14	2.4	2.0	4.6	2.9	.98	.61	.98	.89
20	.44	.88	1.4	20	2.3	2.0	2.2	2.1	.96	.55	.92	.89
21	.44	.88	1.3	4.1	2.3	2.1	2.0	1.9	.97	.52	.85	.85
22	.45	.98	1.2	2.9	2.1	2.2	1.9	1.7	.92	.48	.82	.79
23	.44	1.1	1.2	2.6	2.1	2.2	1.8	1.8	.86	.49	.80	.79
24	.44	.98	1.2	2.6	2.1	2.2	1.8	1.9	.79	.49	.75	.85
25	12	.99	1.7	51	2.1	15	5.0	1.7	5.9	.51	.73	.81
26	16	.94	1.3	19	2.0	28	4.2	1.5	1.1	.49	.71	.74
27	2.0	.89	1.2	5.3	2.0	6.4	3.1	1.5	.58	.53	.70	.73
28	1.4	2.2	1.2	4.3	2.3	4.7	2.7	1.5	.50	2.3	.69	.71
29	1.2	1.9	1.1	3.8	---	4.0	2.6	1.6	.47	.58	.64	.66
30	1.0	2.0	1.4	3.5	---	3.6	2.6	6.3	.70	.53	1.0	.70
31	.94	---	1.3	3.4	---	3.4	---	2.2	---	1.3	.83	---
TOTAL	45.95	52.53	47.5	251.4	69.8	141.0	78.9	107.5	43.73	29.00	53.23	44.21
MEAN	1.48	1.75	1.53	8.11	2.49	4.55	2.63	3.47	1.46	.94	1.72	1.47
MAX	16	17	4.1	63	3.3	28	5.0	18	5.9	7.7	12	11
MIN	.42	.88	1.1	1.1	2.0	2.0	1.8	1.5	.47	.41	.61	.66
CFSM	.99	1.17	1.03	5.44	1.67	3.05	1.77	2.33	.98	.63	1.15	.99
IN.	1.15	1.31	1.19	6.27	1.74	3.52	1.97	2.68	1.09	.72	1.33	1.10

CAL YR 1977 TOTAL 620.60 MEAN 1.70 MAX 69 MIN .18 CFSM 1.14 IN 15.48
WTR YR 1978 TOTAL 964.75 MEAN 2.64 MAX 63 MIN .41 CFSM 1.77 IN 24.07

SANTEE RIVER BASIN

02152610 SUGAR BRANCH NEAR BOILING SPRINGS, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
04...	1530	.43	2	.00
NOV				
07...	1955	2.5	9	.06
18...	1030	.94	3	.01
JAN				
18...	1315	2.9	17	.14
25...	1255	15	220	8.9
MAR				
01...	1415	2.0	4	.02
APR				
24...	1140	1.8	6	.03
MAY				
30...	1545	1.3	6	.02
JUN				
26...	1345	.86	93	.22
JUL				
21...	1230	.59	6	.01
AUG				
01...	1105	1.1	87	.26
07...	1130	3.0	32	.26

Lakes and Reservoirs in South Atlantic Slope basin

02067800; 02067820 TALBOTT AND TOWNES RESERVOIRS 1/.--on Dan River. The two reservoirs are operated as a unit for storage of water for Pinnacles hydroelectric plant. Talbott Dam (drainage area, 20.2 mi² or 52.3 km²), lat 36°40'36", long 80°23'51", Patrick County, Va., Hydrologic Unit 03010103, 4.5 mi (7.2 km) northeast of Kibler. Townes Dam (drainage area, 32.9 mi² or 85.2 km²), lat 36°41'11", long 80°25'49", Patrick County, Va., Hydrologic Unit 03010103, 4 mi (6.4 km) north of Kibler. PERIOD OF RECORD, February 1939 to December 1945 and January 1948 to September 1960 (combined month-end contents only published in WSP 1723), October 1960 to current year.

Total capacity of Talbott Reservoir, 350,000,000 ft³ (9,900,000 m³) and Townes Reservoir, 60,000,000 ft³ (1,700,000 m³). Storage was started in Talbott Reservoir on Feb. 13, 1939, and in Townes Reservoir several months earlier. Records furnished by City of Danville, Va. (See sta 02068500).

02077280 HYCO LAKE.--Lat 36°30'28", long 79°02'48", Person County, Hydrologic Unit 03010104, at outlet control structure 0.4 mi (0.6 km) northwest of dam on Hyco River, 1.1 mi (1.8 km) southwest of McGehees Mill and 8 mi (13 km) northwest of Roxboro. DRAINAGE AREA, 189 mi² (499 km²). PERIOD OF RECORD, October 1964 to current year. Prior to October 1970 published as "Roxboro Steam-Electric Generating Plant Lake". GAGE, water-stage recorder and tape gage. Prior to Feb. 11, 1965 staff gage at upstream end of outlet control structure. Datum of gage is 399.79 ft (121.856 m), National Geodetic Vertical Datum of 1929 (levels by Carolina Power and Light Co.).

Lake, used for cooling water at the Roxboro Steam-electric Generating Plant of Carolina Power and Light Co. first began to fill Sept. 19, 1964 and first reached spillway elevation (9.97 ft or 3.039 m gage height) Mar. 19, 1965. Total capacity at top of spillway is 3,288,000,000 ft³ (93,120,000 m³). Lake cannot be drawn below -0.03 ft or -0.009 m (bottom of gated flume).

02079964 LAKE GASTON.--Lat 36°30'04", long 77°48'43", Halifax County, Hydrologic Unit 03010106, at Gaston Dam on Roanoke River, 0.2 mi (0.3 km) upstream from Black Gut Creek, and 2.7 mi (4.3 km) northwest of Thelma. DRAINAGE AREA, 8,339 mi² (21,598 km²). PERIOD OF RECORD, October 1962 to current year. GAGE, water-stage recorder and staff gage. Datum of gage is National Geodetic Vertical Datum of 1929.

Lake, used mainly for hydroelectric power development, was first filled Oct. 13-15, 1962, and has a total capacity of 22,434,000,000 ft³ (635,330,000 m³). Usable capacity is 20,127,000,000 ft³ (570,000,000 m³) between elevations 165 ft or 50.3 m and 203 ft or 61.9 m (top of spillway gates) of which 2,788,000,000 ft³ (78,960,000 m³) between elevations 200 ft (61.0 m) and 203 ft (61.9 m) is reserved for flood control. Storage for power generation is 10,673,000,000 ft³ (302,260,000 m³) between elevations 185 ft (56.4 m) and 200 ft (61.0 m). Records furnished by Virginia Electric and Power Co. (See sta 02080500)

02080100 ROANOKE RAPIDS LAKE.--Lat 36°29'10", long 77°39'31", Halifax County, Hydrologic Unit 03010107, at Roanoke Rapids Dam on Roanoke River, 1.5 mi (2.4 km) upstream from bridge on State Highway 48, and 2.2 mi (3.5 km) north of Roanoke Rapids. DRAINAGE AREA, 8,395 mi² (21,743 km²). PERIOD OF RECORD, June 1955 to September 1960 (month-end contents only published in WSP 1723), October 1960 to current year. GAGE, water-stage recorder and staff gage. Datum of gage is National Geodetic Vertical Datum of 1929.

Lake, used for hydroelectric power development, was put in operation June 25, 1955, and has a total capacity of 3,360,220,000 ft³ (95,161,400 m³) at normal highwater elevation of 132.0 ft (40.23 m) and 3,515,290,000 ft³ (99,553,000 m³) at elevation 132.75 ft or 40.462 m (top of gates). Records furnished by Virginia Electric and Power Co. (See sta 02080500)

02086490 LAKE MICHIE.--Lat 36°09'02", long 79°49'49", Durham County, Hydrologic Unit 03020201, at Durham municipal dam on Flat River, 3 mi (5 km) southeast of Bahama, and 5 mi (8 km) upstream from confluence with Eno River. DRAINAGE AREA, 170 mi² (440 km²) approximately. PERIOD OF RECORD, October 1962 to current year. GAGE, water-stage recorder and wire-weight gage at dam. Datum of gage is 0.47 ft (0.143 m) National Geodetic Vertical Datum of 1929.

Lake, used for municipal water supply, began filling in May 1926 and reached spillway elevation Dec. 26, 1926. Total capacity is 618,000,000 ft³ (17,500,000 m³) between elevations (gage datum) 300.0 ft (91.44 m) and 341 ft or 103.9 m (crest of spillway). (See sta 02087000)

02111391 W. KERR SCOTT RESERVOIR.--Lat 36°08'04", long 81°13'30", Wilkes County, Hydrologic Unit 03040101, at W. Kerr Scott Dam on Yadkin River, 0.1 mi (0.3 km) upstream from Fish Trap Creek, 2.0 mi (3.2 km) upstream from Millers Creek, and 4.0 mi (6.4 km) west of Wilkesboro. DRAINAGE AREA, 350 mi² (910 km²), approximately. PERIOD OF RECORD, August 1962 to current year. Gage, water-stage recorder and staff gage at dam. Datum of gage is National Geodetic Vertical Datum of 1929.

Lake, used for flood control, low-flow augmentation and recreation. Some 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 ft³ (188,744,000 m³) of which 6,316,200,000 ft³ (178,870,000 m³) is controlled storage. Records furnished by Corps of Engineers. (See sta 02129000)

02122400 HIGH ROCK LAKE.--Lat 35°36'02", long 80°14'06", Davidson County, Hydrologic Unit 03040103, at High Rock Dam on Yadkin River, 0.8 mi (1.3 km) northwest of High Rock, 2 mi (3 km) upstream from Lick Creek, and 256 mi (412 km) upstream from mouth of Pee Dee River in Winyah Bay. DRAINAGE AREA, 4,000 mi² (10,400 km²), approximately. PERIOD OF RECORD, November 1927 to September 1960 (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) National Geodetic Vertical Datum of 1929.

Lake, used for hydroelectric power development, was first put in operation Nov. 7, 1927. Total capacity is 11,090,000,000 ft³ (314,100,000 m³) and usable capacity is 10,230,000,000 ft³ (289,700,000 m³) between elevations 625 ft (190 m) and 655 ft (200 m) gage datum (top of gates). Records furnished by Yadkin, Inc. (See sta 02129000)

02122699 TUCKERTOWN RESERVOIR.--Lat 35°29'03", long 80°10'30", Stanly County, Hydrologic Unit 03040103, at Tuckertown Dam on Yadkin River, 2.5 mi (4.0 km) upstream from Garr Creek, 3.8 mi (6.1 km) northeast of New London and 250 mi (400 km) upstream from mouth of Pee Dee River in Winyah Bay. DRAINAGE AREA, 4,120 mi² (10,670 km²), approximately. PERIOD OF RECORD, April 1962 to current year. GAGE, remote water-stage recorder in powerhouse. Datum of gage is 30.9 ft (9.42 m) National Geodetic Vertical Datum of 1929.

Lake, used for hydroelectric power development, was first filled Apr. 6, 1962. Total capacity is 1,852,400,000 ft³ (52,460,000 m³) and usable capacity is 293,800,000 ft³ (8,320,000 m³) between elevations 593 ft (181 m) and 596 ft (182 m) gage datum. Records furnished by Yadkin, Inc. (See sta 02129000)

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) National Geodetic Vertical Datum of 1929.

Lake (generally known as Narrows Reservoir), used for hydroelectric power development, was first put in operation July 12, 1917. Total capacity is 10,497,960,000 ft³ (297,302,200 m³) and usable capacity is 5,616,584,000 ft³ (159,061,600 m³) between elevations 510.00 ft (155.448 m) and 541.10 ft (164.927 m). Records furnished by Yadkin, Inc. (See sta 02129000)

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) National Geodetic Vertical Datum of 1929 (levels by Carolina Power and Light Co.).

Lake, used for hydroelectric power development, was first put in operation during January 1928. Total capacity is 7,274,520,000 ft³ (206,014,000 m³) and usable capacity is 5,927,040,000 ft³ (167,854,000 m³) between elevations 200.5 ft (61.11 m) and 239.5 ft (73.00 m) gage datum (top of gates). Records furnished by Carolina Power and Light Co. (see sta 02129000)

02128800 BLEWETT FALLS LAKE.--Lat 34°58'58", long 79°52'40", Richmond County, Hydrologic Unit 03040104, at Blewett Falls Dam on Pee Dee River, 1.2 mi (1.9 km) upstream from Cartledge Creek, 6.5 mi (10.5 km) northwest of Rockingham, and 195 mi (314 km) upstream from mouth in Winyah Bay. DRAINAGE AREA, 6,830 mi² (18,000 km²), approximately. PERIOD OF RECORD, December 1929 to September 1960 (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) National Geodetic Vertical Datum of 1929 (levels by Carolina Power and Light Co.).

Lake, used for hydroelectric power development, was first put in use during 1911. Total capacity is 4,225,320,000 ft³ (119,661,000 m³) and usable capacity is 1,850,000,000 ft³ (52,400,000 m³) between elevations 120.0 ft (36.58 m) and 139.0 ft (42.37 m) gage datum (top of 4-foot flashboards). Records furnished by Carolina Power and Light Co. (See sta 02129000)

02138519 LAKE JAMES.--Lat 35°44'36", long 81°50'22", Burke County, Hydrologic Unit 03050101, at Linville Dam at intake tower on Catawba River, 2.1 mi (3.4 km) northeast of Bridgewater and 279 mi (449 km) upstream from mouth of Wateree River. DRAINAGE AREA, 380 mi² (980 km²), approximately. PERIOD OF RECORD, March 1920 to September 1960 (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) National Geodetic Vertical Datum of 1929 (levels by Duke Power Co.).

Lake (generally known as Bridgewater Reservoir), used for hydroelectric power development, was first put in operation May 5, 1919. The total capacity at elevation 100.0 ft (30.48 m) gage datum (crest of spillway) is 12,581,800,000 ft³ (356,317,000 m³) and usable capacity is 7,943,700,000 ft³ (224,970,000 m³) between elevations (gage datum) 65 ft (19.8 m) and 100 ft (30.5 m). Records furnished by Duke Power Co.

02141490 RHODHISS LAKE.--Lat 35°46'54", long 81°26'42", Caldwell County, Hydrologic Unit 03030101, at Rhodhiss Dam on Catawba River, 0.8 mi (1.3 km) west of Rhodhiss, 1.8 mi (2.9 km) south of Granite Falls, and 243 mi (391 km) upstream from mouth of Wateree River. DRAINAGE AREA, 1,090 mi² (2,820 km²), approximately. PERIOD OF RECORD, September 1935 to September 1960 (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) National Geodetic Vertical Datum of 1929 (levels by Duke Power Co.).

Lake, used for hydroelectric power development, was first put in operation Feb. 18, 1925. Total capacity is 3,188,592,000 ft³ (90,300,900 m³) and usable capacity is 1,717,000,000 ft³ (48,630,000 m³) between elevations (gage datum) 85.0 ft (25.91 m) and 100.0 ft or 30.48 m (crest of spillway). Records furnished by Duke Power Co.

02141961 LAKE HICKORY.--Lat 35°49'28", long 81°11'28", Alexander County, Hydrologic Unit 03050101, at Oxford Dam on Catawba River, 2 mi (3 km) upstream from Lower Little River, 7 mi (11 km) south of Taylorsville, and 226 mi (364 km) upstream from mouth of Wateree River. DRAINAGE AREA, 1,310 mi² (3,390 km²), approximately. PERIOD OF RECORD, September 1935 to September 1960 (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) National Geodetic Vertical Datum of 1929 (levels by Duke Power Co.).

Lake, (generally known as Oxford Reservoir) used for hydroelectric power development, was first put in operation Apr. 5, 1928. Total capacity is 5,552,985,000 ft³ (157,260,500 m³). Sept. 30, 1935 to Sept. 30, 1957, the usable capacity considered as 2,277,970,200 ft³ (64,512,120 m³) between elevations (gage datum) 85.0 ft (25.91 m) and 100.0 ft (30.48 m) (top of flood gates). From Apr. 30, 1928 to Aug. 31, 1935, and Oct. 31, 1957, to Sept. 30, 1964, usable capacity considered as 3,378,400,000 ft³ (95,676,300 m³) between elevations 75.0 ft (22.86 m) and 100.0 ft or 30.48 m (top of flood gates) from Oct. 1, 1964 to present, usable capacity considered as 2,277,800,000 ft³ (64,507,000 m³) between elevations (gage datum) 85.0 ft (25.91 m) and 100.0 ft or 30.48 m (top of flood gates). Records furnished by Duke Power Co.

02142441 LOOKOUT SHOALS LAKE.--Lat 35°45'57", long 81°05'36", Catawba County, Hydrologic Unit 03050101, at Lookout Shoals Dam on Catawba River, 4 mi (6 km) upstream from bridge on U.S. Highways 64 and 70, 4.2 mi (6.8 km) north of Catawba, and 216 mi (348 km) upstream from mouth of Wateree River. DRAINAGE AREA, 1,450 mi² (3,760 km²), approximately. PERIOD OF RECORD, December 1915 to September 1960 (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) National Geodetic Vertical Datum of 1929 (levels by Duke Power Co.).

Lake, used for hydroelectric power development, was first put in operation Dec. 2, 1915. Total capacity was originally 1,355,190,000 ft³ (38,379,000 m³). Capacity has been reduced by silting. Prior to October 1957 the usable capacity considered as 473,980,000 ft³ (13,423,000 m³) and October 1957 to Sept. 30, 1964, as 388,300,000 ft³ (11,000,000 m³) between elevations (gage datum) 90.0 ft (27.43 m) and 100.0 ft (30.48 m) (crest of spillway). From Oct. 1, 1964 to present, usable capacity considered as 208,200,000 ft³ (5,896,000 m³) between elevations (gage datum) 95.0 ft (28.96 m) and 100.0 ft or 30.48 m (crest of spillway). Flood of July 16, 1916, washed out an earth dike. Records furnished by Duke Power Co.

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) National Geodetic Vertical Datum of 1929 (levels by Duke Power Co.).
Lake, used for hydroelectric power development began filling in March 1962. Total capacity is 47,586,200,000 ft³ (1,347,640,000 m³) and usable capacity is 26,910,400,000 ft³ (762,102,500 m³) between elevations (gage datum) 75.0 ft (22.86 m) and 100 ft or 30.5 m (top of flood gates). Records furnished by Duke Power Co.

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) National Geodetic Vertical Datum of 1929 (levels by Duke Power Co.).
Lake, used for hydroelectric power development, was first put in operation Dec. 16, 1923. Total capacity is 2,495,988,000 ft³ (70,686,380 m³). Prior to October 1964 usable capacity is considered 1,132,000,000 ft³ (32,060,000 m³) between elevations (gage datum) 90.0 ft (27.43 m) and 100.0 ft or 30.48 m (crest of spillway) October 1964 to present considered as 845,000,000 ft³ (23,900,000 m³) between elevations (gage datum), 93.0 ft (28.35 m) and 100.0 ft or 30.48 m (crest of spillway). Records furnished by Duke Power Co.

OTHER RESERVOIRS.--The following smaller reservoirs in the South Atlantic Slope basins are described below, but records of contents are not published herein:

02077303 ROXBORO STEAM-ELECTRIC GENERATING PLANT AFTERBAY RESERVOIR.--Lat 36°31'51", long 78°59'50", Person County, Hydrologic Unit 03010104, cooling water reservoir for Carolina Power and Light Company plant, on Hyco River near McGehees Mill. DRAINAGE AREA, 196 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), National Geodetic Vertical Datum of 1929. Dam completed May 30, 1974, and storage began Apr. 26, 1974; water in reservoir first reached normal water level elevation of 385 ft (117 m) on Aug. 22, 1974.

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 m³). 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 ³). 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 m²). Total capacity is 220,588,000 ft³ (6,247,050 m³). Dam completed in 1926 and reservoir first filled in 1927. (See sta 02099500)

02102178 BUCKHORN RESERVOIR.--Lat 35°31'35", long 78°59'22", Chatham County, Hydrologic Unit 03030004, on Cape Fear River near Corinth. DRAINAGE AREA, 3,200 mi² (8,290 km²), approximately. Usable capacity is 69,700,000 ft³ (19,700,000 m³). Completed and filled in 1908. Hydroelectric power operation stopped Dec. 31, 1962.

02121461 LEXINGTON-THOMASVILLE RESERVOIR.--Lat 35°51'54", long 80°11'41", Davidson County, Hydrologic Unit 03050103, Lexington and Thomasville's municipal water supply on Abbotts Creek near Lexington. Drainage area, 70.3 mi² (182 km²). Total capacity is 284,100,000 ft³ (8,046,000 m³) of which 281,400,000 ft³ (7,969,000 m³) is usable. Dam completed Aug. 8, 1957, and reservoir first filled Nov. 23, 1957.

02184122 LAKE TOXAWAY.--Lat 35°07'27", long 82°55'56", Transylvania County, Hydrologic Unit 03060101, recreation lake on Toxaway River at town of Lake Toxaway. DRAINAGE AREA, 7.79 mi² (20.18 km²). Total surface area, about 640 acres (359 ha). Lake reached spillway elevation September 1961.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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		345.5	-	8.30	3014	-	199.94	19549	-	128.4	2697	-
Oct. 31		350.5	+5.0	9.66	3228	+214	200.13	19716	+167	131.1	3180	+483
Nov. 30		363.2	+12.7	10.56	3380	+152	199.29	18983	-733	128.0	2629	-551
Dec. 31		351.9	-11.3	10.40	3355	-25	199.20	18905	-78	128.3	2680	+51
CAL YR 1977		-	-13.6		-	-12		-	-749		-	-402
Jan. 31		385.9	+34.0	10.77	3412	+57	199.39	19070	+165	130.8	3122	+442
Feb. 28		357.8	-28.1	10.54	3376	-36	199.78	19411	+341	132.3	3425	+303
Mar. 31		327.3	-30.5	10.65	3394	+18	198.95	18685	-726	129.4	2861	-564
Apr. 30		373.8	+46.5	10.90	3432	+38	199.92	19532	+847	132.5	3467	+606
May 31		352.2	-21.6	10.30	3340	-92	199.53	19192	-340	131.8	3317	-150
June 30		360.0	+7.8	10.50	3370	+30	199.50	19166	-26	131.0	3162	-155
July 31		351.7	-8.3	10.47	3366	-4	200.58	20108	+942	128.3	2680	-482
Aug. 31		336.3	-15.4	10.31	3342	-24	199.70	19341	-767	131.6	3274	+594
Sept. 30		332.4	-3.9	10.22	3327	-15	199.28	18975	-366	127.6	2564	-710
WTR YR 1978		-	-13.1		-	+313		-	-574		-	-133

Date	Elevation (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)
	02111391 W. Kerr Scott Reservoir			02122400 High Rock Lake			02122699 Tuckertown Reservoir			02122844 Badin Lake		
Sept. 30	1029.05	1724	-	649.28	7722	-	595.31	1781	-	539.45	10101	-
Oct. 31	1030.0	1786	+62	653.23	9940	+2218	595.35	1785	+4	539.02	10007	-94
Nov. 30	1030.15	1799	+13	650.77	8532	-1408	595.45	1795	+10	539.25	10054	+47
Dec. 31	1030.0	1786	-13	644.55	5502	-3030	595.28	1778	-17	539.11	10031	-23
CAL YR 1977		-	0		-	-1510		-	+40		-	-303
Jan. 31	1030.0	1786	0	654.90	11018	+5516	595.50	1801	+23	541.06	10498	+467
Feb. 28	1030.1	1795	+9	646.37	6296	-4722	595.36	1786	-15	539.06	10031	-467
Mar. 31	1030.0	1786	-9	654.82	10947	+4651	595.37	1787	+1	541.03	10474	+443
Apr. 30	1030.1	1795	+9	653.48	10122	-825	595.22	1772	-15	540.63	10381	-93
May 31	1030.0	1786	-9	653.34	10001	-121	595.22	1772	0	539.22	10054	-327
June 30	1030.0	1786	0	651.98	9215	-786	595.36	1786	+14	540.15	10287	+233
July 31	1029.95	1783	-3	653.45	10061	-846	595.30	1780	-6	540.44	10334	+47
Aug. 31	1029.75	1769	-14	650.61	8420	-1641	595.35	1785	+5	539.35	10101	-233
Sept. 30	1028.55	1691	-78	649.41	7774	-646	595.31	1781	-4	539.31	10077	-24
WTR YR 1978		-	-33		-	+52		-	0		-	-24

Lakes and Reservoir in South Atlantic Slope basin--Continued

MONTHEND ELEVATIONS AND CONTENTS AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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	239.3	5881	-	137.0	1640	-	95.1	11251	-	96.6	1230	-
Oct. 31	238.5	5708	-173	133.7	1310	-330	95.7	11408	+157	97.7	1381	+151
Nov. 30	238.4	5686	-22	138.1	1756	+446	92.6	10613	-795	96.2	1176	-205
Dec. 31	238.7	5750	+64	136.5	1590	-166	89.3	9816	-797	97.6	1367	+191
CAL YR 1977		-	-87		-	-218		-	-70		-	+42
Jan. 31	238.8	5772	+22	136.0	1540	-50	96.6	11647	+1831	96.5	1216	-151
Feb. 28	238.4	5686	-86	136.4	1580	+40	88.7	9675	-1972	96.1	1163	-53
Mar. 31	238.3	5664	-22	139.1	1860	+280	96.2	11540	+1865	98.1	1437	+274
Apr. 30	238.6	5729	+65	138.1	1756	-104	96.6	11647	+107	97.5	1353	-84
May 31	238.5	5708	-21	138.4	1787	+31	96.5	11620	-27	97.3	1325	-28
June 30	239.1	5837	+129	138.1	1756	-31	96.1	11514	-106	97.1	1298	-27
July 31	239.0	5815	-22	136.6	1600	-156	96.3	11567	+53	97.7	1381	-83
Aug. 31	238.6	5729	-86	135.3	1470	-130	96.4	11593	+26	96.0	1150	-231
Sept. 30	239.4	5903	+174	135.2	1460	-10	95.2	11277	-316	97.9	1409	+259
WTR YR 1978		-	+22		-	-180		-	+26		-	+179

Date	Gage height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)
	02141961 Lake Hickory			02142441 Lookout Shoals Lake			02142647 Lake Norman			02142676 Mountain Island Lake		
Sept. 30	95.9	1576	-	98.1	126	-	96.3	42500	-	95.8	307	-
Oct. 31	96.6	1691	+115	97.9	117	-9	96.9	43340	+790	96.2	354	+47
Nov. 30	96.9	1741	+50	97.0	79.8	-37	95.3	41260	-2080	97.3	488	+134
Dec. 31	97.6	1859	+118	97.7	109	+29	92.7	38040	-3220	95.6	284	-204
CAL YR 1977		-	+168		-	+4		-	-1100		-	-12
Jan. 31	98.6	2031	+172	98.8	156	+47	98.9	46050	+8010	96.8	426	+142
Feb. 28	96.3	1641	-390	98.0	121	-35	94.3	4000	-6050	95.6	284	-142
Mar. 31	98.8	2066	+425	88.4	0*	-121	97.1	43600	+3600	96.0	330	+46
Apr. 30	97.0	1758	-308	97.2	88.0	+88	97.7	44420	+820	95.9	318	-12
May 31	97.9	1910	+152	96.5	59.4	-29	97.9	44680	+260	97.1	462	+144
June 30	97.0	1758	-152	97.5	100	+41	96.8	43210	-1470	95.7	296	-166
July 31	97.7	1876	+118	97.0	79.8	-20	96.8	43210	0	95.6	284	-12
Aug. 31	97.0	1758	-118	97.9	117	-37	96.2	42420	-790	97.0	450	+166
Sept. 30	96.7	1708	-50	98.0	121	+4	95.1	41010	-1410	95.9	318	-132
WTR YR 1978		-	+132		-	-5		-	-1540		-	+11

* Due to repair on dam.

KANAWHA RIVER BASIN

03161000 SOUTH FORK NEW RIVER NEAR JEFFERSON, N. C.

LOCATION.--Lat 36°23'40", long 81°24'27", Ashe County, Hydrologic Unit 05050001, on right bank 600 ft (183 m) upstream from bridge on State Highways 16 and 88, 0.2 mi (0.3 km) downstream from Bear Creek, and 4 mi (6.4 km) southeast of Jefferson.

DRAINAGE AREA.--207 mi² (536 km²).

PERIOD OF RECORD.--October 1924 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 1275: 1925-26(M), 1928-30(M), 1931-32, 1933-35(M), 1941-42(m), 1944(m).

GAGE.--Water-stage recorder. Datum of gage is 2,657.04 ft (809.866 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 14, 1934, nonrecording gage on bridge 400 ft (122 m) downstream at same datum. Oct. 14, 1934, to Mar. 25, 1935, nonrecording gage at present site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 358 of this report.

AVERAGE DISCHARGE.--54 years, 427 ft³/s (12.09 m³/s), 28.01 in/yr (711 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. 26	1630	3000	85.0	5.68	1.731	Jan. 26	0800	5280	150	7.27	2.216
Nov. 7	0130	*26300	745	*14.83	4.520						

Minimum discharge, 155 ft³/s (4.39 m³/s) Sept. 30, gage height, 1.82 ft (0.555 m); minimum daily, 157 ft³/s (4.45 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	272	412	724	465	600	442	661	559	378	238	238	231
2	1350	416	679	458	570	422	616	512	352	297	247	227
3	722	585	627	424	510	435	579	467	346	329	204	269
4	405	882	626	418	460	455	560	740	347	290	199	244
5	340	1610	758	428	440	410	546	976	331	250	332	205
6	314	15400	929	430	400	434	521	693	320	251	306	194
7	297	13800	753	409	356	457	509	610	322	252	775	185
8	325	3660	664	505	370	477	491	753	397	243	892	180
9	822	2040	658	1900	380	580	478	761	432	235	523	175
10	742	1600	639	1020	390	1590	469	648	359	222	388	170
11	485	1310	594	732	395	1490	464	572	320	217	295	193
12	410	1110	594	730	400	896	464	538	327	212	272	219
13	372	981	568	720	410	830	438	804	336	213	388	198
14	356	894	564	710	410	990	416	976	317	217	384	192
15	334	835	736	700	410	1540	406	768	288	218	318	192
16	323	788	632	680	410	1130	401	714	288	275	310	191
17	336	965	579	670	400	888	407	642	289	264	269	183
18	319	869	598	650	400	746	415	583	282	238	294	174
19	307	740	616	620	410	655	476	539	318	237	281	170
20	298	700	561	600	400	592	487	506	423	210	259	162
21	286	677	549	580	400	554	442	481	344	205	235	165
22	280	665	519	555	400	548	415	458	298	199	225	190
23	276	761	489	560	393	521	392	447	289	200	218	185
24	273	732	482	570	440	485	373	490	272	195	212	177
25	291	677	536	941	450	613	501	498	260	195	207	178
26	2100	822	569	4280	450	1490	1280	428	256	192	203	174
27	1080	729	456	1500	456	1600	1040	409	253	193	218	165
28	690	675	469	1040	447	1130	724	396	241	228	243	162
29	561	672	456	827	---	872	613	438	235	194	213	161
30	491	651	487	717	---	769	557	475	234	182	198	157
31	441	---	467	650	---	706	---	404	---	178	201	---
TOTAL	15898	56658	18578	25489	11957	24747	16141	18285	9454	7069	9547	5668
MEAN	513	1889	599	822	427	798	538	590	315	228	308	189
MAX	2100	15400	929	4280	600	1600	1280	976	432	329	892	269
MIN	272	412	456	409	356	410	373	396	234	178	198	157
CFSM	2.48	9.13	2.89	3.97	2.06	3.86	2.60	2.85	1.52	1.10	1.49	.91
IN.	2.86	10.18	3.34	4.58	2.15	4.45	2.90	3.29	1.70	1.27	1.72	1.02

CAL YR 1977 TOTAL 221798 MEAN 608 MAX 15400 MIN 217 CFSM 2.94 IN 39.86
WTR YR 1978 TOTAL 219491 MEAN 601 MAX 15400 MIN 157 CFSM 2.90 IN 39.44

03161000 SOUTH FORK NEW RIVER NEAR JEFFERSON, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
18...	1130	303	2	1.6
NOV				
07...	1315	10200	432	11900
25...	1210	666	10	18
JAN				
05...	1120	389	1	1.1
MAR				
06...	1400	471	4	5.1
MAY				
22...	1115	477	12	15
JUN				
29...	1400	236	7	4.5
JUL				
26...	1145	203	59	32
SEP				
08...	1050	179	3	1.4

03439000 FRENCH BROAD RIVER AT ROSMAN, N. C.

LOCATION.--Lat 35°08'32", long 82°49'28", Transylvania County, Hydrologic Unit 06010105, on left bank at upstream side of bridge on U.S. Highway 178 at Rosman, 1.0 mi (1.6 km) upstream from East Fork, and at mile 216.4 (348.2 km).

DRAINAGE AREA.--67.9 mi² (175.9 km²).

PERIOD OF RECORD.--May 1907 to June 1909, October 1935 to current year. Monthly discharge only for some periods published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1306: 1908(M). WSP 1910: 1936(M), 1938(M), 1939-40, 1942-43.

GAGE.--Water-stage recorder. Datum of gage is 2,173.83 ft (662.583 m) National Geodetic Vertical Datum of 1929. Prior to June 30, 1909, nonrecording gage at site 500 ft (152 m) downstream at different datum. Jan. 1, 1936, to July 6, 1937, nonrecording gage at present site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 360 of this report.

AVERAGE DISCHARGE.--44 years (1907-8, 1935-78), 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)
Oct. 25	2330	3330	94.3	8.82	2.688	Jan. 25	2245	*4930	140	*10.57	3.222
Jan. 8	1945	2120	60.0	6.79	2.070	Aug. 7	1515	2510	71.1	7.48	2.280

Minimum discharge, 77 ft³/s (2.18 m³/s) July 30, 31, gage height, 1.76 ft (0.536 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	178	214	449	243	400	213	262	176	178	116	129	133
2	198	224	344	232	384	216	250	196	171	119	102	133
3	166	284	304	224	365	258	240	175	165	112	137	133
4	158	312	295	218	347	233	234	380	159	108	138	126
5	154	426	610	215	339	214	228	300	154	111	228	124
6	150	897	462	217	323	214	222	244	151	112	262	122
7	146	566	372	214	311	218	215	266	159	110	1680	118
8	184	421	336	777	303	312	208	395	203	108	697	116
9	353	358	331	758	297	337	205	449	221	110	420	113
10	206	324	299	430	290	627	201	320	168	120	314	112
11	181	293	286	360	282	408	209	280	156	112	342	171
12	169	276	276	332	276	348	204	258	201	101	312	124
13	158	260	270	322	291	313	198	387	217	100	266	129
14	153	248	338	298	275	407	187	321	170	112	274	157
15	148	238	305	282	262	354	183	293	157	144	355	132
16	145	247	283	270	258	317	179	271	151	157	267	122
17	144	365	273	392	255	292	174	253	145	109	238	116
18	140	275	306	331	254	280	219	238	140	98	235	111
19	137	252	275	353	249	267	269	225	148	94	227	110
20	133	239	267	461	241	255	207	213	189	96	222	104
21	131	241	257	352	238	250	194	203	155	90	210	102
22	126	259	245	321	225	253	187	195	144	86	189	103
23	124	310	238	305	222	238	181	198	136	86	177	108
24	123	285	249	307	219	231	179	194	131	104	167	114
25	572	265	347	1580	218	423	199	189	130	97	159	108
26	864	246	274	1530	214	539	209	190	170	94	160	103
27	364	234	256	734	207	391	190	181	130	124	155	101
28	292	279	243	584	214	336	180	211	124	116	153	97
29	259	272	235	502	---	307	174	255	120	87	148	94
30	235	333	252	456	---	289	171	226	116	80	144	95
31	221	---	252	425	---	275	---	192	---	123	139	---
TOTAL	6712	9443	9529	14025	7759	9620	6158	7874	4759	3336	8626	3531
MEAN	217	315	307	452	277	310	205	254	159	108	278	118
MAX	864	897	610	1580	400	627	269	449	221	157	1680	171
MIN	123	214	235	214	207	213	171	175	116	80	102	94
CFSM	3.20	4.64	4.52	6.66	4.08	4.57	3.02	3.74	2.34	1.59	4.09	1.74
IN.	3.68	5.17	5.22	7.68	4.25	5.27	3.37	4.31	2.61	1.83	4.73	1.93

CAL YR 1977 TOTAL 96542 MEAN 264 MAX 2520 MIN 71 CFSM 3.89 IN 52.89
WTR YR 1978 TOTAL 91372 MEAN 250 MAX 1680 MIN 80 CFSM 3.68 IN 50.06

TENNESSEE RIVER BASIN

03439000 FRENCH BROAD RIVER AT ROSMAN, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
13...	1000	158	2	.85
NOV				
17...	1335	373	349	351
JAN				
23...	1545	304	11	9.0
FEB				
28...	1125	214	5	2.9
MAY				
18...	1130	240	8	5.2
JUN				
27...	1445	140	26	9.8
JUL				
13...	1410	110	5	1.5
AUG				
02...	1030	90	93	23
07...	1100	1140	281	865
07...	1610	2370	474	3030
07...	1635	2330	417	2620
08...	1500	573	44	68
SEP				
06...	1000	123	3	1.0

03441000 DAVIDSON RIVER NEAR BREVARD, N. C.

LOCATION.--Lat 35°16'23", long 82°42'21", Transylvania County, Hydrologic Unit 06010105, on right bank 150 ft (46 m) upstream from bridge on State Highway 280, 2.1 mi (3.4 km) downstream from Avery Creek, 3.3 mi (5.3 km) northeast of Brevard, and at mile 2.2 (3.5 km).

DRAINAGE AREA.--40.4 mi² (104.6 km²).

PERIOD OF RECORD--October 1920 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1336: 1921, 1922(M), 1923, 1924-25(M), 1926, 1927(M), 1929-32(M).

GAGE.--Water-stage recorder. Datum of gage is 2,115.13 ft (644.692 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to May 17, 1934, nonrecording gage, at site 50 ft (15 m) downstream at same datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 362 of this report.

AVERAGE DISCHARGE.--58 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.--Maximum stage since at least 1869, 11.9 ft (3.63 m) June 1876 (from studies by Tennessee Valley Authority).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 25	2230	2350	66.6	5.48	1.670	Jan. 25	2215	*3590	102	*7.04	2.146
Nov. 6	0315	2460	69.7	5.62	1.713	Aug. 7	1515	1180	33.4	3.70	1.128
Jan. 8	1945	1170	33.1	3.67	1.119						

Minimum discharge, 37 ft³/s (1.05 m³/s) Sept. 29, 30, gage height, 0.52 ft (0.158 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97	118	279	139	237	110	144	97	93	61	53	58
2	96	129	213	131	227	111	135	97	88	62	43	58
3	86	199	187	123	212	136	129	94	85	61	47	58
4	84	240	184	119	200	118	125	229	82	57	60	53
5	83	359	347	117	193	110	120	174	81	58	84	51
6	81	932	280	117	181	110	116	138	82	60	102	50
7	79	423	225	116	187	118	112	165	101	59	646	47
8	124	316	202	424	169	192	108	282	119	56	330	46
9	227	264	213	448	165	223	105	311	123	75	293	45
10	117	237	184	264	159	462	103	213	93	67	175	44
11	102	208	173	239	153	287	110	177	85	58	153	80
12	94	190	165	197	150	237	104	161	101	54	135	49
13	88	177	161	189	160	209	101	224	119	54	130	48
14	86	167	194	173	150	269	95	191	88	61	121	55
15	84	159	177	159	141	226	93	172	82	74	125	53
16	81	161	163	153	139	202	89	157	79	67	108	50
17	79	229	157	205	138	181	90	145	77	55	95	46
18	78	177	183	178	139	168	116	135	84	51	86	44
19	76	162	159	198	136	158	143	127	106	50	91	44
20	74	153	155	250	130	149	106	120	126	50	94	41
21	73	154	146	188	126	145	99	113	102	47	89	40
22	71	163	138	172	121	142	95	109	88	45	79	46
23	71	188	134	163	118	131	92	109	82	46	74	44
24	70	171	136	164	117	126	90	113	77	59	70	44
25	421	159	202	983	117	263	116	103	80	52	67	44
26	473	147	153	943	112	334	137	98	79	46	64	41
27	218	140	140	459	107	240	118	95	70	46	72	41
28	172	163	134	364	111	201	107	120	66	57	70	40
29	150	160	139	311	---	180	101	137	65	45	66	38
30	136	202	146	278	---	166	98	114	63	43	63	39
31	125	---	145	256	---	153	---	100	---	57	61	---
TOTAL	3896	6647	5614	8220	4295	5857	3297	4620	2666	1733	3746	1437
MEAN	126	222	181	265	153	189	110	149	88.9	55.9	121	47.9
MAX	473	932	347	983	237	462	144	311	126	75	646	80
MIN	70	118	134	116	107	110	89	94	63	43	43	38
CFSM	3.12	5.50	4.48	6.56	3.79	4.68	2.72	3.69	2.20	1.38	3.00	1.19
IN.	3.59	6.12	5.17	7.57	3.95	5.39	3.04	4.25	2.45	1.60	3.45	1.32

CAL YR 1977 TOTAL 56097 MEAN 154 MAX 1300 MIN 38 CFSM 3.81 IN 51.65
WTR YR 1978 TOTAL 52028 MEAN 143 MAX 983 MIN 38 CFSM 3.54 IN 47.91

TENNESSEE RIVER BASIN

03441000 DAVIDSON RIVER NEAR BREVARD, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
13...	1700	87	1	.23
NOV				
17...	1230	241	5	3.3
JAN				
16...	1530	144	3	1.2
FEB				
21...	1355	127	2	.69
APR				
20...	1130	106	3	.86
MAY				
16...	1330	155	4	1.7
JUN				
23...	1415	83	4	.90
AUG				
02...	0930	43	3	.35
07...	1015	646	131	228
07...	1210	468	81	102
07...	1535	1200	352	1140
07...	1735	810	168	367
08...	1415	229	10	6.2
SEP				
05...	1205	53	1	.14

03441440 LITTLE RIVER ABOVE HIGH FALLS, NEAR CEDAR MOUNTAIN, N. C.

LOCATION.--Lat 35°11'32", long 82°36'49", Transylvania County, Hydrologic Unit 06010105, on left bank 100 ft (30.5 m) upstream from High Falls, 0.2 mi (0.3 km) upstream from Grassy Creek, 1.0 mi (1.6 km) downstream from Reasonover Creek, 3.8 mi (6.1 km) northeast of Cedar Mountain, and at mile 7.8 (12.6 km).

DRAINAGE AREA.--26.8 mi² (69.4 km²).

PERIOD OF RECORD.--October 1962 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,513.27 ft (766.045 m) National Geodetic Vertical Datum of 1929 (Tennessee Valley Authority bench mark).

REMARKS.--Records good. E. I. du Pont de Nemours and Company plant 0.5 mi (0.8 km) above gage diverted about 1.02 ft³/s (0.029 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.--16 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. 26	0700	1100	31.2	3.62	1.103	Jan. 9	0315	1110	31.4	3.63	1.106
Nov. 6	1115	1640	46.4	4.28	1.305	Jan. 26	0515	*1770	50.1	*4.41	1.344

Minimum discharge, 27 ft³/s (0.76 m³/s) July 31, gage height, 1.32 ft (0.402 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	92	198	90	175	65	109	61	66	48	44	55
2	59	97	160	87	160	65	102	62	62	50	33	50
3	50	129	135	80	150	72	98	57	60	42	36	45
4	47	139	126	75	140	72	92	215	60	38	32	45
5	46	190	184	74	130	67	94	195	57	38	90	45
6	45	1080	166	76	120	69	99	135	55	40	95	40
7	45	406	136	75	125	73	94	137	66	40	404	39
8	50	262	123	339	115	114	88	236	83	38	232	38
9	162	208	119	730	105	131	85	282	110	37	135	35
10	86	184	106	277	96	313	84	186	74	38	110	34
11	68	159	100	204	90	194	95	149	62	39	185	108
12	59	144	96	174	85	150	111	130	59	35	135	52
13	55	129	94	162	90	131	81	201	59	33	110	45
14	52	120	125	142	85	174	79	169	52	35	90	95
15	50	113	125	128	80	160	72	147	49	38	130	67
16	50	111	108	120	78	141	86	131	49	50	100	59
17	47	170	103	173	77	123	80	121	47	39	90	54
18	46	133	122	166	76	107	87	110	45	34	85	49
19	45	120	107	159	75	99	103	99	49	32	85	42
20	44	110	100	218	72	96	84	96	89	32	100	40
21	43	107	95	165	69	90	81	94	70	30	90	39
22	40	112	90	145	68	89	73	84	71	28	75	37
23	40	140	85	133	67	82	71	80	74	29	70	37
24	39	122	88	128	66	80	61	81	72	38	65	40
25	199	113	149	645	65	282	61	82	66	40	60	40
26	794	102	111	1160	64	308	81	75	70	33	60	38
27	245	94	99	400	62	218	72	71	55	42	70	37
28	169	115	92	297	63	167	63	69	49	44	65	35
29	135	127	86	249	---	144	62	81	46	35	60	33
30	113	130	90	217	---	132	62	90	44	32	55	33
31	100	---	94	190	---	118	---	75	---	31	55	---
TOTAL	3079	5258	3612	7278	2648	4126	2510	3801	1870	1158	3046	1406
MEAN	99.3	175	117	235	94.6	133	83.7	123	62.3	37.4	98.3	46.9
MAX	794	1080	198	1160	175	313	111	282	110	50	404	108
MIN	39	92	85	74	62	65	61	57	44	28	32	33
CFSM	3.71	6.53	4.37	8.77	3.53	4.96	3.12	4.59	2.33	1.40	3.67	1.75
IN.	4.27	7.30	5.01	10.10	3.68	5.73	3.48	5.28	2.60	1.61	4.23	1.95

CAL YR 1977 TOTAL 39078 MEAN 107 MAX 1200 MIN 17 CFSM 3.99 IN 54.24
WTR YR 1978 TOTAL 39792 MEAN 109 MAX 1160 MIN 28 CFSM 4.07 IN 55.23

03443000 FRENCH BROAD RIVER AT BLANTYRE, N. C.

LOCATION.--Lat 35°17'56", long 82°37'27", Transylvania County, Hydrologic Unit 06010105, on left bank 40 ft (12 m) upstream from bridge on Secondary Road 1503, 700 ft (213 m) east of railroad at Blantyre, 3.5 mi (5.6 km) downstream from Little River, and at mile 183.7 (295.6 km).

DRAINAGE AREA.--296 mi² (767 km²).

PERIOD OF RECORD.--October 1920 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 923: 1921-23, 1929, 1933, 1935-36(M), 1938, 1940.

GAGE.--Water-stage recorder. Datum of gage is 2,060.32 ft (627.986 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to July 5, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good, except those above 2,600 ft³/s (73.6 m³/s), which are fair. Considerable diurnal fluctuation at low flow caused by powerplant about 8 mi (13 km) above station. Suspended-sediment records for the current year are published on page 365 of this report.

AVERAGE DISCHARGE.--58 years, 990 ft³/s (28.04 m³/s), 45.42 in/yr (1,154 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. 26	2000	4680	133	17.29	5.270	Jan. 9	2100	4510	128	17.02	5.188
Nov. 6	2200	5740	163	18.44	5.621	Jan. 26	2115	*8210	233	*20.20	6.157

Minimum discharge, 341 ft³/s (9.66 m³/s) Sept. 29, 30, gage height, 4.56 ft (1.390 m); minimum daily, 344 ft³/s (9.74 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	634	916	2150	1060	1930	892	1190	773	835	520	612	575
2	645	898	1790	1030	1830	878	1130	778	797	685	461	566
3	644	1020	1470	980	1740	986	1080	743	775	558	518	574
4	578	1290	1340	947	1640	1050	1040	1170	737	509	543	556
5	562	1600	2160	935	1570	912	1010	1770	673	491	686	528
6	556	4850	2560	931	1500	981	971	1200	654	495	871	516
7	576	5090	1750	934	1400	1010	966	1070	764	492	3260	495
8	590	3250	1490	2020	1380	1210	928	1930	759	478	4050	500
9	1170	1970	1430	4240	1330	1590	912	2410	1010	497	3910	480
10	971	1670	1330	4210	1300	3180	898	1810	827	560	1890	464
11	745	1440	1220	2880	1260	2540	899	1440	719	507	1560	579
12	702	1310	1170	1720	1220	1810	930	1270	716	468	1650	625
13	657	1200	1140	1580	1240	1570	885	1640	865	458	1380	570
14	571	1120	1240	1440	1270	1710	854	1700	760	457	1190	774
15	556	1070	1450	1320	1150	1870	828	1420	692	549	1590	739
16	545	1030	1240	1220	1120	1550	817	1290	731	654	1310	651
17	529	1580	1170	1470	1110	1380	812	1190	704	550	1150	606
18	464	1430	1290	1930	1100	1280	822	1120	656	470	1030	572
19	455	1170	1230	1600	1090	1200	1100	1060	634	447	1110	638
20	444	1080	1150	2280	1060	1140	983	1010	844	435	1030	542
21	434	1050	1110	1850	1030	1110	875	971	779	424	956	447
22	428	1070	1050	1550	1010	1110	837	935	690	410	897	418
23	425	1350	1020	1420	978	1060	812	916	670	407	836	393
24	468	1320	1020	1360	966	1020	782	939	675	442	796	411
25	988	1190	1460	3680	956	1740	783	888	627	467	765	411
26	4480	1100	1290	7250	889	2750	977	858	697	417	708	379
27	4030	1030	1120	6100	858	2300	914	841	648	504	649	371
28	1810	1100	1050	4360	861	1740	869	802	594	549	614	359
29	1270	1340	1010	3060	---	1500	829	969	553	473	561	346
30	1090	1260	1030	2350	---	1370	806	1020	535	414	637	344
31	987	---	1120	2100	---	1270	---	919	---	436	595	---
TOTAL	29004	46794	42050	69807	34788	45709	27539	36852	21620	15223	37815	15429
MEAN	936	1560	1356	2252	1242	1474	918	1189	721	491	1220	514
MAX	4480	5090	2560	7250	1930	3180	1190	2410	1010	685	4050	774
MIN	425	898	1010	931	858	878	782	743	535	407	461	344
CFSM	3.16	5.27	4.58	7.61	4.20	4.98	3.10	4.02	2.44	1.66	4.12	1.74
IN.	3.65	5.88	5.28	8.77	4.37	5.74	3.46	4.63	2.72	1.91	4.75	1.94

CAL YR 1977 TOTAL 422467 MEAN 1157 MAX 7160 MIN 254 CFSM 3.91 IN 53.09
WTR YR 1978 TOTAL 422630 MEAN 1158 MAX 7250 MIN 344 CFSM 3.91 IN 53.11

03443000 FRENCH BROAD RIVER AT BLANTYRE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
13...	1530	664	14	25	--
26...	1400	4440	174	2090	69
NOV					
17...	1600	1860	102	512	--
FEB					
24...	1205	940	8	20	--
MAY					
18...	1015	1100	23	68	--
JUN					
23...	1100	622	31	52	--
JUL					
13...	1245	456	15	18	--
AUG					
02...	1350	447	53	64	--
07...	0930	3220	534	4640	--
07...	1240	3440	429	3990	--
07...	1450	3530	467	4450	--
07...	1740	3720	643	6460	--
08...	1240	3790	116	1190	--

03446000 MILLS RIVER NEAR MILLS RIVER, N. C.

LOCATION.--Lat 35°23'56", long 82°35'46", Henderson County, Hydrologic Unit 06010105, on right bank 1.5 mi (2.4 km) downstream from confluence of North and South Forks, 1.8 mi (2.9 km) northwest of Mills River, 4.2 mi (6.8 km) northwest of Horseshoe, and at mile 4.6 (7.4 km).

DRAINAGE AREA.--66.7 mi² (172.8 km²).

PERIOD OF RECORD.--September 1924 to September 1926, October 1933 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 923: 1935, 1937, 1939. WSP 1003: 1938, 1940-42. WSP 1143: 1940(P). WSP 1276: 1926.

GAGE.--Water-stage recorder. Datum of gage is 2,088.47 ft (636.566 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to Oct. 1, 1926, nonrecording gage at site 500 ft (152 m) upstream at datum 2.97 ft (0.905 m) higher.

REMARKS.--Records good. City of Hendersonville diverted an average of 4.76 ft³/s (0.13 m³/s) from North Fork and Bradley Creek for municipal water supply. Suspended-sediment records for the current year are published on page 367 of this report.

AVERAGE DISCHARGE.--47 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)
Oct. 26	0045	1610	45.6	4.82	1.469	Jan. 8	2215	1130	32.0	4.08	1.244
Nov. 6	0430	*4900	139	*10.77	3.283	Jan. 26	0130	3410	96.6	8.28	2.524

Minimum discharge, 55 ft³/s (1.56 m³/s) July 31, gage height, 1.69 ft (0.515 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	191	166	335	170	338	177	230	167	150	88	96	93
2	185	168	274	163	322	177	218	162	143	104	64	89
3	170	221	247	154	305	194	210	153	137	94	59	110
4	167	275	243	149	291	179	201	278	132	86	64	89
5	161	471	385	151	280	164	195	258	126	83	91	83
6	158	2290	355	148	264	171	189	214	127	88	102	75
7	153	767	294	146	262	177	184	215	147	88	530	77
8	161	533	266	432	250	230	177	325	164	104	382	73
9	230	432	262	654	241	264	174	384	185	221	347	70
10	160	380	236	370	233	725	171	287	146	104	207	70
11	145	329	222	340	226	468	170	248	133	90	179	155
12	135	300	212	273	221	363	168	226	138	84	191	89
13	130	278	207	259	231	318	164	293	153	84	233	83
14	124	263	231	234	223	376	155	262	125	87	216	93
15	122	249	225	213	211	348	152	241	118	87	270	87
16	120	244	208	213	208	301	150	222	116	92	227	83
17	120	311	201	246	205	270	150	209	112	80	197	77
18	115	254	222	231	206	252	180	199	108	73	161	73
19	115	234	203	228	203	236	202	187	124	70	142	77
20	110	222	198	280	196	222	165	179	158	69	170	70
21	108	218	190	229	194	214	156	173	145	66	155	66
22	108	222	180	210	188	210	150	166	126	63	132	64
23	106	241	176	201	187	198	146	180	116	62	120	64
24	104	223	175	199	189	192	144	189	110	65	110	68
25	289	214	220	877	186	384	180	167	106	94	104	68
26	721	204	186	1680	186	465	250	157	107	68	99	66
27	305	194	174	690	179	382	220	151	102	63	93	66
28	237	204	163	530	180	319	191	150	97	65	93	64
29	207	208	173	448	---	284	177	183	92	61	108	61
30	188	231	177	397	---	262	170	192	89	57	129	61
31	175	---	178	366	---	244	---	168	---	78	106	---
TOTAL	5520	10546	7018	10881	6405	8766	5389	6585	3832	2618	5177	2364
MEAN	178	352	226	351	229	283	180	212	128	84.5	167	78.8
MAX	721	2290	385	1680	338	725	250	384	185	221	530	155
MIN	104	166	163	146	179	164	144	150	89	57	59	61
CFSM	2.67	5.28	3.39	5.26	3.43	4.24	2.70	3.18	1.92	1.27	2.50	1.18
IN.	3.08	5.88	3.91	6.07	3.57	4.89	3.01	3.67	2.14	1.46	2.89	1.32

CAL YR 1977 TOTAL 76521 MEAN 210 MAX 2290 MIN 47 CFSM 3.15 IN 42.68
WTR YR 1978 TOTAL 75101 MEAN 206 MAX 2290 MIN 57 CFSM 3.09 IN 41.88

03446000 MILLS RIVER NEAR MILLS RIVER, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
NOV				
06...	1305	1780	209	1000
17...	1130	332	20	18
JAN				
16...	1435	200	4	2.2
FEB				
21...	1050	191	4	2.1
APR				
20...	1330	165	5	2.2
MAY				
16...	1115	221	6	3.6
JUN				
23...	1450	115	8	2.5
AUG				
02...	1305	65	11	1.9
07...	1410	573	250	387
07...	1825	590	408	650
08...	1540	373	92	93
SEP				
06...	1330	81	1	.22

03448000 FRENCH BROAD RIVER AT BENT CREEK, N. C.

LOCATION.--Lat 35°30'07", long 82°35'35", Buncombe County, Hydrologic Unit 06010105, on left bank 50 ft (15 m) downstream from Bent Creek, 6.2 mi (10 km) upstream from Hominy Creek, 6.7 mi (10.8 km) south of Asheville, and at mile 157.7 (253.7 km).

DRAINAGE AREA.--676 mi² (1,751 km²).

PERIOD OF RECORD.--October 1933 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,995.91 ft (608.353 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority).

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 369 of this report. Some diurnal fluctuation at low flow caused by powerplant about 34 mi (55 km) above station.

AVERAGE DISCHARGE.--45 years, 1,693 ft³/s (47.95 m³/s), 34.01 in/yr (864 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. 26	0600	6310	179	6.30	1.920	Jan. 9	0445	6240	177	6.26	1.908
Nov. 6	1915	*19700	558	*12.09	3.685	Jan. 26	1130	14900	422	10.28	3.133

Minimum discharge, 603 ft³/s (17.1 m³/s) July 31; minimum gage height, 2.61 ft (0.796 m) Sept. 30; minimum daily discharge, 616 ft³/s (17.4 m³/s) July 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1170	1550	2750	1640	2700	1500	1910	1560	1410	827	965	1020
2	1150	1490	2640	1630	2540	1500	1800	1520	1320	1050	867	1000
3	1130	1580	2160	1580	2410	1550	1720	1470	1280	1120	730	1040
4	1050	1810	1950	1530	2280	1660	1680	1840	1250	895	794	983
5	1020	2480	2790	1550	2180	1630	1680	2670	1170	829	1300	931
6	1000	15100	3640	1560	2090	1630	1660	1980	1140	832	1320	906
7	1010	13100	2720	1560	1910	1650	1650	1680	1290	844	3930	880
8	1030	7620	2220	2480	1870	1700	1640	2590	1330	815	5310	858
9	1480	4510	2070	5830	1820	2120	1620	3760	1500	1040	5220	840
10	1650	2820	1940	5330	1780	5000	1610	2940	1460	898	4250	818
11	1300	2380	1760	4470	1720	4580	1620	2180	1240	892	2100	971
12	1190	2070	1680	2700	1690	3140	1610	1850	1170	801	2200	1060
13	1130	1890	1650	2330	1710	2540	1570	2130	1300	767	2220	933
14	1060	1800	1680	2130	1750	2510	1510	2450	1280	797	1730	2240
15	997	1780	1950	1890	1660	2780	1460	2030	1140	950	2280	2200
16	975	1740	1750	1730	1600	2380	1440	1840	1120	1070	2390	1260
17	956	2170	1670	2020	1600	2110	1430	1680	1120	1050	2080	1110
18	905	2250	1790	2860	1580	1950	1490	1610	1090	831	1610	1030
19	855	1800	1780	2410	1550	1820	1670	1590	1050	767	1540	1050
20	837	1740	1670	3230	1550	1720	1650	1570	1240	739	1550	951
21	819	1740	1660	2850	1530	1670	1550	1550	1340	706	1600	833
22	806	1740	1650	2290	1520	1670	1480	1540	1230	660	1450	777
23	791	1830	1640	2050	1510	1640	1440	1510	1130	652	1340	905
24	797	1910	1620	1920	1500	1620	1420	1580	1050	675	1280	763
25	1010	1760	1760	5770	1500	2770	1490	1530	1040	768	1220	759
26	5540	1750	1830	13400	1500	4270	2160	1460	1020	707	1170	750
27	5270	1730	1650	12300	1480	3840	2060	1410	1060	633	1070	698
28	4300	1730	1630	8830	1480	2830	1650	1370	1010	898	1080	669
29	2160	1870	1600	5820	---	2440	1620	1400	900	792	1020	634
30	1760	1800	1610	3790	---	2200	1590	1540	861	670	1150	627
31	1630	---	1650	2990	---	2030	---	1540	---	616	1110	---
TOTAL	46778	89540	60560	112470	50010	72450	48880	57370	35541	25591	57876	29496
MEAN	1509	2985	1954	3628	1786	2337	1629	1851	1185	826	1867	983
MAX	5540	15100	3640	13400	2700	5000	2160	3760	1500	1120	5310	2240
MIN	791	1490	1600	1530	1480	1500	1420	1370	861	616	730	627
CFSM	2.23	4.42	2.89	5.37	2.64	3.46	2.41	2.74	1.75	1.22	2.76	1.45
IN.	2.57	4.93	3.33	6.19	2.75	3.99	2.69	3.16	1.96	1.41	3.18	1.62

CAL YR 1977 TOTAL 680117 MEAN 1863 MAX 15100 MIN 438 CFSM 2.76 IN 37.43
WTR YR 1978 TOTAL 686562 MEAN 1881 MAX 15100 MIN 616 CFSM 2.78 IN 37.78

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 June 1978.

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, 19.5°C Oct. 2, May 26, 27, June 1, 2, 4; minimum, 1.0°C Dec. 29, Feb. 7, 8.

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1977 TO JUNE 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.0	16.0	13.0	12.0	10.5	9.5	5.5	4.5	3.0	2.0	5.5	4.5
2	19.5	17.0	12.0	11.5	10.5	9.5	5.0	3.5	4.5	3.0	4.5	3.5
3	18.5	15.5	13.5	12.0	9.5	8.5	4.0	2.0	4.5	4.0	3.5	3.0
4	16.0	14.0	14.0	13.5	9.0	8.5	3.5	2.0	4.5	4.0	4.0	2.0
5	15.5	13.5	14.5	14.0	11.0	9.0	4.0	2.0	4.5	4.0	4.5	2.0
6	15.0	13.5	16.0	14.5	11.0	9.0	5.0	3.5	4.0	1.5	5.5	3.0
7	15.0	13.5	15.5	15.0	9.0	4.5	6.0	5.0	2.0	1.0	5.5	4.5
8	14.5	14.0	15.0	14.0	4.5	4.0	7.0	5.5	2.0	1.0	6.0	5.5
9	15.5	14.0	14.5	13.5	5.0	4.0	4.5	1.5	3.5	2.0	5.5	5.5
10	14.5	13.5	14.0	13.0	4.5	3.5	2.0	1.5	4.5	3.0	6.0	5.5
11	14.5	13.0	13.0	10.0	4.0	3.0	2.0	1.5	4.5	3.5	7.0	6.0
12	14.0	12.0	10.0	9.0	4.0	3.0	3.5	1.5	5.0	3.5	8.0	7.0
13	13.0	11.0	9.0	6.5	5.0	3.5	4.5	3.0	5.0	4.5	8.5	8.0
14	12.0	10.0	7.0	6.0	7.0	5.0	4.5	2.0	5.0	4.5	10.5	8.5
15	12.0	10.0	7.0	6.5	8.5	7.0	3.5	1.5	6.0	4.5	10.5	10.0
16	11.5	10.5	8.5	7.0	8.0	8.0	3.5	1.5	5.5	5.0	10.5	9.0
17	11.0	9.0	10.5	8.5	8.0	8.0	4.5	2.0	6.0	5.5	9.0	7.0
18	11.0	9.0	10.0	9.5	8.5	8.0	5.0	4.5	6.5	5.5	8.0	6.5
19	11.5	9.5	9.5	8.5	8.5	7.0	4.5	4.5	6.5	5.5	8.5	6.5
20	12.0	9.5	8.5	8.0	7.0	6.5	5.0	3.5	6.0	5.0	10.0	8.0
21	12.0	10.0	9.0	8.0	7.0	5.5	4.5	3.0	5.0	3.0	11.5	9.5
22	13.0	10.0	10.0	9.0	5.5	4.5	3.5	3.5	3.5	2.0	12.0	10.0
23	12.0	10.0	11.0	10.0	4.5	4.0	4.0	3.0	3.0	1.5	13.0	10.5
24	11.5	11.0	13.0	11.0	6.0	4.5	3.5	3.5	4.5	2.0	13.0	10.5
25	12.0	11.5	12.0	11.0	7.0	6.0	4.0	3.0	5.5	3.5	11.5	10.0
26	13.5	12.0	11.0	8.0	6.0	4.0	3.0	2.0	6.0	4.5	10.0	9.5
27	14.5	13.5	8.0	6.0	4.0	2.0	2.0	1.5	6.0	4.0	9.5	9.0
28	14.5	14.5	6.5	6.0	2.0	1.5	2.0	1.5	5.0	4.5	10.0	8.5
29	15.0	14.0	8.5	6.5	2.0	1.0	2.0	1.5	---	---	10.5	9.5
30	14.5	13.5	9.5	8.5	3.0	1.5	2.0	1.5	---	---	12.0	10.5
31	14.0	13.0	---	---	4.5	3.0	3.0	2.0	---	---	12.0	10.5
MONTH	19.5	9.0	16.0	6.0	11.0	1.0	7.0	1.5	6.5	1.0	13.0	2.0

03448000 FRENCH BROAD RIVER AT BENT CREEK, N. C.--Continued

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1977 TO JUNE 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE	
1	13.5	11.0	13.0	12.0	19.5	17.0
2	14.5	12.0	14.0	11.5	19.5	17.0
3	15.0	13.5	13.5	12.0	19.0	18.0
4	15.0	13.5	13.0	11.0	19.5	17.0
5	16.0	14.0	13.0	11.0	---	---
6	15.5	14.5	14.5	12.0	---	---
7	16.0	14.0	15.0	14.0	---	---
8	15.5	13.5	14.5	13.5	---	---
9	15.5	13.5	14.5	13.5	---	---
10	15.5	13.5	15.0	14.0	---	---
11	15.0	14.0	15.0	14.0	---	---
12	15.0	13.0	14.5	13.5	---	---
13	15.0	13.5	15.0	13.5	---	---
14	15.0	13.0	14.0	13.0	---	---
15	15.0	12.0	13.0	11.0	---	---
16	15.0	13.0	11.5	10.5	---	---
17	15.0	13.5	13.5	11.0	---	---
18	14.0	13.5	14.0	12.0	---	---
19	14.0	13.0	15.5	13.0	---	---
20	13.0	12.0	17.0	14.5	---	---
21	12.0	10.5	18.5	15.0	---	---
22	12.0	9.0	18.5	16.0	---	---
23	12.0	10.5	18.5	16.5	---	---
24	13.5	10.5	18.0	16.5	---	---
25	13.0	12.0	19.0	16.5	---	---
26	12.0	10.0	19.5	17.0	---	---
27	11.0	9.5	19.5	17.0	---	---
28	13.0	10.5	19.0	17.0	---	---
29	13.5	11.5	19.0	17.0	---	---
30	13.0	13.0	18.0	16.5	---	---
31	---	---	19.0	16.0	---	---
MONTH	16.0	9.0	19.5	10.5	19.5	17.0
YEAR	19.5	1.0				

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
11...	1330	1210	20	65
JAN				
05...	1045	1580	4	17
JUN				
28...	1215	960	15	39
AUG				
02...	1240	857	122	282
08...	1110	5190	280	3920

03451000 SWANNANOA RIVER AT BILTMORE, N. C.

LOCATION.--Lat 35°34'06", long 82°32'42", Buncombe County, Hydrologic Unit 06010105, on left bank at Biltmore, 100 ft (30.5 m) downstream from Biltmore Avenue Bridge, 200 ft (61 m) upstream from Southern Railway bridge, and 1.6 mi (2.6 km) upstream from mouth.

DRAINAGE AREA.--130 mi² (337 km²).

PERIOD OF RECORD.--October 1920 to September 1926, May 1934 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 803: 1921(M), 1923(M), 1925(M). WSP 823: Drainage area. WSP 1306: 1921(M), 1924(M), 1926(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,976.58 ft (602.462 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Dec. 1, 1920, to Sept. 30, 1926, nonrecording gage at site 100 ft (30.5 m) upstream at same datum.

REMARKS.--Records good. Considerable regulation by Lake Craig 3.6 mi (5.8 km) above station from 1925 to 1950 (reservoir silted). No diversion from Beetree Reservoir above station by city of Asheville for water supply since June 1963. City of Asheville diverted an average of 36.1 ft³/s (1.02 m³/s) for water supply from Burnett Lake on North Fork Swannanoa River 20 mi (32 km) above station (see p. 423); 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 372 of this report.

AVERAGE DISCHARGE.--51 years (1920-26, 1933-78), 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, 9,650 ft³/s (273 m³/s) Nov. 6, gage height, 15.12 ft (4.609 m); minimum, 26 ft³/s (0.74 m³/s) July 31, Aug. 2, gage height, 1.31 ft (0.399 m); minimum daily, 34 ft³/s (0.96 m³/s) Aug. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	86	274	139	266	112	230	281	126	65	36	50
2	63	85	249	126	247	108	209	255	119	95	34	58
3	45	134	228	115	227	126	188	223	109	70	53	59
4	41	196	214	109	207	121	179	338	104	58	50	48
5	43	454	288	110	197	109	175	301	94	54	241	46
6	38	5530	323	109	181	109	167	262	90	57	124	43
7	39	2380	275	112	149	111	152	261	101	57	615	41
8	64	930	240	350	164	127	147	379	115	57	276	39
9	171	598	223	737	160	147	140	451	135	55	232	39
10	86	437	196	419	150	690	133	365	104	52	184	42
11	67	317	179	326	141	434	134	312	96	48	152	48
12	59	291	163	268	141	369	130	284	87	44	160	40
13	56	247	159	243	141	344	123	307	129	49	275	40
14	53	211	159	219	138	387	115	290	101	67	139	113
15	57	191	178	192	129	432	119	289	86	51	136	63
16	69	176	169	170	126	340	116	283	83	60	132	55
17	55	289	164	244	125	286	112	250	84	50	103	53
18	50	267	208	235	126	254	133	226	82	43	84	46
19	48	221	182	212	125	228	173	203	80	42	76	40
20	47	193	176	260	117	204	146	180	94	43	76	39
21	45	178	167	214	117	190	147	169	87	40	69	50
22	49	183	152	193	117	192	157	153	78	38	61	44
23	48	264	142	173	113	184	153	156	74	45	61	85
24	44	257	141	168	115	177	139	180	70	97	55	57
25	196	238	161	1130	120	480	256	150	71	53	50	47
26	570	236	157	2230	118	606	699	136	65	45	54	44
27	183	210	144	841	108	512	569	134	70	44	64	43
28	132	203	134	550	110	387	419	144	60	51	68	43
29	113	204	127	414	---	325	354	158	58	38	68	38
30	99	213	130	362	---	282	313	155	57	41	72	42
31	87	---	141	302	---	247	---	131	---	36	71	---
TOTAL	2765	15419	5843	11272	4175	8620	6227	7406	2709	1645	3871	1495
MEAN	89.2	514	188	364	149	278	208	239	90.3	53.1	125	49.8
MAX	570	5530	323	2230	266	690	699	451	135	97	615	113
MIN	38	85	127	109	108	108	112	131	57	36	34	38

CAL YR 1977 TOTAL 67332 MEAN 184 MAX 5530 MIN 28
WTR YR 1978 TOTAL 71447 MEAN 196 MAX 5530 MIN 34

03451000 SWANNANOA RIVER AT BILTMORE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
11...	1600	67	18	3.3	--
NOV					
06...	1115	8360	1940	43800	--
06...	1155	8830	1630	38900	65
07...	1000	2410	836	5440	--
08...	1105	905	301	735	--
JAN					
16...	1120	152	6	2.5	--
FEB					
21...	1130	112	13	3.9	--
MAR					
31...	1555	236	15	9.6	--
MAY					
19...	1200	193	401	209	--
JUN					
26...	1215	58	6	.94	--
AUG					
02...	1455	30	4	.32	--
07...	1945	583	384	604	--

03451500 FRENCH BROAD RIVER AT ASHEVILLE, N. C.

LOCATION.--Lat 35°36'32", long 82°34'41", Buncombe County, Hydrologic Unit 06010105, on right bank 27 ft (8.2 m) upstream from Pearson Bridge (Secondary Road 1348) at Asheville, 1.4 mi (2.3 km) downstream from bridge on U.S. Highways 19 and 23, 3.2 mi (5.1 km) downstream from Swannanoa River, and at mile 145.8 (234.6 km).

DRAINAGE AREA.--945 mi² (2,448 km²).

PERIOD OF RECORD.--October 1895 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1306: 1895-1909, 1901(M), 1914-15(M), 1917(M), 1920-22(M), 1927(M).

GAGE.--Water-stage recorder. Datum of gage is 1,950.28 ft (594.445 m) National Geodetic Vertical Datum of 1929. Sept. 17, 1895, to Dec. 31, 1901, nonrecording gage at present site at different datum. Mar. 19, 1903, to July 15, 1916, and Jan. 1, 1917, to Sept. 30, 1922, nonrecording gage at Smith Bridge 1.5 mi (2.4 km) upstream at datum 11.52 ft (3.511 m) higher. Oct. 1, 1922, to Aug. 9, 1930, nonrecording gage at present site and datum.

REMARKS.--Records good. Many small diversions from tributaries above station for water supply. Diversions by city of Asheville and others from upstream tributaries in the Swannanoa River basin totaled about 44 ft³/s (1.25 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 374 of this report.

AVERAGE DISCHARGE.--83 years, 2,093 ft³/s (59.27 m³/s), 30.08 in/yr (764 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)
Nov. 6	1045	*34000	963	*12.33	3.758	Jan. 26	0330	20200	572	9.32	2.841

Minimum discharge, 764 ft³/s (21.6 m³/s) July 31, gage height, 1.27 ft (0.387 m); minimum daily, 778 ft³/s (22.0 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1320	1760	3240	2020	3450	1820	2560	2070	1770	1050	1040	1120
2	1330	1680	3300	1930	3260	1800	2430	2000	1660	1200	1020	1080
3	1270	1790	2790	1820	3100	1910	2320	1900	1590	1450	892	1140
4	1200	2180	2580	1740	2920	2070	2240	2350	1560	1120	960	1070
5	1160	2940	3260	1750	2810	1910	2180	3460	1460	1040	1560	1010
6	1140	25000	4550	1740	2700	1890	2130	2820	1400	1040	1630	980
7	1140	18700	3500	1740	2510	1960	2050	2430	1560	1040	4800	953
8	1180	10100	2850	2730	2520	2090	2020	3190	1690	1020	6050	917
9	1620	6140	2660	7540	2460	2650	1980	4700	1930	1200	5880	904
10	1980	3770	2530	6530	2390	6760	1940	3910	1860	1090	4930	880
11	1520	3130	2340	5590	2330	6020	1930	3020	1570	1070	2730	1020
12	1340	2800	2220	3510	2280	4280	1960	2660	1460	980	2630	1120
13	1280	2580	2160	2960	2280	3450	1920	2840	1610	942	2980	1010
14	1220	2390	2180	2760	2350	3360	1860	3260	1590	979	2260	2100
15	1140	2280	2480	2520	2240	3760	1800	2850	1420	1080	2660	2540
16	1140	2190	2340	2320	2160	3250	1760	2640	1380	1200	2810	1390
17	1110	2840	2190	2570	2150	2890	1740	2450	1390	1210	2480	1210
18	1070	2990	2350	3490	2140	2690	1770	2320	1350	1010	1930	1120
19	1010	2470	2380	3060	2130	2530	2160	2200	1320	927	1760	1120
20	983	2260	2220	3870	2080	2400	2160	2070	1540	902	1790	1050
21	962	2140	2150	3630	2030	2310	1910	1990	1640	855	1920	956
22	950	2150	2040	2930	1980	2290	1820	1900	1520	810	1620	891
23	943	2450	1950	2650	1940	2230	1780	1870	1380	808	1490	1040
24	927	2590	1920	2530	1950	2150	1740	2210	1290	896	1420	909
25	1220	2400	2200	7300	1930	3600	1930	1950	1280	932	1340	886
26	6590	2330	2410	18200	1900	5590	3270	1810	1240	893	1300	893
27	5950	2130	2080	14400	1790	5200	3250	1750	1290	818	1210	853
28	5080	2090	1950	11000	1780	3880	2480	1720	1190	1000	1200	819
29	2730	2450	1860	7260	---	3240	2260	1750	1120	955	1220	790
30	2120	2400	1900	4870	---	2920	2140	2180	1080	845	1260	778
31	1900	---	2020	3820	---	2700	---	2070	---	782	1230	---
TOTAL	54525	123120	76600	140780	65560	95600	63490	76340	44140	31144	68002	32549
MEAN	1759	4104	2471	4541	2341	3084	2116	2463	1471	1005	2194	1085
MAX	6590	25000	4550	18200	3450	6760	3270	4700	1930	1450	6050	2540
MIN	927	1680	1860	1740	1780	1800	1740	1720	1080	782	892	778
CFSM	1.86	4.34	2.62	4.81	2.48	3.26	2.24	2.61	1.56	1.06	2.32	1.15
IN.	2.15	4.85	3.02	5.54	2.58	3.76	2.50	3.01	1.74	1.23	2.68	1.28

CAL YR 1977 TOTAL 845805 MEAN 2317 MAX 25000 MIN 611 CFSM 2.45 IN 33.30
WTR YR 1978 TOTAL 871850 MEAN 2389 MAX 25000 MIN 778 CFSM 2.53 IN 34.32

03451500 FRENCH BROAD RIVER AT ASHEVILLE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
OCT							
25...	1200	1030	7	19	--	--	--
26...	1225	7500	739	15000	--	--	--
NOV							
06...	1245	32700	1370	121000	--	--	--
06...	1430	31700	1260	108000	--	--	--
07...	1300	17400	347	16300	--	--	--
08...	1125	9980	216	5620	--	--	--
18...	1045	3060	107	884	--	--	--
JAN							
16...	1025	2280	23	142	--	--	--
26...	1315	18200	538	26400	29	32	47
27...	1200	14300	238	9190	--	--	--
MAR							
31...	1045	2700	32	233	--	--	--
MAY							
19...	1040	2340	38	240	--	--	--
JUL							
14...	1545	999	26	70	--	--	--
27...	1400	842	17	39	--	--	--
AUG							
07...	2045	6280	756	12800	--	--	--
SEP							
05...	1115	1010	9	25	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT						
25...	--	--	--	--	--	--
26...	--	--	--	--	--	--
NOV						
06...	--	--	--	--	--	81
06...	--	--	--	--	--	78
07...	--	--	--	--	--	49
08...	--	--	--	--	--	--
18...	--	--	--	--	--	--
JAN						
16...	--	--	--	--	--	--
26...	62	71	83	92	98	--
27...	--	--	--	--	--	--
MAR						
31...	--	--	--	--	--	--
MAY						
19...	--	--	--	--	--	--
JUL						
14...	--	--	--	--	--	--
27...	--	--	--	--	--	--
AUG						
07...	--	--	--	--	--	--
SEP						
05...	--	--	--	--	--	--

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.

LOCATION.--Lat 35°47'10", long 82°39'39", Madison County, Hydrologic Unit 06010105, on right bank 0.7 mi (1.1 km) upstream from Hayes Creek, 1.0 mi (1.6 km) downstream from Ivy River, 1.5 mi (2.4 km) southeast of Marshall, and at mile 126.7 (203.9 km).

DRAINAGE AREA.--1,332 mi² (3,450 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1942 to current year.

REVISED RECORDS.--WSP 1436: 1954(M).

GAGE.--Water-stage recorder. Datum of gage is 1,646,79 ft (501.942 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority).

REMARKS.--Records good. Small diversions from tributaries for water supply. Slight diurnal flucutation 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.--36 years, 2,476 ft³/s (70.12 m³/s), 25.24 in/yr (641 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,000 ft³/s (1,530 m³/s) Nov. 6, 1977, gage height, 13.64 ft (4.157 m), minimum, 193 ft³/s (5.47 m³/s) Sept. 13, 14, 1954, gage height, 0.36 ft (0.110 m); minimum daily, 292 ft³/s (8.27 m³/s) Sept. 27, 28, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed since at least 1791, 22.0 ft (6.71 m) July 16, 1916, discharge, 115,000 ft³/s (3,257 m³/s), and flood of Aug. 30, 1940, reached a stage of 16.6 ft (5.06 m), discharge, 70,000 ft³/s (1,982 m³/s), from high-water marks, flood profiles, and studies by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft³/s (280 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 6	0630	*54000	1530	*13.64	4.157
Jan. 26	0045	30200	855	9.81	2.990
Mar. 10	1115	13400	379	6.22	1.896

Minimum discharge, 878 ft³/s (24.9 m³/s) Sept. 30, gage height, 1.19 ft (0.363 m); minimum daily, 878 ft³/s (24.9 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1480	2020	3510	2330	3900	2090	3080	2650	2100	1200	1100	1290
2	1530	1920	3780	2230	3730	2080	2900	2510	1940	1210	1190	1200
3	1450	1980	3230	2090	3580	2160	2760	2350	1850	1700	1150	1350
4	1370	2390	3020	2010	3360	2320	2640	2690	1810	1290	1120	1250
5	1320	3210	3380	2020	3220	2190	2560	4140	1710	1180	1470	1150
6	1300	30000	4970	2020	3100	2170	2500	3540	1630	1160	1950	1120
7	1290	19700	4110	2010	2880	2270	2410	2960	1730	1170	5410	1090
8	1340	10800	3330	2590	3040	2380	2330	3610	2100	1160	6320	1040
9	1860	6940	3080	8160	2950	2950	2260	5100	2240	1240	6000	1020
10	2290	4510	2900	6780	2730	9480	2240	4600	2190	1260	5260	986
11	1820	3720	2660	5860	2630	7450	2240	3650	1840	1180	3320	1060
12	1560	3280	2560	4220	2590	5430	2290	3180	1690	1120	2890	1210
13	1470	2990	2470	3500	2560	4420	2200	3300	1820	1070	3310	1150
14	1410	2770	2470	3230	2660	4440	2110	3890	1830	1110	2570	1820
15	1330	2620	2730	2910	2560	4760	2040	3660	1650	1180	2850	2920
16	1320	2510	2700	2640	2450	4160	2000	3360	1570	1290	3070	1640
17	1340	3340	2490	3010	2430	3640	2000	3050	1580	1340	2790	1350
18	1270	3590	2630	4090	2420	3320	2060	2810	1540	1180	2180	1240
19	1200	2970	2750	3730	2410	3070	2480	2640	1550	1060	1930	1210
20	1180	2660	2560	4600	2350	2900	2520	2480	1770	1030	1950	1180
21	1160	2520	2480	4390	2300	2780	2260	2360	1840	989	2060	1070
22	1150	2490	2350	3550	2260	2770	2140	2260	1740	961	1790	1060
23	1150	2790	2240	3170	2170	2660	2070	2200	1590	965	1650	1100
24	1130	2980	2190	3000	2250	2560	2030	2570	1490	1050	1560	1020
25	1200	2800	2510	8140	2210	3960	2400	2350	1430	1090	1490	988
26	7180	2730	2790	21800	2220	6560	4370	2150	1380	1070	1470	991
27	6160	2490	2460	14700	2080	6120	4640	2040	1430	971	1370	970
28	5440	2420	2230	11400	2060	4800	3430	2010	1360	1030	1340	935
29	3330	2730	2160	7590	---	4010	2960	2210	1270	1130	1400	903
30	2460	2770	2200	5240	---	3580	2780	2430	1220	984	1380	878
31	2180	---	2310	4300	---	3280	---	2440	---	928	1380	---
TOTAL	61670	140640	87250	157310	75100	116760	76700	91190	50898	35298	74720	36191
MEAN	1989	4688	2815	5075	2682	3766	2557	2942	1696	1139	2410	1206
MAX	7180	30000	4970	21800	3900	9480	4640	5100	2240	1700	6320	2920
MIN	1130	1920	2160	2010	2060	2080	2000	2010	1220	928	1100	878
CFSM	1.49	3.52	2.11	3.81	2.01	2.83	1.92	2.21	1.27	.86	1.81	.91
IN.	1.72	3.93	2.44	4.39	2.10	3.26	2.14	2.55	1.42	.99	2.09	1.01

CAL YR 1977 TOTAL 986122 MEAN 2702 MAX 30000 MIN 775 CFSM 2.03 IN 27.54
WTR YR 1978 TOTAL 1003719 MEAN 2750 MAX 30000 MIN 878 CFSM 2.07 IN 28.03

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957-67, 1973 to September 1978 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1964 to September 1967, August 1973 to September 1978.
WATER TEMPERATURES: October 1957 to September 1967, August 1973 to September 1978.

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, 237 micromhos Feb. 28, 1978; minimum daily, 33 micromhos May 31, 1976.
WATER TEMPERATURES: Maximum daily, 28.5°C Aug. 8, 1964; minimum daily, 0.0°C on several days during winter months of most years.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 237 micromhos Feb. 28; minimum daily, 36 micromhos Jan. 28.
WATER TEMPERATURES: Maximum daily, 26.0°C July 2, 23; minimum daily, 0.0°C Jan. 4, 10, 11, 12, 25, 29, 31.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
NOV 06...	1730	30000	38	--	16.0	1200	11.8	13	0	3.1	1.2	2.0
MAY 04...	1000	2320	75	6.2	14.0	20	12.7	17	0	4.9	1.1	8.6
JUL 24...	1115	1100	135	7.7	26.0	25	8.5	24	1	7.5	1.3	15

DATE	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
NOV 06...	21	.2	3.2	17	0	14	--	7.7	1.9	.0	5.1	38
MAY 04...	51	.9	1.1	22	0	18	22	15	3.6	.0	10	61
JUL 24...	55	1.3	1.9	28	0	23	.9	27	5.1	.1	11	94

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)
NOV 06...	35	.05	3080	.45	.06	.51	.47	.17	.10	.13	2.6	.45
MAY 04...	57	.08	382	.40	.01	.41	.41	.09	.08	.10	.31	.15
JUL 24...	86	.13	279	.55	.02	.57	.56	.03	.03	.04	.61	.36

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)
NOV 06...	2.8	2.3	.55	3.3	15	.78	--	.04	.14	.00	.00
MAY 04...	.40	.17	.23	.81	3.6	.11	.34	.06	.05	.04	.12
JUL 24...	.64	.25	.39	1.2	5.4	.17	.52	.10	.09	.08	.25

DATE	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)
NOV 06...	20	19	1	35	27	8	1000	--	130	13
MAY 04...	10	8	2	7	5	2	1200	--	110	15
JUL 24...	10	8	2	5	3	2	1300	1100	170	23

DATE	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
NOV 06...	8	5	230	220	10	42	18	--	.00
MAY 04...	7	8	10	10	0	--	8.9	.8	.00
JUL 24...	5	18	10	0	10	--	5.3	.7	.00

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97	80	75	83	60	90	64	66	66	110	110	107
2	104	84	73	76	63	89	67	67	76	110	137	108
3	97	87	65	77	67	89	62	71	76	110	108	104
4	104	88	71	77	63	104	65	76	79	100	118	97
5	106	77	70	86	64	89	76	74	78	98	120	100
6	112	54	70	86	72	86	69	61	81	100	113	102
7	119	42	61	86	125	82	72	55	84	87	85	115
8	117	44	60	83	100	82	73	64	84	83	64	133
9	112	49	70	73	100	82	72	68	84	82	54	133
10	96	57	74	52	82	84	72	57	81	76	52	130
11	89	62	87	49	96	63	71	57	76	74	60	128
12	86	67	91	60	67	60	76	62	79	90	71	129
13	104	70	104	66	67	61	75	62	83	99	65	124
14	107	65	107	73	94	63	76	60	84	113	64	126
15	108	66	91	72	73	65	77	53	80	118	68	94
16	108	123	89	88	96	63	76	58	80	122	73	74
17	107	75	103	111	104	65	75	63	89	117	67	99
18	110	70	92	87	77	67	74	63	93	100	69	104
19	117	67	83	75	104	74	82	63	94	108	80	108
20	115	89	96	98	75	69	78	68	88	116	79	120
21	126	110	107	79	111	70	83	66	91	121	77	120
22	123	117	128	74	168	75	72	67	89	129	76	121
23	121	86	156	78	127	77	73	69	99	125	88	133
24	121	70	153	81	118	75	71	75	92	124	90	134
25	117	66	113	85	84	77	71	76	99	113	95	124
26	83	66	88	52	158	75	69	77	96	127	92	130
27	57	71	57	41	81	62	63	78	92	130	97	134
28	56	70	182	36	237	58	61	79	100	128	95	134
29	64	89	168	43	---	62	63	75	95	127	95	140
30	73	81	79	50	---	66	63	72	108	124	104	143
31	75	---	96	56	---	67	---	72	---	120	110	---
MEAN	101	75	95	72	98	74	71	67	87	109	86	118

WTR YR 1978 MEAN 88 MAX 237 MIN 36

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	11.0	10.0	4.0	2.0	4.0	11.0	13.0	19.0	25.0	24.0	23.0
2	19.0	11.0	9.0	2.0	3.0	3.0	12.0	11.0	20.0	26.0	23.0	23.0
3	15.0	14.0	8.0	1.0	3.0	7.0	13.0	12.0	21.0	24.0	23.0	23.0
4	13.0	14.0	9.0	.0	3.0	3.0	13.0	13.0	19.0	24.0	24.0	21.0
5	12.0	16.0	11.0	1.0	3.0	3.0	18.0	12.0	18.0	23.0	23.0	21.0
6	14.0	16.0	8.0	2.0	2.0	3.0	14.0	13.0	19.0	23.0	22.0	21.0
7	13.0	15.0	4.0	4.0	1.0	4.0	14.0	16.0	21.0	23.0	22.0	21.0
8	15.0	14.0	2.0	6.0	1.0	5.0	14.0	15.0	21.0	23.0	20.0	21.0
9	15.0	14.0	3.0	2.0	2.0	5.0	16.0	15.0	20.0	24.0	20.0	23.0
10	12.0	12.0	1.0	.0	2.0	5.0	16.0	15.0	20.0	24.0	21.0	23.0
11	11.0	10.0	3.0	.0	3.0	4.0	18.0	13.0	21.0	25.0	20.0	22.0
12	12.0	13.0	1.0	.0	3.0	6.0	14.0	16.0	21.0	23.0	20.0	21.0
13	12.0	6.0	3.0	1.0	3.0	6.0	14.0	15.0	21.0	22.0	21.0	21.0
14	9.0	5.0	8.0	1.0	4.0	9.0	14.0	14.0	18.0	23.0	20.0	22.0
15	8.0	5.0	9.0	1.0	4.0	4.0	14.0	12.0	17.0	22.0	21.0	20.0
16	10.0	8.0	6.0	1.0	3.0	4.0	14.0	16.0	20.0	23.0	21.0	19.0
17	13.0	9.0	7.0	2.0	5.0	4.0	14.0	12.0	21.0	24.0	21.0	20.0
18	8.0	8.0	10.0	1.0	5.0	6.0	15.0	14.0	22.0	21.0	22.0	20.0
19	9.0	7.0	6.0	2.0	5.0	7.0	14.0	15.0	22.0	23.0	22.0	22.0
20	9.0	8.0	11.0	2.0	4.0	7.0	13.0	16.0	22.0	23.0	23.0	22.0
21	9.0	9.0	5.0	2.0	4.0	4.0	10.0	18.0	20.0	24.0	22.0	23.0
22	10.0	11.0	4.0	2.0	4.0	9.0	10.0	18.0	20.0	25.0	23.0	23.0
23	10.0	11.0	5.0	1.0	4.0	10.0	11.0	18.0	20.0	26.0	22.0	23.0
24	11.0	12.0	7.0	1.0	4.0	11.0	14.0	18.0	20.0	25.0	22.0	21.0
25	13.0	12.0	7.0	.0	3.0	10.0	14.0	18.0	21.0	23.0	23.0	20.0
26	13.0	8.0	3.0	2.0	4.0	9.0	11.0	20.0	22.0	22.0	22.0	19.0
27	13.0	4.0	1.0	2.0	3.0	9.0	9.0	20.0	24.0	24.0	23.0	18.0
28	14.0	5.0	5.0	2.0	5.0	7.0	10.0	20.0	25.0	23.0	23.0	17.0
29	14.0	10.0	4.0	.0	---	8.0	12.0	20.0	25.0	23.0	23.0	18.0
30	14.0	10.0	1.0	1.0	---	10.0	14.0	20.0	25.0	24.0	23.0	17.0
31	12.0	---	3.0	.0	---	10.0	---	20.0	---	24.0	23.0	---
MEAN	12.5	10.5	5.5	1.5	3.5	6.5	13.5	15.5	21.0	23.5	22.0	21.0

WTR YR 1978 MEAN 13.0 MAX 26.0 MIN .0

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
06...	1730	30000	1230	99600	78
07...	1115	20300	532	29200	45
08...	1330	10300	322	8960	30
JAN					
27...	1415	14300	454	17500	30
MAR					
31...	1400	3260	32	282	73
MAY					
04...	1000	2320	28	175	86
04...	1400	2560	48	332	88
JUL					
12...	1545	1099	26	77	95
24...	1115	1100	31	92	89
AUG					
07...	1115	5270	1040	14800	--

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT									
11...	1430	1750	142	7.3	17.0	10.0	12	1.5	400
NOV									
17...	1115	3890	57	7.3	10.0	10.3	16	3.1	5600
DEC									
14...	1230	2460	71	7.3	8.0	11.6	<10	1.1	510
JAN									
31...	1230	4270	32	6.9	3.0	13.9	<10	1.0	560
FEB									
08...	1330	3030	110	7.0	4.0	13.8	<10	1.3	170
MAR									
08...	0815	2330	49	7.4	6.0	11.8	10	1.4	2000
APR									
19...	1145	2460	71	7.2	12.0	9.4	16	2.5	3100
MAY									
25...	1150	2320	--	7.2	21.0	8.9	15	1.8	2600
JUN									
14...	1430	1790	--	7.4	22.0	8.3	13	1.8	450
JUL									
12...	1311	1110	25	7.5	--	7.6	<10	1.7	450

03455500 WEST FORK PIGEON RIVER ABOVE LAKE LOGAN, NEAR HAZELWOOD, N. C.

LOCATION.--Lat 35°23'46", long 82°56'17", Haywood County, Hydrologic Unit 06010106, on right bank at upstream side of bridge on Secondary Road 1216, 600 ft (183 m) upstream from Big Creek, 1.1 mi (1.8 km) upstream from Lake Logan, 6.7 mi (10.8 km) southeast of Hazelwood, and at mile 9.3 (15.0 km).

DRAINAGE AREA.--27.6 mi² (71.5 km²)

PERIOD OF RECORD.--February 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,976.00 ft (907.085 m) National Geodetic Vertical Datum of 1929 (Tennessee Valley Authority bench mark).

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 381 of this report.

AVERAGE DISCHARGE.--24 years, 104 ft³/s (2.945 m³/s), 51.17 in/yr (1,300 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)
Oct. 25	2115	*3730	106	*6.07	1.850	Jan. 25	2100	3610	102	5.99	1.826
Nov. 6	0115	3420	96.9	5.86	1.786	Aug. 7	1100	3510	99.4	5.92	1.804

Minimum daily discharge, 23 ft³/s (0.65 m³/s) Sept. 29, 30; minimum gage height, 1.04 ft (0.317 m) July 31, Sept. 28, 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	71	192	100	152	54	124	89	67	42	34	34
2	47	110	130	88	142	56	115	92	63	41	34	34
3	42	227	117	85	130	88	109	81	62	54	44	34
4	40	215	152	80	120	64	102	215	59	40	32	32
5	38	464	343	78	115	84	98	126	56	40	143	30
6	36	828	192	84	105	60	94	100	54	39	135	30
7	36	317	157	82	95	60	89	129	57	37	1080	29
8	137	218	142	455	90	246	85	216	127	37	211	28
9	236	180	170	269	85	203	81	192	122	47	176	27
10	73	165	135	175	85	325	79	131	71	50	123	27
11	59	140	132	150	84	162	94	116	66	43	108	36
12	54	125	115	135	82	195	86	108	147	36	105	27
13	50	115	115	115	90	172	79	196	204	35	99	28
14	48	107	185	110	80	460	72	227	90	34	87	64
15	47	100	137	110	74	236	70	168	78	46	78	34
16	47	112	117	105	74	197	68	146	72	41	71	30
17	44	239	115	130	74	162	68	131	67	33	62	27
18	43	130	145	107	73	145	99	120	64	31	57	26
19	42	112	112	132	69	137	108	110	90	30	63	25
20	40	105	115	180	65	125	79	100	95	29	62	25
21	39	115	100	122	62	125	74	95	68	28	57	25
22	38	127	94	110	73	130	71	89	62	26	51	31
23	36	167	90	102	96	115	68	94	57	33	47	28
24	36	130	112	122	73	110	66	94	54	46	45	25
25	423	112	230	1160	60	350	117	84	53	36	43	25
26	262	100	122	550	59	500	115	78	58	29	41	24
27	117	94	115	285	55	300	107	75	49	38	49	25
28	102	135	110	227	57	200	98	90	47	40	45	24
29	88	125	105	200	---	160	85	95	45	27	39	23
30	80	160	105	180	---	140	85	85	43	25	37	23
31	74	---	110	160	---	132	---	71	---	28	36	---
TOTAL	2500	5345	4311	5988	2419	5493	2685	3743	2247	1141	3294	880
MEAN	80.6	178	139	193	86.4	177	89.5	121	74.9	36.8	106	29.3
MAX	423	828	343	1160	152	500	124	227	204	54	1080	64
MIN	36	71	90	78	55	54	66	71	43	25	32	23
CFSM	2.92	6.45	5.04	6.99	3.13	6.41	3.24	4.38	2.71	1.33	3.84	1.06
IN.	3.37	7.20	5.81	8.07	3.26	7.40	3.62	5.04	3.03	1.54	4.44	1.19

CAL YR 1977 TOTAL 43696 MEAN 120 MAX 2100 MIN 19 CFSM 4.35 IN 58.89
WTR YR 1978 TOTAL 40046 MEAN 110 MAX 1160 MIN 23 CFSM 3.99 IN 53.97

TENNESSEE RIVER BASIN

03455500 WEST FORK PIGEON RIVER ABOVE LAKE LOGAN NEAR HAZELWOOD, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
13...	1115	52	0	.00
NOV				
30...	1415	112	2	.60
JAN				
26...	1420	390	8	8.4
FEB				
27...	1100	50	2	.27
MAR				
30...	1410	133	5	1.8
MAY				
01...	1400	89	2	.48
15...	1415	165	1	.45
JUN				
23...	1430	59	2	.32
JUL				
17...	1400	34	2	.18
AUG				
01...	1005	33	2	.18
07...	1055	3410	721	6640
07...	1125	2870	652	5050
07...	1145	2210	369	2200
07...	1250	1290	93	324
07...	1515	840	38	86
08...	1345	190	2	1.0
SEP				
06...	1440	30	1	.08

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 mi² (143.2 km²).

PERIOD OF RECORD.--March 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,725.08 ft (830.604 m) National Geodetic Vertical Datum of 1929 (Tennessee Valley Authority bench mark).

REMARKS.--Records good. Considerable regulation at times caused by Lake Logan (see p. 423). Suspended-sediment records for the current year are published on page 383 of this report.

AVERAGE DISCHARGE.--24 years, 164 ft³/s (4.644 m³/s), 40.27 in/yr (1,023 mm/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,100 ft³/s (314 m³/s) May 15, 1976, gage height, 10.52 ft (3.206 m), from rating curve extended above 3,300 ft³/s (93.5 m³/s); minimum, 7.6 ft³/s (0.22 m³/s) Sept. 7, 1954, minimum gage height, 0.10 ft (0.030 m) Oct. 22, 23, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,280 ft³/s (121 m³/s) Jan. 25, gage height, 7.13 ft (2.173 m); minimum, 42 ft³/s (1.19 m³/s) Sept. 13, 17, gage height, 0.53 ft (0.162 m); minimum daily, 43 ft³/s (1.22 m³/s) July 23, Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	110	287	172	277	104	212	151	115	66	57	53
2	78	159	196	157	261	106	200	157	109	66	55	52
3	69	346	176	143	241	158	191	139	107	81	58	54
4	66	354	210	139	226	121	182	284	104	64	53	49
5	64	710	455	137	216	106	174	207	98	62	157	47
6	61	1200	331	142	197	108	166	168	97	61	164	46
7	61	535	250	139	187	113	158	171	99	60	1150	44
8	101	378	232	559	184	308	151	302	176	60	311	50
9	333	307	274	494	174	284	146	314	190	84	241	53
10	115	269	220	266	166	588	142	219	118	71	184	50
11	93	230	207	250	159	326	156	196	108	73	157	59
12	85	207	195	237	155	334	154	184	162	58	165	43
13	79	186	190	227	174	302	138	295	275	55	169	45
14	76	175	264	203	153	633	129	315	134	57	136	69
15	74	163	234	184	142	407	125	258	119	74	126	56
16	75	168	198	179	141	342	122	228	112	71	115	48
17	71	364	187	240	138	286	121	209	105	58	100	44
18	70	216	230	210	136	254	160	193	100	50	92	55
19	65	189	192	227	130	240	179	179	116	49	94	50
20	63	177	191	323	124	238	136	166	157	47	92	52
21	61	180	174	236	121	247	127	157	111	45	91	52
22	60	185	160	217	113	283	123	149	99	44	80	60
23	58	235	156	202	115	234	120	156	93	43	75	58
24	57	192	168	214	113	227	118	165	88	67	70	53
25	597	171	361	1400	113	525	173	144	84	71	67	51
26	345	154	213	1110	111	538	202	134	90	49	64	50
27	183	149	193	571	105	334	177	128	79	56	66	49
28	158	185	178	454	107	285	175	136	75	61	75	48
29	137	184	171	384	---	259	153	152	72	47	60	48
30	126	196	187	339	---	241	150	144	69	47	58	49
31	116	---	191	303	---	226	---	122	---	56	58	---
TOTAL	3675	8274	6871	10058	4479	8757	4660	5922	3461	1853	4440	1537
MEAN	119	276	222	324	160	282	155	191	115	59.8	143	51.2
MAX	597	1200	455	1400	277	633	212	315	275	84	1150	69
MIN	57	110	156	137	105	104	118	122	69	43	53	43
(†)	+12	-3	-2	0	-4	+5	-3	0	-4	-19	+18	-163
MEAN‡	119	276	222	324	160	283	155	191	115	59.2	144	45.8
CFSM‡	2.15	4.99	4.01	5.86	2.89	5.12	2.80	3.45	2.08	1.07	2.60	0.83
IN.‡	2.48	5.56	4.62	6.76	3.01	5.89	3.13	3.98	2.32	1.23	3.00	0.92

CAL YR 1977 TOTAL 70076 MEAN 192 MAX 2330 MIN 40 MEAN‡ 192 CFSM‡ 3.47 IN.‡ 47.12
WTR YR 1978 TOTAL 63987 MEAN 175 MAX 1400 MIN 43 MEAN‡ 175 CFSM‡ 3.16 IN.‡ 42.90

† Change in contents, in cfs-days, in Lake Logan.

‡ Adjusted for change in lake contents.

03456000 WEST FORK PIGEON RIVER BELOW LAKE LOGAN NEAR WAYNESVILLE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
13...	0945	74	2	.40
NOV				
30...	1600	172	3	1.4
JAN				
26...	1410	850	43	99
FEB				
27...	1255	93	3	.75
APR				
10...	1045	146	8	3.2
MAY				
01...	1345	151	1	.41
15...	1600	250	2	1.3
JUN				
23...	1115	89	3	.72
JUL				
17...	1445	55	3	.45
AUG				
01...	1315	59	3	.48
07...	1030	1230	24	80
07...	1220	2780	159	1190
07...	1320	1950	61	321
08...	1315	264	8	5.7
SEP				
06...	1325	46	2	.25

03456500 EAST FORK PIGEON RIVER NEAR CANTON, N. C.

LOCATION.--Lat 35°27'42", long 82°52'12", Haywood County, Hydrologic Unit 06010106, on right bank 800 ft (244 m) upstream from bridge on U.S. Highway 276, 0.3 mi (0.5 km) downstream from Dix Creek, 1.6 mi (2.6 km) upstream from confluence with West Fork Pigeon River, and 5.2 mi (8.4 km) southwest of Canton.

DRAINAGE AREA.--51.5 mi² (133.4 km²).

PERIOD OF RECORD.--March 1954 to current year.

REVISED RECORDS.--WRD N. C. 1973: 1966(M), 1972(M).

GAGE.--Water-stage recorder. Datum of gage is 2,674.34 ft (815.139 m) National Geodetic Vertical Datum of 1929 (Tennessee Valley Authority bench mark).

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 385 of this report.

AVERAGE DISCHARGE.--24 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)
Oct. 25	2245	3010	85.2	5.67	1.728	Jan. 25	2245	*5580	158	*7.48	2.280
Nov. 6	0430	5350	152	7.34	2.237						

Minimum daily discharge, 28 ft³/s (0.79 m³/s) Sept. 22; minimum gage height, 1.09 ft (0.332 m) Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	104	214	110	246	93	208	133	95	57	37	37
2	72	130	160	102	233	93	194	130	91	60	39	38
3	66	299	147	94	210	117	183	120	88	64	50	41
4	64	374	153	93	197	101	172	240	86	55	43	36
5	62	774	279	91	187	91	163	206	81	53	73	33
6	59	1800	233	90	169	92	155	175	81	54	80	33
7	57	706	198	90	163	96	147	168	85	52	505	32
8	65	469	181	382	160	170	140	237	111	49	204	30
9	168	363	195	440	150	185	134	247	118	50	178	29
10	76	303	164	242	146	498	130	197	86	50	144	29
11	66	252	152	210	136	296	132	180	79	45	114	68
12	62	221	143	190	135	272	130	168	103	43	120	36
13	59	198	137	170	148	251	121	230	111	43	133	34
14	57	182	172	150	134	450	113	203	85	43	109	60
15	56	168	157	147	125	343	110	187	79	47	100	44
16	57	159	140	141	123	289	106	174	76	52	91	37
17	56	250	134	198	122	251	104	163	73	44	79	33
18	54	179	155	170	121	226	126	153	70	40	71	31
19	53	162	134	183	117	207	142	144	145	38	67	31
20	51	151	133	229	111	195	114	135	158	37	64	30
21	50	149	124	184	108	192	108	128	130	35	61	28
22	49	146	116	168	104	198	97	121	101	34	57	33
23	48	156	112	156	132	177	94	127	90	35	54	33
24	48	139	112	158	103	170	97	135	82	43	51	31
25	397	130	191	1280	102	432	158	115	76	50	49	32
26	481	122	133	1340	100	544	190	108	73	38	47	32
27	203	115	125	571	94	379	156	103	68	36	45	32
28	163	127	117	423	96	313	148	118	63	42	47	30
29	139	131	115	345	---	272	136	131	61	35	42	29
30	124	136	117	309	---	244	133	115	59	32	40	29
31	112	---	119	275	---	224	---	102	---	33	39	---
TOTAL	3149	8595	4762	8731	3972	7461	4141	4893	2704	1389	2833	1051
MEAN	102	287	154	282	142	241	138	158	90.1	44.8	91.4	35.0
MAX	481	1800	279	1340	246	544	208	247	158	64	505	68
MIN	48	104	112	90	94	91	94	102	59	32	37	28
CFSM	1.98	5.57	2.99	5.48	2.76	4.68	2.68	3.07	1.75	.87	1.78	.68
IN.	2.27	6.21	3.44	6.31	2.87	5.39	2.99	3.53	1.95	1.00	2.05	.76

CAL YR 1977 TOTAL 62305 MEAN 171 MAX 2130 MIN 25 CFSM 3.32 IN 45.00
WTR YR 1978 TOTAL 53681 MEAN 147 MAX 1800 MIN 28 CFSM 2.85 IN 38.77

03456500 EAST FORK PIGEON RIVER NEAR CANTON, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
13...	1400	60	1	.16
JAN				
26...	1455	910	56	138
FEB				
24...	1145	102	3	.83
APR				
10...	1250	132	5	1.8
MAY				
16...	1320	173	3	1.4
JUN				
23...	1615	88	7	1.7
JUL				
17...	1555	41	1	.11
AUG				
03...	1100	57	9	1.4
07...	1000	596	93	150
08...	1240	181	11	5.4
SEP				
06...	0930	34	2	.18

03457000 PIGEON RIVER AT CANTON, N. C.

LOCATION.--Lat 35°31'30", long 82°50'28", Haywood County, Hydrologic Unit 06010106, on left bank 100 ft (30 m) upstream from small tributary, 200 ft (61 m) downstream from Pigeon Street Bridge, 0.5 mi (0.8 km) from U.S. Highways 19 and 23 at Canton, and at mile 64.1 (103.1 km). Records include flow of small tributary.

DRAINAGE AREA.--133 mi² (344 km²) includes that of small tributary below gage.

PERIOD OF RECORD.--May 1907 to June 1909, October 1928 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 853: 1929-37(M). WSP 1306: 1908(M).

GAGE.--Water-stage recorder. Datum of gage is 2,572.22 ft (784.013 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to June 1909, nonrecording gage at bridge 0.4 mi (0.6 km) downstream at different datum. Dec. 6, 1928, to Jan. 3, 1929, nonrecording gage at present site and datum.

REMARKS.--Records good. Occasional diurnal fluctuation and considerable regulation at low flow caused by Lake Logan on West Fork Pigeon River 12 mi (19 km) upstream (see p. 423). Town of Canton diverted above station an average of 1.95 ft³/s (0.055 m³/s) for municipal water supply. Suspended-sediment records for the current year are published on page 387 of this report.

AVERAGE DISCHARGE.--51 years (1907-8, 1928-78), 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)
Oct. 26	0100	5660	160	8.12	2.475	Jan. 26	0100	*9570	271	*10.83	3.301
Nov. 6	0600	8010	227	9.87	3.008						

Minimum discharge, 82 ft³/s (2.32 m³/s) Sept. 29, 30, gage height, 0.83 ft (0.253 m); minimum daily, 83 ft³/s (2.35 m³/s) Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	222	554	301	566	210	430	300	236	148	108	103
2	151	256	383	279	527	207	399	304	225	153	99	105
3	136	620	342	252	478	262	379	274	221	170	118	110
4	129	779	383	249	443	236	357	529	219	145	109	100
5	126	1630	794	243	419	201	340	458	209	138	204	94
6	124	3370	623	246	382	211	325	360	203	137	230	92
7	121	1480	485	242	364	213	308	343	215	134	1760	89
8	131	991	443	870	404	419	294	546	283	129	632	89
9	547	770	500	1200	335	480	285	636	367	156	415	93
10	211	645	409	613	317	1330	278	443	236	140	351	90
11	165	539	380	633	301	698	284	399	212	141	276	130
12	152	471	357	505	292	635	295	370	270	123	320	93
13	141	421	346	441	324	595	263	544	421	119	351	87
14	136	387	445	391	296	1140	247	546	250	117	256	121
15	133	358	429	350	271	832	240	478	223	135	248	115
16	133	342	358	338	267	674	234	428	213	144	221	96
17	130	696	340	486	261	574	232	394	205	123	194	87
18	125	427	411	427	257	500	279	366	195	110	176	91
19	119	378	349	426	248	458	337	343	258	105	167	91
20	116	350	344	664	236	439	262	321	390	102	170	88
21	113	345	319	465	232	436	243	304	285	98	165	88
22	111	341	294	414	230	500	235	289	231	94	149	95
23	108	409	286	380	230	415	228	307	215	114	141	105
24	106	351	287	374	225	396	220	340	200	111	133	91
25	388	318	594	2420	223	984	300	285	189	145	128	89
26	1530	295	374	3430	221	1190	453	266	193	108	123	86
27	433	283	336	1360	210	781	371	253	177	104	119	86
28	342	306	315	1020	214	640	351	262	167	114	134	85
29	290	339	315	828	---	563	312	327	159	99	115	83
30	260	315	310	714	---	506	305	295	153	91	111	84
31	237	---	335	630	---	463	---	252	---	101	110	---
TOTAL	7098	18434	12440	21191	8773	17188	9086	11562	7020	3848	7833	2856
MEAN	229	614	401	684	313	554	303	373	234	124	253	95.2
MAX	1530	3370	794	3430	566	1330	453	636	421	170	1760	130
MIN	106	222	286	242	210	201	220	252	153	91	99	83
(†) MEAN‡	+67.3	+52.4	+52.7	+56.3	+49.2	+62.2	+52.4	+58.0	+57.4	+51.3	+87.4	-99.4
CFSM‡	231	616	403	685	315	556	305	375	236	126	255	91.9
IN.‡	1.74	4.63	3.03	5.15	2.37	4.18	2.29	2.82	1.77	0.95	1.92	0.69
	2.00	5.17	3.49	5.94	2.47	4.82	2.56	3.25	1.98	1.09	2.21	0.77

CAL YR 1977 TOTAL 140687 MEAN 385 MAX 4710 MIN 84 MEAN‡ 387 CFSM‡ 2.91 IN.‡ 39.46
WTR YR 1978 TOTAL 127329 MEAN 349 MAX 3430 MIN 83 MEAN‡ 350 CFSM‡ 2.63 IN.‡ 35.75

† 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.

03457000 PIGEON RIVER AT CANTON, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
14...	1115	140	1	.38
NOV				
06...	1355	2620	61	432
18...	1530	417	7	7.9
JAN				
18...	1330	422	6	6.8
26...	1345	2280	122	751
FEB				
24...	1415	231	2	1.2
APR				
10...	1530	292	5	3.9
MAY				
01...	1430	298	5	4.0
16...	1030	458	4	4.9
AUG				
03...	0830	123	6	2.0
07...	0940	2830	241	1840
07...	1415	3180	223	1920
08...	1130	559	20	30
SEP				
06...	0850	94	1	.25

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) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority).

REMARKS.--Records good. Considerable regulation by Lake Junaluska on Richland Creek and Lake Logan on West Fork Pigeon River for periods at low flow, combined capacity of reservoirs, about 2,000 ft³/s-day (4.894 hm³). (See p. 423). Suspended-sediment records for the current year are published on page 389 of this report.

AVERAGE DISCHARGE.--51 years, 678 ft³/s (19.20 m³/s), 26.31 in/yr (668 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)
Oct. 26	0415	6010	170	7.04	2.146	Jan. 26	0400	*14800	419	*10.75	3.277
Nov. 6	0945	9950	282	8.93	2.722						

Minimum discharge, 153 ft³/s (4.33 m³/s) Sept. 29, gage height, 1.20 ft (0.366 m); minimum daily, 157 ft³/s (4.45 m³/s) Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	335	513	960	694	1120	555	735	731	552	329	331	256
2	346	616	754	648	1080	460	692	713	526	361	251	254
3	312	886	682	587	988	562	730	653	519	449	293	320
4	292	1120	799	564	924	608	855	989	509	356	274	255
5	285	1850	1180	567	882	520	825	1050	478	323	319	306
6	282	5100	1170	572	829	552	754	807	462	313	510	419
7	275	2380	765	572	726	551	655	762	525	310	3020	405
8	323	1730	799	1150	778	681	543	1020	755	304	1590	393
9	957	1280	944	2550	745	1010	526	1310	844	348	830	386
10	530	983	808	1190	712	2570	518	939	595	334	703	379
11	394	777	743	983	682	1520	534	849	522	308	604	368
12	360	699	707	950	665	1340	559	797	551	285	713	294
13	337	635	691	905	725	1340	499	1020	838	275	918	234
14	325	595	797	823	708	1970	473	1180	589	274	616	226
15	319	561	876	751	636	1780	458	1070	517	306	624	274
16	328	543	723	560	624	1590	514	936	494	367	516	232
17	335	1410	691	985	618	1380	539	863	471	304	452	216
18	308	899	908	966	610	1100	651	806	453	267	405	208
19	301	760	765	894	596	1030	764	758	474	259	387	212
20	290	700	738	1450	566	988	620	712	779	251	413	206
21	285	681	698	988	548	979	571	676	610	237	386	205
22	281	682	648	870	599	1080	551	645	505	234	349	204
23	275	761	623	812	688	949	532	709	464	284	326	244
24	269	708	630	808	685	914	519	827	438	333	310	212
25	474	648	1360	4230	600	1430	893	655	413	342	299	207
26	2430	615	896	7110	594	1870	1060	610	408	298	311	191
27	859	575	776	2080	571	1530	906	581	397	247	302	163
28	690	625	719	1540	573	1400	795	613	367	249	344	162
29	601	680	693	1480	---	1080	725	728	353	244	299	157
30	540	642	707	1340	---	999	734	726	340	218	292	158
31	493	---	753	1280	---	901	---	598	---	267	266	---
TOTAL	14431	30654	25003	40899	20072	35239	19730	25333	15743	9276	17253	7746
MEAN	466	1022	807	1319	717	1137	658	817	525	299	557	258
MAX	2430	5100	1360	7110	1120	2570	1060	1310	844	449	3020	419
MIN	269	513	623	560	548	460	458	581	340	218	251	157

CAL YR 1977 TOTAL 281278 MEAN 771 MAX 10600 MIN 185
WTR YR 1978 TOTAL 261379 MEAN 716 MAX 7110 MIN 157

03459500 PIGEON RIVER NEAR HEPCO, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
MAY				
15...	1350	1040	22	62
16...	1535	930	30	75
23...	1015	629	21	36
SEP				
11...	1130	370	18	18
28...	1630	167	16	7.2

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.
(HYDROLOGIC BENCH-MARK STATION)

LOCATION.--Lat 35°40'02", long 83°04'23", Haywood County, Hydrologic Unit 06010106, in Great Smoky Mountains National Park, on left bank 20 ft (6 m) downstream from bridge on State Highway 284, 500 ft (152 m) upstream from Little Cataloochee Creek, 2 mi (3 km) north of Cataloochee and 3.7 mi (6.0 km) upstream from mouth.

DRAINAGE AREA.--49.2 mi² (127.4 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1933 to September 1952, October 1962 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,456.88 ft (748.857 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority).

REMARKS.--Water-discharge record good. Records for Class A evaporation station 2.4 mi (3.9 km) upstream published in reports of National Climatic Center, NOAA, U.S. Department of Commerce.

AVERAGE DISCHARGE.--35 years, 111 ft³/s (3.144 m³/s), 30.64 in/yr (778 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,080 ft³/s (144 m³/s) Mar. 6, 1963, gage height, 8.08 ft (2.463 m); minimum, 9 ft³/s (0.25 m³/s) Jan. 2, 1940, Dec. 17, 24, 1943, gage height, 1.87 ft (0.57 m), result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,770 ft³/s (50.1 m³/s) Jan. 25, gage height, 5.52 ft (1.682 m); minimum daily, 34 ft³/s (0.96 m³/s) Sept. 30; minimum gage height, 2.12 ft (0.646 m) Sept. 28, 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	76	143	129	180	58	126	135	89	54	74	46
2	66	74	125	116	155	58	120	125	85	58	42	46
3	53	73	119	115	140	74	116	120	89	65	52	54
4	50	80	149	110	131	59	111	143	82	53	124	44
5	49	96	182	102	122	72	108	131	76	51	99	43
6	48	234	180	104	112	74	104	122	74	49	116	42
7	47	165	159	96	112	66	100	122	109	48	477	40
8	76	139	146	243	126	108	96	160	187	52	315	39
9	125	123	164	328	118	112	94	194	157	49	210	40
10	79	113	137	216	102	321	92	162	122	48	150	55
11	69	102	130	200	86	225	108	150	109	44	123	49
12	65	95	125	180	84	204	97	143	133	43	112	43
13	62	89	118	160	93	189	89	188	155	43	110	44
14	60	85	139	145	86	339	84	219	120	43	90	43
15	57	81	124	131	80	285	82	215	109	57	86	41
16	61	89	115	130	77	232	80	194	101	60	80	40
17	60	215	114	145	77	197	79	176	94	45	73	38
18	58	146	166	126	75	176	119	159	88	41	67	38
19	57	128	139	131	72	167	108	145	100	50	64	37
20	54	116	142	150	67	160	94	133	97	64	66	36
21	52	111	130	129	64	168	90	123	82	43	62	36
22	51	108	121	120	61	186	87	116	77	40	58	39
23	50	112	114	112	67	168	84	122	73	49	55	43
24	49	103	150	124	67	162	83	122	69	51	53	36
25	118	99	366	596	65	160	147	110	67	53	51	35
26	172	95	245	890	62	201	146	106	65	47	56	36
27	108	91	201	417	59	173	138	99	62	40	56	35
28	99	101	174	302	59	162	132	104	59	39	55	35
29	91	104	168	245	---	151	124	117	57	36	61	35
30	85	106	157	225	---	141	144	106	55	35	54	34
31	80	---	139	214	---	133	---	94	---	82	48	---
TOTAL	2205	3349	4781	6431	2599	4981	3182	4355	2842	1532	3139	1222
MEAN	71.1	112	154	207	92.8	161	106	140	94.7	49.4	101	40.7
MAX	172	234	366	890	180	339	147	219	187	82	477	55
MIN	47	73	114	96	59	58	79	94	55	35	42	34
CFSM	1.45	2.28	3.13	4.21	1.89	3.27	2.15	2.85	1.93	1.00	2.05	.83
IN.	1.67	2.53	3.61	4.86	1.97	3.77	2.41	3.29	2.15	1.16	2.37	.92

CAL YR 1977 TOTAL 42739 MEAN 117 MAX 1900 MIN 38 CFSM 2.38 IN 32.31
WTR YR 1978 TOTAL 40618 MEAN 111 MAX 890 MIN 34 CFSM 2.26 IN 30.71

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued
(Hydrologic bench-mark and pesticide station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: August 1973 to current year.
WATER TEMPERATURES: October 1962 to current year.

INSTRUMENTATION.--Temperature recorder since October 1962. Water-quality monitor since May 1974.

REMARKS.--Miscellaneous chemical data published for 1945 water year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 43 micromhos June 13, 1974; minimum, 10 micromhos Jan. 12, 13, Feb. 2, 8, 10, 1975, Jan. 10, 19, 1976, Feb. 8, 1978.
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, 26 micromhos Oct. 26; minimum, 10 micromhos Feb. 8.
WATER TEMPERATURES: Maximum, 20.0°C July 21, 22, 28, Sept. 1; minimum, 0.0°C on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
OCT 26...	1200	162	25	6.6	11.0	14	12.4	--	--	--	5
NOV 06...	0945	267	22	--	13.5	40	12.3	--	--	--	5
JAN 26...	1105	890	12	7.9	3.0	25	15.0	--	--	--	3
APR 03...	1130	116	14	8.0	10.0	10	13.0	11	<1	1000	3
JUL 25...	1045	45	17	7.4	16.0	10	9.0	160	20	1500	4
SEP 08...	1200	39	18	--	15.0	--	--	--	--	--	--

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)
OCT 26...	0	1.6	.4	1.2	27	.2	1.1	7	0	6	2.8
NOV 06...	0	1.4	.4	.8	21	.2	1.1	12	0	10	--
JAN 26...	1	.8	.3	.8	30	.2	.7	3	0	2	1
APR 03...	0	.8	.3	1.0	35	.2	.6	10	0	9	2
JUL 25...	0	1.1	.3	1.2	34	.3	.8	8	0	7	5
SEP 08...	--	--	--	--	--	--	--	--	--	--	--

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)
OCT 26...	3.4	1.6	.0	6.6	20	--	20	.03	8.75	--
NOV 06...	3.5	.8	.0	6.5	19	--	21	.03	13.7	--
JAN 26...	1.5	1.0	.0	5.3	14	--	12	.02	33.6	--
APR 03...	1.2	.3	.0	7.1	14	13	17	.02	4.38	1
JUL 25...	2.4	.6	.0	8.7	20	--	20	.03	2.43	--
SEP 08...	--	--	--	--	--	--	--	--	--	--

DATE	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
OCT 26...	.10	.00	.10	.10	.01	.00	.00	.21	.09	.22
NOV 06...	.15	.00	.15	.15	--	.01	.01	--	.14	.18
JAN 26...	.20	.00	.20	--	.00	--	--	.23	--	.23
APR 03...	.15	.00	.15	.14	.00	.00	.00	.25	.12	.25
JUL 25...	.14	.00	.14	.15	.01	.00	.00	.00	.04	.01
SEP 08...	--	--	--	--	--	--	--	--	--	--

DATE	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)
OCT 26...	.13	.09	.32	1.4	.02	--	.01	.01	.00	.00
NOV 06...	.03	.15	.33	1.5	.02	--	.01	.00	.00	.00
JAN 26...	--	--	.43	1.9	.02	.06	.01	.01	--	--
APR 03...	.13	.12	.40	1.8	.00	.00	.01	.00	.00	.00
JUL 25...	.00	.04	.15	.66	.02	.06	.01	.00	.00	.00
SEP 08...	--	--	--	--	--	--	--	--	--	--

DATE	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
OCT 26...	2	0	0	10	10	0	10	9	1	170
NOV 06...	--	--	--	<10	<9	1	1	1	0	340
JAN 26...	--	--	--	10	9	1	5	4	1	610
APR 03...	0	0	0	10	10	0	2	2	0	60
JUL 25...	--	--	--	10	9	1	1	0	2	90

TENNESSEE RIVER BASIN

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
OCT 26...	--	30	0	0	2	10	<.5	0	0	10
NOV 06...	--	40	6	0	7	--	--	--	--	10
JAN 26...	--	0	9	9	0	--	--	--	--	30
APR 03...	--	10	8	1	7	0	<.5	0	0	10
JUL 25...	40	50	58	44	14	--	--	--	--	20

DATE	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)
OCT 26...	10	0	--	--	--	--	--	--	--
NOV 06...	0	10	--	--	--	--	--	--	--
JAN 26...	30	0	--	--	--	--	--	--	--
APR 03...	0	10	<.4	<.4	.6	<.4	.6	<.4	.04
JUL 25...	20	0	--	--	--	--	--	--	--

DATE	URANIUM DIS-SOLVED, EXTRAC-TION (UG/L)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	NAPH-THA-LENES, POLY-CHLOR, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 26...	--	8.2	4.3	--	.00	.00	--	--	--	--	--
NOV 06...	--	66	17	--	--	.00	--	--	--	--	--
JAN 26...	--	2.3	2.2	--	--	.00	--	--	--	--	--
APR 03...	<.01	--	3.1	.2	.00	.00	.0	0	.00	.00	.0
JUL 25...	--	--	9.9	.2	--	.00	--	--	--	--	--
SEP 08...	--	--	--	--	--	--	.0	3	.00	.00	.0

DATE	CHLOR-DANE, TOTAL (UG/L)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-AZINON, TOTAL (UG/L)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-ELDRIN TOTAL (UG/L)
OCT 26...	--	--	--	--	--	--	--	--	--	--	--
NOV 06...	--	--	--	--	--	--	--	--	--	--	--
JAN 26...	--	--	--	--	--	--	--	--	--	--	--
APR 03...	.0	0	.00	.0	.00	.0	.00	.0	.00	--	.00
JUL 25...	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	.0	0	.00	.0	.00	.0	.00	.0	.00	.0	.00

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
OCT 26...	--	--	--	--	--	--	--	--	--	--
NOV 06...	--	--	--	--	--	--	--	--	--	--
JAN 26...	--	--	--	--	--	--	--	--	--	--
APR 03...	.0	.00	.00	.0	.00	--	.00	.0	.00	.0
JUL 25...	--	--	--	--	--	--	--	--	--	--
SEP 08...	.0	.00	.00	.0	.00	.0	.00	.0	.00	.0

DATE	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOTAL (UG/L)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)
APR 03...	.00	.0	.00	--	--	--	.00	--	.00	--	.00
JUL 25...	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00

DATE	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL (UG/L)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
APR 03...	.00	--	0	0	.00	--	.00	.00	.00
JUL 25...	--	--	--	--	--	--	--	--	--
SEP 08...	.00	.0	0	0	.00	.0	--	--	--

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	APR 3,78	
TIME	1130	
TOTAL CELLS/ML	96	
DIVERSITY: DIVISION	0.0	
.CLASS	0.0	
..ORDER	0.0	
...FAMILY	1.1	
....GENUS	1.1	
ORGANISM	CELLS /ML	PER-CENT
CHRYSOPHYTA		
.BACILLARIOPHYCEAE		
..PENNALES		
...GOMPHONEMATACEAE		
....GOMPHONEMA	68#	71
...MERIDIONACEAE		
....MERIDION	14	14
...NAVICULACEAE		
....NAVICULA	14	14

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

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19	18	20	19	20	19	13	12	13	12	14	14
2	19	17	21	19	20	19	14	13	13	13	14	14
3	19	19	21	20	20	19	16	14	13	13	16	14
4	19	18	21	20	21	19	15	14	13	13	15	13
5	19	17	21	20	22	20	15	13	13	13	15	13
6	19	17	23	21	20	18	14	13	13	12	14	12
7	19	17	21	19	18	16	15	13	13	11	14	14
8	20	17	20	19	17	16	15	12	12	10	16	14
9	20	19	20	19	18	16	13	12	13	12	17	16
10	20	19	20	19	17	16	15	13	13	13	17	15
11	19	17	20	19	17	16	15	15	13	13	14	13
12	19	17	19	18	16	16	16	14	14	13	16	14
13	19	17	19	18	17	16	16	15	15	13	15	14
14	18	16	19	18	17	16	16	15	15	14	16	14
15	19	17	19	18	17	16	15	14	14	14	14	13
16	19	16	20	18	16	15	16	14	14	14	14	13
17	19	17	22	20	17	14	17	16	14	14	13	13
18	19	17	21	19	17	14	18	17	15	14	13	12
19	18	17	20	19	14	13	18	17	14	14	13	13
20	18	17	20	19	14	13	19	17	14	13	14	13
21	18	17	20	20	15	13	17	16	14	13	14	13
22	19	17	21	20	15	14	17	16	14	12	14	14
23	19	17	20	20	15	14	17	16	14	12	14	13
24	20	18	21	19	15	13	19	17	14	13	15	13
25	25	20	21	20	14	13	19	17	14	13	16	14
26	26	23	20	19	14	14	17	12	14	14	16	14
27	23	22	19	18	13	13	13	12	14	13	15	14
28	22	20	20	19	13	13	13	12	14	14	14	13
29	21	20	20	19	19	13	13	11	---	---	14	14
30	21	19	21	19	19	13	12	11	---	---	14	14
31	20	19	---	---	13	12	12	11	---	---	14	13
MONTH	26	16	23	18	22	12	19	11	15	10	17	12
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14	14	17	17	19	17	19	18	20	19	22	20
2	15	14	17	15	19	17	20	19	21	20	22	21
3	15	14	16	15	20	19	22	20	20	18	22	19
4	15	14	18	16	19	17	22	21	20	19	22	19
5	15	14	19	15	18	17	22	20	20	19	22	20
6	15	14	17	15	19	17	22	20	21	18	22	20
7	16	14	18	16	20	19	22	20	19	18	22	19
8	16	14	19	17	22	20	22	21	19	17	22	18
9	16	14	19	16	21	20	22	21	19	18	20	19
10	16	14	17	16	20	19	22	20	19	18	22	20
11	16	16	16	14	19	18	22	20	18	17	20	19
12	17	15	17	15	21	19	22	20	19	17	21	20
13	16	15	17	15	20	19	22	18	19	17	22	20
14	16	14	16	16	19	17	20	17	19	18	22	21
15	16	14	16	16	19	18	20	19	19	18	22	21
16	16	14	16	14	20	19	21	20	19	18	22	20
17	16	15	16	14	20	18	21	20	19	18	22	20
18	16	15	16	14	20	18	22	20	19	17	22	20
19	17	15	16	14	20	18	23	20	19	17	22	20
20	16	15	16	14	22	20	24	22	20	18	22	18
21	16	14	16	15	21	20	23	22	20	18	19	18
22	16	14	16	15	---	---	23	22	20	18	20	17
23	16	14	18	16	---	---	23	22	20	18	21	19
24	16	14	19	17	---	---	24	22	20	18	20	19
25	17	16	19	18	---	---	24	20	20	18	20	19
26	17	17	19	17	19	17	21	20	21	20	20	19
27	17	15	19	17	19	17	20	19	22	19	21	19
28	16	14	20	19	19	17	20	19	22	21	21	19
29	16	14	21	19	19	17	20	19	22	20	21	19
30	17	16	21	19	19	18	21	20	22	20	21	20
31	---	---	20	18	---	---	21	18	22	20	---	---
MONTH	17	14	21	14	22	17	24	17	22	17	22	17
YEAR	26	10										

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
17...	1415	56	1	.15	100
26...	1200	162	7	3.1	45
NOV					
06...	0945	267	3	2.2	100
JAN					
26...	1105	890	24	58	82
MAR					
06...	1315	76	5	1.0	100
APR					
03...	1130	116	3	.94	100
26...	1345	137	2	.74	100
MAY					
16...	1330	199	2	1.1	100
JUN					
12...	1130	104	7	2.0	90
26...	1430	75	4	.81	62
JUL					
25...	1045	45	2	.24	80

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER YEAR OCTOBER 1977 to SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT									
25...	1100	55	11	6.9	11.0	10.1	<10	.3	<10
NOV									
09...	1430	124	15	6.7	14.0	9.8	<10	.1	<10
DEC									
29...	0815	170	10	6.6	.0	13.0	<10	.4	10
JAN									
30...	1115	211	6	6.7	1.0	12.8	<10	.5	<10
MAR									
29...	1400	150	11	6.4	8.0	11.0	<10	.2	<10
APR									
27...	1130	133	6	6.7	8.0	11.1	<10	.4	10
MAY									
25...	1320	116	10	6.9	17.0	9.8	<10	.5	<10
JUN									
19...	1230	93	--	6.9	16.0	9.1	<10	.7	30
JUL									
12...	1345	44	20	6.7	19.0	8.0	<10	1.7	170

03463300 SOUTH TOE RIVER NEAR CELO, N. C.

LOCATION.--Lat 35°49'52", long 82°11'04", Yancey County, Hydrologic Unit 06010108, on right bank on Secondary Road 1168, 800 ft (244 m) upstream from bridge on Secondary Road 1167, 0.3 mi (0.5 km) downstream from Whiteoak Creek, 1.9 mi (3.1 km) southeast of Celo, and at mile 20.1 (32.3 km).

DRAINAGE AREA.--43.4 mi² (112.4 km²).

PERIOD OF RECORD.--July 1957 to current year.

REVISED RECORDS.--WSP 1910: 1958-59.

GAGE.--Water-stage recorder. Datum of gage is 2,658 ft (810.16 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 400 of this report.

AVERAGE DISCHARGE.--21 years, 148 ft³/s (4.191 m³/s), 46.31 in/yr (1,176 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,900 ft³/s (932 m³/s) Nov. 6, 1977, gage height, 17.41 ft (5.307 m), from outside floodmarks, from rating curve extended above 4,500 ft³/s (127 m³/s) on basis of slope-area measurement of peak flow; minimum, 14 ft³/s (0.40 m³/s) Dec. 26, 1958, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,800 ft³/s (79 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 6	Unknown	*32900	932	*17.41	5.307	Aug. 5	0715	8620	244	7.80	2.377
Jan. 25	2245	5070	144	5.98	1.823	Sept. 14	0345	8620	244	7.80	2.377

Minimum discharge, 26 ft³/s (0.74 m³/s) July 21, 22, gage height, 0.60 ft (0.183 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	106	278	114	175	78	189	212	91	47	39	63
2	58	137	197	105	150	75	175	178	86	56	32	77
3	55	594	174	118	135	87	163	156	85	52	39	257
4	53	833	182	122	120	82	153	356	82	43	57	94
5	53	1480	345	96	110	111	144	269	76	42	1230	76
6	51	9960	274	96	100	75	135	209	74	45	261	70
7	49	1940	214	95	90	78	128	203	81	44	1070	63
8	62	854	194	442	80	113	121	310	101	41	438	58
9	157	590	189	508	80	152	116	307	104	39	300	54
10	71	455	173	258	83	482	113	232	81	37	212	53
11	59	367	155	248	85	246	115	201	74	36	171	71
12	59	309	135	190	85	255	113	187	73	35	198	69
13	57	274	133	137	85	246	101	289	79	38	312	56
14	55	244	191	128	90	502	95	316	66	39	205	1670
15	53	220	180	123	80	325	92	288	63	37	174	275
16	54	212	156	122	85	263	90	243	62	40	160	195
17	52	339	155	122	90	211	95	212	60	35	129	154
18	51	238	203	118	90	181	113	189	58	31	111	134
19	55	203	164	120	90	172	141	171	66	31	99	118
20	51	185	150	120	90	177	119	157	77	30	99	106
21	49	175	140	120	89	189	108	145	72	29	101	99
22	48	188	127	120	89	205	100	135	60	27	86	98
23	47	222	124	119	90	174	104	138	56	103	79	124
24	45	187	123	119	88	177	98	149	52	112	74	102
25	398	188	193	1240	85	562	256	129	50	60	71	93
26	965	186	137	1010	83	648	477	119	50	44	74	86
27	244	160	135	425	77	371	302	112	46	38	70	81
28	181	174	131	327	79	285	257	108	44	37	70	76
29	148	189	162	250	---	249	228	108	43	34	64	72
30	129	204	112	200	---	221	232	104	42	31	64	70
31	115	---	116	185	---	198	---	98	---	31	69	---
TOTAL	3582	21413	5342	7497	2673	7190	4673	6030	2054	1344	6158	4614
MEAN	116	714	172	242	95.5	232	156	195	68.5	43.4	199	154
MAX	965	9960	345	1240	175	648	477	356	104	112	1230	1670
MIN	45	106	112	95	77	75	90	98	42	27	32	53
CFSM	2.67	16.5	3.96	5.58	2.20	5.35	3.59	4.49	1.58	1.00	4.59	3.55
IN.	3.07	18.35	4.58	6.43	2.29	6.16	4.01	5.17	1.76	1.15	5.28	3.95

CAL YR 1977 TOTAL 69388 MEAN 190 MAX 9960 MIN 25 CFSM 4.38 IN 59.47
WTR YR 1978 TOTAL 72570 MEAN 199 MAX 9960 MIN 27 CFSM 4.59 IN 62.20

NOTE: No gage-height record Nov. 5-7.

03463300 SOUTH TOE RIVER NEAR CELO, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
17...	1100	49	1	.13
NOV				
07...	1420	1420	48	184
08...	1415	940	26	66
DEC				
13...	1200	127	0	.00
JAN				
03...	1350	111	1	.30
MAR				
01...	1300	74	3	.61
APR				
12...	1200	111	2	.60
MAY				
18...	1210	170	2	.92
JUN				
27...	1145	47	3	.38
JUL				
31...	1105	30	3	.24
AUG				
07...	1415	1040	31	87
SEP				
07...	1240	60	0	.00
14...	0925	1030	75	209

03479000 WATAUGA RIVER NEAR SUGAR GROVE, N. C.

LOCATION.--Lat 36°14'18", long 81°49'22", Watauga County, Hydrologic Unit 06010103, on right bank 250 ft (76 m) upstream from bridge on Secondary Road 1121, 300 ft (91 m) downstream from Cove Creek, 2.3 mi (3.7 km) southwest of Sugar Grove, and at mile 64.4 (103.6 km).

DRAINAGE AREA.--90.8 mi² (235.2 km²).

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is 2,607.84 ft (794.870 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Slight diurnal fluctuation at low flow caused by small mills above station. Suspended-sediment records for the current year are published on page 402 of this report.

AVERAGE DISCHARGE.--39 years, 174 ft³/s (4.928 m³/s), 26.02 in/yr (661 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. 26	0345	3840	109	8.71	2.655	Jan. 26	0100	8280	234	12.27	3.740
Nov. 6	1045	*16200	459	*16.77	5.111						

Minimum discharge, 32 ft³/s (0.91 m³/s) July 31, gage height, 1.42 ft (0.433 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	156	250	154	240	103	223	208	90	49	87	87
2	503	160	219	140	210	98	201	181	85	69	46	64
3	188	224	204	216	192	221	184	165	86	75	41	76
4	128	326	244	176	179	151	171	245	86	62	160	59
5	106	757	309	162	169	125	161	269	76	53	277	52
6	95	7690	340	123	165	117	151	222	74	52	92	49
7	85	3300	287	122	160	119	146	210	95	51	826	47
8	115	1230	243	318	155	150	147	264	121	50	375	44
9	284	690	239	918	150	213	141	290	109	46	258	43
10	196	500	203	460	150	918	137	243	82	43	173	41
11	151	378	206	390	142	552	128	208	73	43	130	44
12	137	313	182	340	128	395	125	190	70	40	130	72
13	121	270	169	300	126	374	113	299	99	45	197	51
14	115	242	223	253	130	686	105	309	69	53	180	49
15	106	223	225	196	119	647	103	331	64	41	246	51
16	111	213	200	226	119	475	101	303	63	72	149	48
17	112	305	191	210	123	371	101	262	63	50	115	45
18	102	232	230	205	129	283	105	213	59	42	100	42
19	98	211	206	199	126	243	120	189	77	40	94	41
20	93	197	204	190	115	211	122	170	112	39	81	40
21	80	191	193	185	113	202	109	158	91	38	75	39
22	77	192	176	177	115	197	102	144	78	37	69	38
23	75	209	168	150	115	177	93	146	67	36	65	39
24	73	193	171	144	115	166	91	185	61	42	62	39
25	89	225	245	1180	110	530	170	145	57	44	59	41
26	1580	295	196	3070	110	860	453	128	56	42	61	37
27	504	247	224	765	107	648	374	118	54	37	57	36
28	318	236	213	476	104	470	293	119	51	39	55	36
29	247	225	237	400	---	378	240	124	51	35	52	34
30	205	222	166	340	---	331	222	113	48	33	50	35
31	176	---	159	290	---	265	---	103	---	61	104	---
TOTAL	6361	19852	6722	12475	3916	10676	4932	6254	2267	1459	4466	1419
MEAN	205	662	217	402	140	344	164	202	75.6	47.1	144	47.3
MAX	1580	7690	340	3070	240	918	453	331	121	75	826	87
MIN	73	156	159	122	104	98	91	103	48	33	41	34
CFSM	2.26	7.29	2.39	4.43	1.54	3.79	1.81	2.23	.83	.52	1.59	.52
IN.	2.61	8.13	2.75	5.11	1.60	4.37	2.02	2.56	.93	.60	1.83	.58

CAL YR 1977 TOTAL 87830 MEAN 241 MAX 7690 MIN 46 CFSM 2.65 IN 35.98
WTR YR 1978 TOTAL 80799 MEAN 221 MAX 7690 MIN 33 CFSM 2.43 IN 33.10

03479000 WATAUGA RIVER NEAR SUGAR GROVE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 18...	1415	95	5	1.3
NOV 25...	1445	206	43	24
DEC 15...	1130	233	7	4.4
JAN 05...	1430	160	10	4.3
MAR 06...	1015	135	24	8.7
APR 14...	1330	123	11	3.7
MAY 22...	1430	149	17	6.8
JUN 20...	1245	107	37	11
JUL 24...	1345	43	10	1.2
SEP 08...	1340	45	2	.24

03500000 LITTLE TENNESSEE RIVER NEAR PRENTISS, N. C.

LOCATION.--Lat 35°08'57", long 83°22'46", Macon County, Hydrologic Unit 06010202, on left bank 600 ft (183 m) upstream from Owenby Branch, 0.5 mi (0.8 km) upstream from Cartoogechaye Creek, 2 mi (3 km) north of Prentiss, and at mile 119.5 (192.3 km).

DRAINAGE AREA.--140 mi² (363 km²).

PERIOD OF RECORD.--October 1943 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 1236: 1949(M).

GAGE.--Water-stage recorder. Datum of gage is 2,008.39 ft (612.157 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Since Oct. 1, 1954, auxiliary water-stage recorder 0.5 mi (0.8 km) downstream from base gage at same datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--35 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)
Nov. 6	2000	*3320	94.0	*8.40	2.560	Jan. 26	1400	2970	84.1	8.05	2.454
Dec. 5	2115	1540	43.6	4.49	1.369	Aug. 8	0500	1840	52.1	5.08	1.548
Jan. 9	0715	1900	53.8	5.21	1.588	Aug. 10	1015	1850	52.4	5.10	1.554

Minimum daily discharge, 121 ft³/s (3.43 m³/s) July 30; minimum gage height, 1.49 ft (0.454 m) July 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	187	272	650	481	712	383	360	274	238	151	246	183
2	229	276	573	455	684	374	351	289	227	152	140	181
3	195	364	516	424	653	469	344	267	230	150	129	186
4	173	425	491	407	619	471	335	368	224	144	135	174
5	168	701	1010	398	597	413	329	374	212	140	191	166
6	162	2740	1020	408	569	397	322	308	204	140	194	164
7	159	1900	711	412	538	395	315	300	245	143	1130	163
8	171	1050	617	907	530	490	304	487	311	141	1320	161
9	701	806	672	1640	516	592	301	680	472	149	878	155
10	399	689	601	896	505	1000	297	479	310	155	1530	154
11	294	596	549	711	488	736	312	404	265	137	725	179
12	256	539	517	639	477	619	340	367	253	131	781	170
13	228	498	497	612	503	554	308	508	311	130	539	166
14	215	467	583	566	488	700	293	463	245	134	478	166
15	205	440	595	526	457	661	285	412	225	176	407	169
16	195	426	533	498	445	582	281	380	217	267	431	182
17	187	748	505	727	438	530	277	355	209	166	354	179
18	180	578	590	738	433	501	333	335	202	144	313	172
19	179	498	528	705	424	477	433	319	197	136	292	154
20	175	459	502	1130	408	453	341	302	233	133	291	146
21	170	438	476	814	401	439	312	292	234	131	304	148
22	168	433	447	688	389	460	296	279	205	126	267	151
23	165	520	431	623	380	425	290	273	208	125	247	153
24	159	513	441	596	377	409	283	310	199	132	231	170
25	299	467	843	1470	370	407	307	287	184	136	220	175
26	1170	434	609	2610	364	472	315	265	179	130	213	155
27	536	408	530	1450	350	430	287	303	173	125	212	154
28	406	484	490	1080	362	404	274	280	170	144	225	151
29	347	548	463	915	---	390	266	286	161	126	203	141
30	314	493	469	821	---	378	262	294	153	121	196	139
31	290	---	515	762	---	367	---	257	---	151	191	---
TOTAL	8682	19210	17974	25109	13477	15378	9353	10797	6896	4466	13013	4907
MEAN	280	640	580	810	481	496	312	348	230	144	420	164
MAX	1170	2740	1020	2610	712	1000	433	680	472	267	1530	186
MIN	159	272	431	398	350	367	262	257	153	121	129	139
CFSM	2.00	4.57	4.14	5.79	3.44	3.54	2.23	2.49	1.64	1.03	3.00	1.17
IN.	2.31	5.10	4.78	6.67	3.58	4.09	2.49	2.87	1.83	1.19	3.46	1.30

CAL YR 1977 TOTAL 160876 MEAN 441 MAX 3360 MIN 107 CFSM 3.15 IN 42.75
WTR YR 1978 TOTAL 149262 MEAN 409 MAX 2740 MIN 121 CFSM 2.92 IN 39.66

03500240 CARTOOGECHAYE CREEK NEAR FRANKLIN, N. C.

LOCATION.--Lat 35°09'31", long 83°23'39", Macon County, Hydrologic Unit 06010202, on downstream side of center pier of bridge on Secondary Road 1152, 0.1 mi (0.2 km) downstream from unnamed creek, 1.8 mi (2.9 km) south of Franklin, and 1.9 mi (3.1 km) upstream from mouth.

DRAINAGE AREA.--57.1 mi² (147.9 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1944, 1947, 1953-55, 1960. June 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,017.18 ft (614.836 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 405 of this report.

AVERAGE DISCHARGE.--17 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)
Oct. 25	2400	1020	28.9	6.09	1.856	Jan. 26	0300	1650	46.7	8.62	2.627
Nov. 6	0700	*1660	47.0	*8.68	2.646						

Minimum daily discharge, 36 ft³/s (1.02 m³/s) Sept. 28, 29, 30; minimum gage height, 1.28 ft (0.390 m) Sept. 22, 27, 28, 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	88	183	164	225	116	129	105	83	63	107	50
2	156	94	160	152	216	115	127	106	81	62	51	50
3	88	116	147	140	200	179	124	99	86	62	50	50
4	78	138	148	133	190	148	121	158	82	60	53	49
5	73	231	207	133	183	132	119	137	78	59	86	48
6	70	1070	188	140	172	127	117	119	77	58	65	48
7	68	459	163	136	164	128	114	116	81	57	428	47
8	80	300	150	381	158	211	112	176	144	57	222	46
9	155	232	208	446	154	276	111	252	129	58	303	44
10	100	197	174	267	150	497	108	175	98	58	247	44
11	89	168	161	219	144	314	129	147	90	54	137	45
12	82	150	149	199	140	257	121	133	87	53	103	44
13	77	137	142	192	163	225	113	161	90	53	86	48
14	73	128	182	174	147	314	106	139	80	53	78	47
15	71	121	167	161	137	283	103	132	78	70	74	46
16	70	124	152	151	133	242	102	124	77	74	69	45
17	70	232	148	246	129	215	101	117	75	57	64	43
18	69	162	206	214	128	198	141	111	74	54	61	42
19	67	143	173	252	125	186	144	106	77	52	61	40
20	65	132	167	376	120	175	119	101	101	52	70	40
21	64	127	152	266	117	172	111	97	86	50	64	39
22	63	128	142	222	113	180	107	94	79	48	60	39
23	64	138	134	198	111	164	104	96	75	53	58	39
24	63	130	154	202	110	156	102	100	73	60	57	38
25	222	122	448	751	107	156	125	92	71	58	55	40
26	367	117	270	1130	105	178	119	90	73	52	55	38
27	170	113	218	518	102	156	107	112	69	48	55	37
28	129	155	191	376	111	148	102	112	66	50	55	36
29	111	150	169	309	---	142	100	99	65	47	53	36
30	101	155	175	267	---	137	99	96	65	46	52	36
31	93	---	172	243	---	132	---	88	---	67	51	---
TOTAL	3121	5757	5600	8758	4054	6059	3437	3790	2490	1745	3030	1294
MEAN	101	192	181	283	145	195	115	122	83.0	56.3	97.7	43.1
MAX	367	1070	448	1130	225	497	144	252	144	74	428	50
MIN	63	88	134	133	102	115	99	88	65	46	50	36
CFSM	1.77	3.36	3.17	4.96	2.54	3.42	2.01	2.14	1.45	.99	1.71	.76
IN.	2.03	3.75	3.65	5.71	2.64	3.95	2.24	2.47	1.62	1.14	1.97	.84

CAL YR 1977 TOTAL 54228 MEAN 149 MAX 1290 MIN 50 CFSM 2.61 IN 35.33
WTR YR 1978 TOTAL 49135 MEAN 135 MAX 1130 MIN 36 CFSM 2.36 IN 32.01

03500240 CARTOOGECHAYE CREEK NEAR FRANKLIN, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
18...	1315	62	4	.67
NOV				
22...	1130	121	9	2.9
DEC				
16...	1426	154	10	4.2
JAN				
25...	1500	560	231	349
FEB				
27...	1200	97	6	1.6
APR				
05...	1340	119	17	5.5
MAY				
19...	1325	105	19	5.4
AUG				
02...	1300	52	33	4.6
SEP				
05...	1320	48	4	.52

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 (36.811 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority).

REMARKS.--Records good. Considerable diurnal fluctuation caused by Porters Bend powerplant at Lake Emory 20 mi (32 km) upstream. Suspended-sediment records for the current year are published on page 407 of this report.

AVERAGE DISCHARGE.--35 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)
Nov. 6	1500	7540	214	6.80	2.073	Jan. 26	0815	*10400	295	*8.00	2.438
Jan. 9	0615	5540	157	5.90	1.798	Aug. 7	2245	6800	193	6.48	1.975

Minimum daily discharge, 308 ft³/s (8.72 m³/s) July 31; minimum gage height, 1.64 ft (0.500 m) Aug. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	496	693	1570	1220	1870	895	933	735	624	436	810	491
2	739	666	1380	1150	1770	877	906	755	610	424	515	450
3	635	788	1210	1080	1660	1080	886	733	613	442	358	446
4	515	953	1190	1020	1540	1180	863	923	605	411	442	446
5	466	1300	1880	1010	1470	964	846	1120	582	399	549	422
6	477	6250	2650	1030	1440	918	837	872	568	395	638	408
7	462	5210	1740	1040	1290	930	819	821	565	386	3200	404
8	472	2730	1460	1790	1260	1150	801	1130	816	386	4210	396
9	1280	1960	1540	4930	1220	1680	786	1970	1100	384	2040	377
10	986	1620	1450	2670	1190	3220	777	1370	808	406	3560	346
11	698	1370	1280	2050	1150	2470	795	1110	651	384	1770	400
12	633	1200	1210	1740	1110	1850	885	994	657	363	1710	421
13	588	1110	1170	1630	1180	1630	795	1190	818	353	1370	410
14	544	1020	1280	1490	1190	1960	769	1250	639	353	1080	446
15	525	957	1410	1360	1080	2090	728	1070	592	402	965	444
16	509	943	1220	1260	1030	1700	728	988	576	602	1000	427
17	507	1720	1150	1720	1020	1500	715	936	559	475	857	395
18	480	1430	1440	2110	1010	1370	807	872	540	392	764	409
19	466	1150	1310	1840	994	1270	1060	833	615	365	695	361
20	474	1040	1220	3350	957	1210	912	797	752	374	682	340
21	461	978	1160	2320	913	1160	804	767	684	345	808	323
22	447	957	1070	1930	943	1240	765	734	582	341	667	327
23	448	1160	1030	1710	881	1120	740	719	538	338	589	341
24	448	1170	1040	1610	872	1070	713	762	537	371	571	331
25	668	1030	2450	4790	874	1060	804	742	503	444	564	383
26	3670	964	1840	9290	855	1290	885	688	505	396	530	393
27	1610	899	1470	5040	816	1150	794	794	490	352	544	349
28	1080	1010	1300	3310	837	1070	728	723	465	394	535	337
29	905	1280	1220	2670	---	1040	718	697	460	375	512	330
30	800	1120	1190	2380	---	983	709	730	440	329	491	319
31	748	---	1320	1970	---	955	---	669	---	308	478	---
TOTAL	23237	44678	43850	72510	32422	42082	24308	28494	18494	12125	33504	11672
MEAN	750	1489	1415	2339	1158	1357	810	919	616	391	1081	389
MAX	3670	6250	2650	9290	1870	3220	1060	1970	1100	602	4210	491
MIN	447	666	1030	1010	816	877	709	669	440	308	358	319
CFSM	1.72	3.42	3.25	5.37	2.66	3.11	1.86	2.11	1.41	.90	2.48	.89
IN.	1.98	3.81	3.74	6.19	2.77	3.59	2.07	2.43	1.58	1.03	2.86	1.00

CAL YR 1977 TOTAL 416645 MEAN 1141 MAX 9680 MIN 330 CFSM 2.62 IN 35.55
WTR YR 1978 TOTAL 387376 MEAN 1061 MAX 9290 MIN 308 CFSM 2.43 IN 33.05

03503000 LITTLE TENNESSEE RIVER AT NEEDMORE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
18...	1450	475	5	6.4
NOV				
22...	1300	955	16	41
DEC				
14...	1455	1280	25	86
JAN				
06...	1400	1040	9	25
25...	1200	4710	255	3240
FEB				
27...	1430	825	6	13
MAY				
22...	1110	737	16	32
AUG				
01...	1045	1080	236	688
08...	1405	3740	374	3780
09...	1345	1580	138	589
SEP				
08...	1200	393	3	3.2

03504000 NANTAHALA RIVER NEAR RAINBOW SPRINGS, N. C.

LOCATION.--Lat 35°07'35", long 83°37'11", Macon County, Hydrologic Unit 06010202, on right bank on Nantahala Forest Service Road 437, 300 ft (91 m) upstream from Roaring Fork, 0.2 mi (0.3 km) downstream from Buck Creek, 5 mi (8 km) downstream from town of Rainbow Springs, and at mile 34.3 (55.2 km).

DRAINAGE AREA.--51.9 mi² (134.4 km²).

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 973: 1941(M).

GAGE.--Water-stage recorder. Datum of gage is 3,072.97 ft (936.641 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Occasional slight diurnal fluctuation at low flow caused by small ponds on tributaries above station. Suspended-sediment records for the current year are published on page 409 of this report.

AVERAGE DISCHARGE.--38 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)
Nov. 6	0230	*3130	88.6	*6.17	1.881	Jan. 25	2215	2070	58.6	4.75	1.448
Jan. 8	2000	1520	43.0	3.93	1.198						

Minimum discharge, 51, ft³/s (1.44 m³/s) Sept. 28, 29, 30, gage height, 0.71 ft (0.216 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	156	313	268	356	143	176	150	126	88	114	82
2	165	197	275	249	334	138	171	150	122	85	67	80
3	115	254	259	234	308	228	166	140	133	85	70	80
4	106	351	304	225	290	157	161	216	119	81	79	76
5	101	625	400	217	277	143	158	174	113	80	107	75
6	98	1680	351	239	253	138	154	159	109	80	87	74
7	95	831	309	229	261	142	150	172	127	79	577	72
8	237	614	287	677	235	313	150	326	260	79	259	70
9	397	503	420	662	225	345	148	372	209	83	427	68
10	209	436	324	449	216	588	146	261	153	81	322	66
11	173	368	299	397	207	376	208	222	141	74	239	68
12	157	328	279	350	199	360	159	204	137	72	201	66
13	146	299	268	336	215	325	153	263	135	73	173	73
14	139	277	339	300	193	441	144	216	119	73	155	71
15	131	258	286	277	182	399	140	205	115	158	158	67
16	134	272	267	268	175	339	137	192	112	109	144	64
17	125	408	269	357	172	299	137	182	109	78	126	62
18	118	286	355	287	170	276	225	176	105	74	117	60
19	115	262	285	318	165	259	192	169	143	72	125	59
20	111	247	274	366	159	247	164	163	155	72	145	57
21	108	243	258	291	158	229	157	157	119	69	133	56
22	105	273	243	270	157	260	151	152	109	67	113	60
23	103	296	233	255	163	226	147	154	108	68	106	67
24	101	270	288	287	146	215	143	172	104	67	102	59
25	367	252	586	1000	143	209	190	155	98	71	100	59
26	397	237	372	1080	138	234	168	145	97	67	100	56
27	241	228	326	667	131	212	152	183	94	70	97	55
28	204	298	296	544	143	202	145	156	91	74	97	52
29	186	262	278	471	---	195	142	147	88	63	89	51
30	173	279	296	431	---	187	141	140	87	61	87	51
31	163	---	276	394	---	181	---	133	---	97	85	---
TOTAL	5132	11290	9615	12395	5771	8006	4775	5806	3737	2450	4801	1956
MEAN	166	376	310	400	206	258	159	187	125	79.0	155	65.2
MAX	397	1680	586	1080	356	588	225	372	260	158	577	82
MIN	95	156	233	217	131	138	137	133	87	61	67	51
CFSM	3.20	7.25	5.97	7.71	3.97	4.97	3.06	3.60	2.41	1.52	2.99	1.26
IN.	3.68	8.09	6.89	8.88	4.14	5.74	3.42	4.16	2.68	1.76	3.44	1.40

CAL YR 1977 TOTAL 86424 MEAN 237 MAX 1680 MIN 55 CFSM 4.57 IN 61.94
WTR YR 1978 TOTAL 75734 MEAN 207 MAX 1680 MIN 51 CFSM 3.99 IN 54.28

TENNESSEE RIVER BASIN

03504000 NANTAHALA RIVER NEAR RAINBOW SPRINGS, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
14...	1145	135	1	.36
NOV				
22...	1200	256	3	2.1
DEC				
16...	1240	268	3	2.2
JAN				
04...	1130	226	1	.61
MAR				
01...	1445	139	18	6.8
MAY				
12...	1325	205	8	4.4
JUN				
29...	1410	84	2	.45
JUL				
06...	1500	85	9	2.1
AUG				
02...	1535	67	14	2.5
SEP				
08...	1525	72	2	.39

03505500 NANTAHALA RIVER AT NANTAHALA, N. C.

LOCATION.--Lat 35°17'55", long 83°39'22", Swain County, Hydrologic Unit 06010202, on left bank on U.S. Highway 19, 1.0 mi (1.6 km) northeast of Nantahala, 2.3 mi (3.7 km) downstream from Rowlin Creek, 2.8 mi (4.5 km) downstream from Nantahala Dam powerhouse, and at mile 10.8 (17.4 km).

DRAINAGE AREA.--144 mi² (373 km²).

PERIOD OF RECORD.--May 1942 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,894.68 ft (577.498 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority).

REMARKS.--Records good. Flow regulated by Nantahala Lake 12 mi (19 km) upstream (see p. 422) and Queens Creek Lake, capacity, about 300 ft³/s-day (734,000 m³). Suspended-sediment records for the current year are published on page 411 of this report.

AVERAGE DISCHARGE.--36 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, 2,540 ft³/s (71.9 m³/s) Jan. 25, gage height, 5.13 ft (1.564 m); minimum, 26 ft³/s (0.74 m³/s) Sept. 28, 39, 30, gage height, 1.45 ft (0.442 m); minimum daily, 27 ft³/s (0.76 m³/s) Sept. 27, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	475	634	699	757	850	672	96	471	387	371	394	468
2	487	642	695	748	844	688	93	471	485	379	397	480
3	501	651	684	747	816	737	211	184	390	364	373	464
4	514	660	700	750	788	684	220	222	253	349	367	549
5	525	545	705	749	783	671	214	230	363	370	406	539
6	373	1060	710	758	772	672	252	217	338	356	421	393
7	486	768	740	753	772	627	102	225	443	370	620	476
8	497	746	760	894	719	717	67	273	514	416	466	495
9	474	715	755	952	767	741	66	362	519	434	468	505
10	101	696	755	838	759	714	65	473	470	339	452	561
11	52	675	755	808	750	759	93	465	511	376	425	510
12	48	669	750	744	748	595	158	462	417	325	527	479
13	47	673	750	794	764	569	175	470	449	358	498	487
14	45	674	750	774	755	615	165	475	399	336	527	482
15	38	706	750	766	746	626	71	462	412	357	525	357
16	39	708	751	764	742	748	70	404	424	378	446	441
17	37	813	754	795	733	502	179	365	505	356	518	488
18	38	604	778	779	529	142	209	472	354	395	534	473
19	43	616	761	798	428	132	234	433	387	449	499	533
20	42	675	750	842	495	275	254	427	405	482	481	488
21	227	673	744	807	563	268	403	376	401	431	501	500
22	630	674	745	796	521	333	68	435	372	402	489	100
23	625	688	738	783	631	122	66	391	307	400	500	35
24	624	682	759	796	673	113	239	380	364	397	499	29
25	772	678	903	1340	655	265	260	427	322	306	495	33
26	812	675	798	1670	640	123	303	445	341	337	449	33
27	688	669	779	1140	661	224	432	505	426	367	410	27
28	661	691	768	1000	649	124	256	399	396	373	463	32
29	650	674	761	934	---	134	262	360	380	384	469	32
30	650	685	764	897	---	144	187	440	396	338	455	27
31	647	---	758	871	---	142	---	384	---	406	455	---
TOTAL	11848	20719	23269	26844	19553	13878	5470	12105	12130	11701	14529	10516
MEAN	382	691	751	866	698	448	182	390	404	377	469	351
MAX	812	1060	903	1670	850	759	432	505	519	482	620	561
MIN	37	545	684	744	428	113	65	184	259	306	367	27
(†)	-798.9	+1776.9	-1217.6	+2526.4	-4803.7	+6468.4	+6125.7	+2878.8	-1558.2	-4912.1	-3598.9	-5603.3
MEAN‡	356	750	711	947	527	656	387	483	352	219	353	166
CFSM‡	2.47	5.21	4.94	6.58	3.66	4.56	2.69	3.35	2.44	1.52	2.45	1.14
IN.‡	2.85	5.81	5.70	7.59	3.81	5.25	2.99	3.87	2.73	1.75	2.82	1.27

CAL YR 1977 TOTAL 189847 MEAN 520 MAX 1650 MIN 37 MEAN‡ 524 CFSM‡ 3.64 IN.‡ 49.40
WTR YR 1978 TOTAL 182562 MEAN 500 MAX 1670 MIN 27 MEAN‡ 493 CFSM‡ 3.42 IN.‡ 46.44

† 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.

03505500 NANTAHALA RIVER AT NANTAHALA, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
13...	1025	41	1	.11
NOV				
22...	1020	674	5	9.1
MAR				
02...	1100	648	67	117
MAY				
22...	1305	655	5	8.8
JUL				
03...	1355	638	6	10
AUG				
03...	0950	34	4	.37

03510500 TUCKASEGEE RIVER AT DILLSBORO, N. C.

LOCATION.--Lat 35°21'59", long 83°15'38", Jackson County, Hydrologic Unit 06010203, on left bank on Secondary Road 1377, 0.4 mi (0.6 km) downstream from Scott Creek, 0.5 mi (0.8 km) downstream from bridge on U.S. Highway 23 at Dillsboro, and at mile 31.1 (50.0 km).

DRAINAGE AREA.--347 mi² (899 km²).

PERIOD OF RECORD.--June 1928 to current year (prior to October 1933 monthly discharge only, published in WSP 1306; figures of daily discharge published in WSP 663, 683, 698, 713, 728, 743, are unreliable).

REVISED RECORDS.--WSP823: Drainage area. WSP 923: 1940(M). WSP 1306: 1929-33. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 1,950.15 ft (594.406 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to May 24, 1934, nonrecording gage at site below Scott Creek 0.4 mi (0.6 km) upstream at datum 7.27 ft (2.216 m) higher.

REMARKS.--Records good. Considerable diurnal fluctuation caused by Dillsboro powerplant 0.7 mi (1.1 km) above station. Flow partly regulated by Thorpe Reservoir 28 mi (45 km) upstream (see p. 422), and by Cedar Cliff Lake, Bear Creek Lake, and Tennessee Creek project lakes (see p. 424). Suspended-sediment records for the current year are published on page 413 of this report.

AVERAGE DISCHARGE.--50 years, 795 ft³/s (22.51 m³/s), 31.11 in/yr (790 mm/yr) unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,600 ft³/s (1,490 m³/s) Aug. 30, 1940, gage height, 21.96 ft (6.693 m), from floodmarks, from rating curve extended above 8,400 ft³/s (238 m³/s) on basis of slope-area measurements and computation of peak flow over dam; minimum, 35 ft³/s (0.99 m³/s) Sept. 17, 1953, gage height, 1.60 ft (0.488 m); minimum daily, 107 ft³/s (3.03 m³/s) Sept. 19, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1840 was approximately equal to that of Aug. 30, 1940, from studies by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s (130 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 26	0130	*6730	191	*8.52	2.597	Aug. 7	1500	4870	138	7.37	2.246

Minimum discharge, 189 ft³/s (5.35 m³/s) July 1, gage height, 2.27 ft (0.692 m); minimum daily, 296 ft³/s (8.38 m³/s) July 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	299	1040	1350	1160	1670	873	892	669	575	573	622	385
2	509	1030	1040	625	1570	870	660	756	529	499	452	423
3	431	989	931	855	1510	1320	687	559	547	342	542	450
4	389	1070	856	890	1350	938	761	956	561	365	717	330
5	363	1040	1270	769	1410	682	605	1070	445	377	606	407
6	367	1680	1620	878	1370	747	595	739	526	527	558	426
7	370	1500	1500	765	1210	785	631	675	662	491	3360	398
8	659	1350	1160	1320	1140	1140	551	872	849	434	2260	393
9	1210	1240	1410	2080	1170	1450	462	1420	821	481	1580	432
10	607	1200	1250	1580	1050	2250	612	956	506	545	1420	444
11	618	804	1210	1450	842	1790	801	865	399	480	1310	523
12	574	753	1020	1280	1050	1480	698	1100	539	403	1240	475
13	589	730	798	1160	1090	1370	623	1270	1140	388	1050	420
14	695	524	1120	1110	1380	1780	676	1170	623	409	964	724
15	551	486	1030	926	1320	1490	638	1130	552	532	689	542
16	543	857	1000	1010	958	1580	424	1100	650	382	782	409
17	878	1500	1120	1350	967	1190	704	1070	656	296	711	450
18	1010	1230	1270	1330	1000	1230	687	1030	462	407	689	343
19	1010	730	817	1360	778	945	712	987	526	478	736	550
20	1010	928	1130	1790	756	944	558	742	1150	477	514	550
21	1020	901	1020	1240	923	977	641	549	691	463	540	515
22	545	1110	980	1000	884	1000	641	590	609	392	678	589
23	733	1100	1080	1090	943	861	423	564	663	382	665	592
24	955	1060	884	1280	983	871	515	878	574	589	639	483
25	642	716	1480	3150	909	1130	959	573	346	768	652	599
26	1600	770	1070	4160	666	1220	795	822	433	432	880	592
27	698	838	720	2560	836	837	591	672	593	381	863	689
28	536	756	890	2140	1150	931	557	583	655	386	853	610
29	1020	911	769	1930	---	852	450	523	633	371	901	810
30	981	891	822	1810	---	833	515	826	523	324	485	870
31	1010	---	1070	1740	---	1020	---	783	---	432	513	---
TOTAL	22422	29734	33687	45788	30885	35386	19064	26499	18438	13806	28471	15423
MEAN	723	991	1087	1477	1103	1141	635	855	615	445	918	514
MAX	1600	1680	1620	4160	1670	2250	959	1420	1150	768	3360	870
MIN	299	486	720	625	666	682	423	523	346	296	452	330

CAL YR 1977 TOTAL 326120 MEAN 893 MAX 6860 MIN 211
WTR YR 1978 TOTAL 319603 MEAN 876 MAX 4160 MIN 296

TENNESSEE RIVER BASIN

03510500 TUCKASEGEE RIVER AT DILLSBORO, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
20...	1130	942	7	18
NOV				
23...	1110	990	9	24
FEB				
28...	1010	1080	14	41
MAY				
22...	1530	768	22	46
AUG				
08...	1310	1460	138	544
23...	1035	464	11	14
SEP				
05...	1535	273	1	.74

03512000 OCONALUFTEE RIVER AT BIRDTOWN, N. C.

LOCATION.--Lat 35°27'42", long 83°21'13", Swain County, Hydrologic Unit 06010203, in Cherokee Indian Reservation, on left bank 200 ft (61 m) upstream from bridge on Secondary Road 1359, 0.5 mi (0.8 km) south of Birdtown, 0.6 mi (1.0 km) downstream from Adams Creek, 0.6 mi (1.0 km) upstream from Goose Creek, 2.2 mi (3.5 km) southwest of Cherokee and at mile 3.1 (5.0 km).

DRAINAGE AREA.--184 mi² (477 km²).

PERIOD OF RECORD.--July 1945 to September 1946, July 1948 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,843,30 ft (561.838 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1946, nonrecording gage at same site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 415 of this report.

AVERAGE DISCHARGE.--31 years, 520 ft³/s (14.73 m³/s), 38.38 in/yr (975 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,900 ft³/s (450 m³/s) Dec. 30, 1969, gage height, 12.46 ft (3.798 m), from floodmarks; minimum 80 ft³/s (2.27 m³/s) Oct. 19, 1954, gage height, 0.66 ft (0.201 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of Nov. 19, 1906 and Mar. 27, 1913 reached stages of 18 ft (5.5 m) and 14.5 ft (4.42 m), respectively, discharge not determined, from studies by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (110 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 8	2315	6290	178	6.72	2.048	Mar. 14	1130	*6420	182	*6.80	2.073
Jan. 26	0315	5910	167	6.47	1.972						

Minimum daily discharge, 140 ft³/s (3.96 m³/s) Sept. 28, 29; minimum gage height, 1.02 ft (0.311 m) Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	265	355	1080	603	733	274	564	643	410	276	752	202
2	282	332	794	538	699	269	537	621	388	281	262	205
3	261	307	675	472	606	312	516	555	385	391	263	254
4	243	313	870	462	537	271	491	734	378	286	697	200
5	231	331	1260	428	520	249	475	676	356	264	570	187
6	226	932	1120	444	462	268	453	603	346	255	470	190
7	222	742	835	423	454	284	435	547	504	246	1730	178
8	475	616	728	1790	475	541	416	753	995	244	1220	172
9	1200	522	763	2270	416	749	404	1230	872	241	731	166
10	619	484	606	1120	394	1850	391	933	603	259	536	235
11	471	421	553	952	376	1260	474	809	502	231	485	250
12	402	390	519	840	367	1270	452	794	503	218	477	199
13	346	363	501	776	389	1230	387	846	924	218	514	192
14	331	348	713	703	369	2890	366	1250	593	218	378	197
15	306	328	713	630	337	2110	355	1230	525	268	559	186
16	301	341	589	585	331	1570	346	983	469	342	433	180
17	304	895	549	679	327	1180	338	813	431	253	358	168
18	280	554	822	595	327	894	499	694	413	223	315	163
19	277	475	666	635	316	812	512	629	420	212	288	155
20	274	445	631	816	301	782	422	575	464	231	284	150
21	256	431	574	612	296	847	399	533	399	228	265	160
22	249	458	525	559	280	1110	382	496	366	211	245	261
23	241	629	487	543	285	858	378	513	347	203	231	170
24	240	555	520	548	287	834	370	666	333	226	222	163
25	499	499	1910	2350	284	844	604	560	323	281	214	159
26	1290	463	1030	3750	281	1030	684	510	315	303	231	145
27	623	430	837	1970	262	822	572	470	309	244	234	141
28	523	467	739	1420	277	718	544	456	308	232	425	140
29	451	584	700	1030	---	662	503	481	293	221	270	140
30	405	618	686	913	---	619	598	457	290	221	235	141
31	373	---	665	843	---	580	---	421	---	552	213	---
TOTAL	12466	14628	23660	30299	10988	27989	13867	21481	13756	8079	14107	5449
MEAN	402	488	763	977	392	903	462	693	459	261	455	182
MAX	1290	932	1910	3750	733	2890	684	1250	995	552	1730	261
MIN	222	307	487	423	262	249	338	421	290	203	213	140
CFSM	2.19	2.65	4.15	5.31	2.13	4.91	2.51	3.77	2.50	1.42	2.47	.99
IN.	2.52	2.96	4.78	6.13	2.22	5.66	2.80	4.34	2.78	1.63	2.85	1.10

CAL YR 1977 TOTAL 199664 MEAN 547 MAX 6000 MIN 199 CFSM 2.97 IN 40.37
WTR YR 1978 TOTAL 196769 MEAN 539 MAX 3750 MIN 140 CFSM 2.93 IN 39.78

03512000 OCONALUFTEE RIVER AT BIRDTOWN, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
20...	1435	265	1	.72
NOV				
23...	1410	622	7	12
JAN				
06...	1115	430	11	13
25...	1010	2550	129	888
FEB				
28...	1440	280	6	4.5
APR				
18...	1115	390	22	23
MAY				
18...	1520	698	19	36
AUG				
01...	1630	389	39	41
08...	1530	910	111	273
SEP				
06...	1430	189	4	2.0

03513000 TUCKASEGEE RIVER AT BRYSON CITY, N. C.

LOCATION.--Lat 35°25'40", long 83°26'50", Swain County, Hydrologic Unit 06010203, on left bank 400 ft (122 m) downstream from bridge on Secondary Road 1364, Everett Street, in Bryson City, 0.6 mi (1.0 km) downstream from Deep Creek, and at mile 12.6 (20.3 km).

DRAINAGE AREA.--655 mi² (1,696 km²).

PERIOD OF RECORD.--October 1897 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 523: 1916, 1918-20. WSP 823: Drainage area. WSP 1306: 1898-1913. WSP 1336: 1907, 1915(M), 1916-20, 1921-29(M), 1933-34(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,714.54 ft (522.592 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Nov. 7, 1897, to Feb. 2, 1914, and May 18, 1920, to June 27, 1927, nonrecording gage at bridge 400 ft (122 m) upstream at datum 2.00 ft (0.610 m) higher. Feb. 3, 1914, to May 17, 1920, water-stage recorder at site 200 ft (61 m) upstream at datum 2.00 ft (0.610 m) higher. June 28, 1927, to Sept. 30, 1960, water-stage recorder at present site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good. Considerable diurnal fluctuation caused by powerplants above station. Flow regulated by Thorpe Reservoir, Cedar Cliff Lake, Bear Creek Lake, Tennessee Creek project lakes (see pp. 422,424), 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 417 of this report.

AVERAGE DISCHARGE.--81 years, 1,592 ft³/s (45.09 m³/s), 33.01 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)
Jan. 8	2400	10100	286	7.15	2.179	Aug. 7	1945	9700	275	6.98	2.128
Jan. 26	0130	*17400	493	*9.76	2.975						

Minimum discharge, 428 ft³/s (12.1 m³/s) Sept. 18, gage height, 1.66 ft (0.506 m); minimum daily, 454 ft³/s (12.9 m³/s) Sept. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	849	1610	2900	2060	2870	1520	1770	1580	1150	1060	1710	664
2	861	1580	2200	1530	2730	1310	1620	1730	1160	925	864	614
3	890	1550	2010	1510	2540	1980	1370	1410	1100	929	799	813
4	809	1580	2110	1640	2370	1650	1570	1830	1180	833	1650	557
5	773	1630	2860	1450	2280	1190	1400	2190	863	699	1330	610
6	737	3160	3290	1620	2230	1300	1270	1670	993	929	1210	572
7	740	2630	2780	1560	1970	1350	1290	1670	1440	911	4840	610
8	1210	2350	2290	3320	1960	1900	1320	1830	2180	898	4430	663
9	3140	2120	2610	5360	1960	2770	1090	3270	2250	872	2630	599
10	1570	1990	2240	3230	1890	4830	1120	2260	1470	933	2350	694
11	1350	1580	2130	2770	1550	3670	1560	2010	1150	874	2030	794
12	1210	1350	1940	2480	1650	3110	1530	2100	1120	844	2010	782
13	1180	1360	1530	2270	1770	3010	1210	2530	2360	762	1850	631
14	1150	1110	2150	2090	2130	4840	1280	2760	1530	772	1540	868
15	1170	1020	2150	1830	2010	3950	1350	2750	1250	897	1490	811
16	969	1370	1900	1820	1810	3460	979	2510	1250	1110	1360	767
17	1350	2790	1970	2340	1410	2750	1220	2310	1420	715	1330	685
18	1490	2230	2600	2330	1660	2580	1490	2150	1030	762	1130	454
19	1480	1590	1760	2290	1510	2160	1590	1990	1040	784	1240	695
20	1480	1540	2130	3210	1210	2120	1260	1770	1850	892	987	780
21	1470	1620	1930	2240	1500	2170	1200	1370	1360	788	847	760
22	1090	1850	1840	2000	1440	2600	1390	1350	1150	778	1040	930
23	1000	2140	1890	1820	1500	2130	1060	1290	1090	675	983	951
24	1420	1940	1680	2070	1560	2080	1040	1900	1250	726	977	658
25	1310	1590	4140	6100	1520	2370	1750	1350	810	1210	950	768
26	3590	1440	2720	10600	1290	2820	2010	1560	785	997	1050	825
27	1690	1550	1930	5530	1210	2010	1510	1530	1000	678	1210	814
28	1340	1530	1970	4290	1720	2030	1400	1240	1140	686	1250	934
29	1590	1800	1810	3660	---	1860	1280	1170	1090	657	1260	898
30	1670	1660	1700	3280	---	1850	1320	1420	970	617	1100	1100
31	1570	---	1870	3060	---	1900	---	1440	---	629	793	---
TOTAL	42148	53260	69030	91360	51250	75270	41249	57940	38431	25842	48240	22301
MEAN	1360	1775	2227	2947	1830	2428	1375	1869	1281	834	1556	743
MAX	3590	3160	4140	10600	2870	4840	2010	3270	2360	1210	4840	1100
MIN	737	1020	1530	1450	1210	1190	979	1170	785	617	793	454

CAL YR 1977 TOTAL 637906 MEAN 1748 MAX 18300 MIN 585
WTR YR 1978 TOTAL 616321 MEAN 1689 MAX 10600 MIN 454

TENNESSEE RIVER BASIN

03513000 TUCKASEGEE RIVER AT BRYSON CITY, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
19...	1515	1420	7	27
NOV				
23...	1300	2100	14	79
JAN				
25...	1100	6430	310	5380
FEB				
28...	1200	1690	11	50
MAY				
18...	1145	2100	24	136
JUL				
03...	0930	1070	32	92
AUG				
01...	1330	1310	175	619
08...	1450	3220	191	1660
SEP				
06...	1220	620	4	6.7

03548500 HIWASSEE RIVER ABOVE MURPHY, N. C.

LOCATION.--Lat 35°04'50", long 84°00'10", Cherokee County, Hydrologic Unit 06020002, on right bank on U.S. Highway 64, 600 ft (183 m) upstream from Will Scott Creek, 2.0 mi (3.2 km) southeast of Murphy, and at mile 99.1 (159.5 km).

DRAINAGE AREA.--406 mi² (1,052 km²).

PERIOD OF RECORD.--June 1896 to August 1897, gage heights only, October 1897 to current year. Published as "at Murphy" 1897-1940. Records published for both sites August 1939 to April 1940. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORD.--WSP 583: 1899(M). WSP 973: Drainage area. WSP 1003: 1943. WSP 1306: 1901-2, 1904-17, 1919(M), 1922(M), 1924-26(M). WSP 1706: 1899, 1907.

GAGE.--Water-stage recorder. Datum of gage is 1,538.23 ft (468.853 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to Jan. 30, 1921, nonrecording gage at bridge 2.8 mi (4.5 km) downstream at datum 30.40 ft (9.266 m) lower. Jan. 30, 1921, to Nov. 8, 1926, nonrecording gage 2.8 mi (4.5 km) downstream at datum 28.40 ft (8.656 m) lower. Nov. 9, 1926, to Apr. 30, 1940, water-stage recorder 2.8 mi (4.5 km) downstream at datum 28.20 ft (8.595 m) lower.

REMARKS.--Records good. Considerable diurnal fluctuation since 1924 caused by Mission powerplant at Andrews Dam 7 mi (11 km) upstream, normal regulated storage, about 75 ft³/s-day (184,000 m³). Flow regulated since 1942 by Chatuge Lake 22 mi (35 km) upstream (see p. 423). Suspended-sediment records for the current year are published on page 419 of this report.

AVERAGE DISCHARGE.--81 years (1897-1978), 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, 6,820 ft³/s (193 m³/s) Jan. 25, gage height, 8.32 ft (2.536 m); minimum, 136 ft³/s (3.85 m³/s) Sept. 25, gage height, 2.20 ft (0.671 m); minimum daily, 154 ft³/s (4.36 m³/s) Sept. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1040	486	501	1400	1730	1520	394	349	515	562	704	948
2	765	760	1010	1270	1670	1520	380	526	689	183	934	940
3	704	533	1100	1390	1610	1730	437	518	671	181	628	585
4	782	694	763	1460	1710	1700	692	365	409	175	904	231
5	892	1100	978	1350	1680	1480	480	377	398	303	695	910
6	851	2670	1380	1350	1640	1110	442	339	532	535	299	934
7	883	1500	1580	1450	1630	1180	455	345	669	653	1080	905
8	654	1290	1500	1330	1630	932	509	567	963	610	1370	930
9	1010	1270	1640	2710	1610	1560	333	1190	680	455	1990	759
10	1110	1100	1790	1910	1590	2490	445	694	396	422	1610	790
11	1100	1790	1550	1970	1380	1490	399	534	332	611	1170	1060
12	1080	1230	1160	2030	1100	917	425	462	533	545	1150	543
13	905	827	457	2020	1020	1110	360	528	725	787	769	757
14	1000	1010	478	1930	1190	1430	334	453	581	513	743	953
15	599	1290	829	1650	1370	850	321	639	564	737	1350	1000
16	560	1290	1020	1220	1360	1020	313	425	571	371	1230	774
17	990	1850	1380	1090	1350	1240	308	391	711	556	1130	710
18	1080	1660	1190	1430	826	904	342	366	581	966	1190	1060
19	806	1430	1040	1410	365	564	359	349	305	945	1120	1010
20	762	1020	1810	2000	928	862	360	332	539	948	641	1060
21	739	956	1790	1590	1330	714	338	566	433	926	586	977
22	751	1220	1760	1420	1320	833	330	303	256	825	965	605
23	451	1110	1730	1540	1180	504	318	585	237	491	953	185
24	506	815	1760	1570	1350	474	310	799	232	297	1080	154
25	1080	791	2240	3270	719	463	340	606	221	850	989	489
26	1700	905	1700	4550	494	513	374	831	261	423	1080	884
27	1160	775	1630	2670	935	697	327	492	670	428	628	331
28	984	722	1420	2530	1500	661	314	319	690	710	580	433
29	595	1070	1390	1910	---	434	308	311	863	447	914	683
30	327	878	1400	1780	---	414	310	540	920	248	1030	429
31	619	---	1350	1720	---	398	---	462	---	404	862	---
TOTAL	26485	34042	41326	56920	36217	31714	11357	15563	16147	17107	30374	22029
MEAN	854	1135	1333	1836	1293	1023	379	502	538	552	980	734
MAX	1700	2670	2240	4550	1730	2490	692	1190	963	966	1990	1060
MIN	327	486	457	1090	365	398	308	303	221	175	299	154

CAL YR 1977 TOTAL 368956 MEAN 1011 MAX 6810 MIN 188 MEAN+ 1031 CFSM+ 2.54 IN.+ 34.47
WTR YR 1978 TOTAL 339281 MEAN 930 MAX 4550 MIN 154 MEAN+ 903 CFSM+ 2.22 IN.+ 30.18

+ Adjusted for change in contents in Chatuge Lake.

03548500 HIWASSEE RIVER ABOVE MURPHY, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
13...	1315	376	3	3.0
NOV				
22...	1345	1170	6	19
MAR				
01...	1155	529	11	16
MAY				
24...	1150	559	397	599
JUN				
27...	1125	232	5	3.1
JUL				
18...	1235	204	5	2.8
AUG				
03...	1250	166	9	4.0
SEP				
07...	1130	239	4	2.6

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) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to May 11, 1934, nonrecording gage at same site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 421 of this report.

AVERAGE DISCHARGE.--66 years (1904-9, 1914-16, 1919-78), 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.--Maximum discharge, 2,630 ft³/s (74.5 m³/s) Jan. 26, gage height, 8.83 ft (2.691 m); minimum, 16 ft³/s (0.45 m³/s) Sept. 21, from regulation caused by road construction above gage; minimum daily, 44 ft³/s (1.25 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	131	178	344	326	418	200	227	217	135	90	85	63
2	203	166	316	304	394	207	218	213	130	87	63	62
3	172	156	293	282	362	430	211	196	135	85	65	68
4	142	183	318	264	337	335	204	213	133	82	82	60
5	129	231	369	254	319	279	199	223	123	79	123	57
6	120	959	367	307	300	258	192	201	120	78	94	56
7	114	662	316	293	279	250	186	215	213	76	306	55
8	233	509	291	856	274	357	179	340	487	75	186	55
9	599	394	386	1000	266	522	174	571	407	104	307	52
10	357	357	339	585	255	1020	171	387	260	112	281	51
11	261	300	311	433	245	701	274	310	211	81	200	52
12	212	268	289	371	236	557	253	272	188	77	180	52
13	183	244	276	329	272	471	212	340	188	75	136	54
14	166	226	300	275	250	637	194	289	160	77	129	53
15	153	211	289	236	232	579	185	280	151	228	128	55
16	147	221	269	206	227	494	178	261	143	176	116	53
17	142	594	267	489	221	432	176	243	137	100	100	51
18	133	412	378	416	216	386	265	224	137	87	91	48
19	127	334	318	453	209	353	283	211	141	82	92	46
20	122	293	300	745	200	328	239	194	149	79	133	45
21	120	282	279	527	201	320	220	183	138	76	106	54
22	115	287	257	406	194	327	205	172	127	72	88	88
23	111	358	243	340	189	295	195	178	120	70	82	54
24	107	344	356	344	189	281	187	205	115	79	78	50
25	299	316	973	1330	191	273	237	172	111	105	75	51
26	649	288	602	1970	188	322	241	160	107	83	74	48
27	345	267	453	1100	177	285	212	151	104	73	77	47
28	271	328	383	777	197	268	198	149	100	69	77	46
29	229	317	333	609	---	257	188	156	96	66	71	45
30	202	308	345	517	---	245	193	157	93	64	70	44
31	184	---	337	461	---	236	---	143	---	65	67	---
TOTAL	6478	9993	10897	16805	7038	11905	6296	7226	4859	2752	3762	1615
MEAN	209	333	352	542	251	384	210	233	162	88.8	121	53.8
MAX	649	959	973	1970	418	1020	283	571	487	228	307	88
MIN	107	156	243	206	177	200	171	143	93	64	63	44
CFSM	2.01	3.20	3.39	5.21	2.41	3.69	2.02	2.24	1.56	.85	1.16	.52
IN.	2.32	3.57	3.90	6.01	2.52	4.26	2.25	2.58	1.74	.98	1.35	.58

CAL YR 1977 TOTAL 99580 MEAN 273 MAX 4080 MIN 55 CFSM 2.63 IN 35.62
WTR YR 1978 TOTAL 89626 MEAN 246 MAX 1970 MIN 44 CFSM 2.37 IN 32.06

TENNESSEE RIVER BASIN

03550000 VALLEY RIVER AT TOMOTLA, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT				
14...	1445	158	6	2.6
NOV				
22...	1450	282	16	12
JAN				
17...	1200	823	342	760
17...	1330	1080	484	1410
MAR				
01...	1100	191	16	8.3
MAY				
24...	1320	180	33	16
JUN				
27...	1400	103	11	3.1
JUL				
18...	1330	86	33	7.7
AUG				
03...	1120	59	24	3.8
SEP				
07...	1340	54	11	1.6

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 National Geodetic Vertical Datum of 1929.

Reservoir is formed by single arch, variable radius, concrete dam with fourteen taintor gates 10 ft (3 m) high by 24 ft (7.3 m) wide. Dam was completed in 1929 and filling began October 1929; water in reservoir first reached minimum pool elevation November 1929. Total capacity (new capacity table put into use Jan. 1, 1971), at elevation 2,258.6 ft (688.42 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) Nov. 6, 7, Jan. 25-28, Aug. 7, elevation 2,258.6 ft (688.42 m); minimum observed, 3,510 ft³/s-day (8.589 hm³) Sept. 27, elevation, 2,188.7 ft (667.12 m).

03504500 NANTAHALA LAKE.--Lat 35°11'56", long 83°39'17", Macon County, Hydrologic Unit 06010202, at Nantahala Dam on Nantahala River, 4.2 mi (6.8 km) southeast of Topton, 5.5 mi (8.8 km) upstream from Whiteoak Creek, and at mile 22.8 (36.7 km). DRAINAGE AREA, 91.0 mi² (235.7 km²). PERIOD OF RECORD, January 1942 to current year. Prior to October 1944 monthend contents only, published in WSP 1306. GAGE, water-stage recorder. Datum of gage is 122.16 ft (37.234 m) National Geodetic Vertical Datum of 1929 (levels by Aluminum Co. of America); gage readings have been reduced to elevations NGVD. Prior to June 3, 1942, nonrecording gage at same site and datum.

Reservoir is formed by rockfill dam with side channel gate-controlled spillway supplemented by fuse-plug dam. Dam completed and storage began Jan. 30, 1942; water in reservoir first reached minimum pool elevation Feb. 16, 1942. Total capacity (based on 1969 resurvey; new capacity table put into use Jan. 1, 1971), at elevation 2,890.0 ft (880.72 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, 64,000 ft³/s-day (156.6 hm³) May 25, elevation, 2,883.26 ft (878.818 m); minimum, 46,600 ft³/s-day (114.0 hm³) Mar. 8, elevation, 2,858.17 ft (871.170 m).

03507500 THORPE RESERVOIR.--Lat 35°11'46", long 83°09'09", Jackson County, Hydrologic Unit 06010203, at Thorpe Dam on West Fork Tuckasegee River, 2.3 mi (3.7 km) northwest of Glenville, 3.0 mi (4.8 km) upstream from Shoal Creek, and at mile 9.7 (15.6 km). DRAINAGE AREA, 36.7 mi² (95.1 km²). PERIOD OF RECORD, February 1941 to current year. Prior to October 1944 monthend contents only, published in WSP 1306. Prior to October 1948, published as Glenville Reservoir. GAGE, water-stage recorder. Datum of gage is 391.75 ft (119.405 m) National Geodetic Vertical Datum of 1929 (levels by Aluminum Co. of America); gage readings have been reduced to elevations NGVD. Prior to Apr. 9, 1941, nonrecording gage at same site and datum.

Reservoir is formed by earth and rock dam and six 40 ft (12.2 m) fuse-plug dams. Side channel spillway equipped with two taintor gates 12 ft (3.7 m) high by 25 ft (7.6 m) wide. Dam completed and storage began Feb. 12, 1941. Water in reservoir first reached minimum pool elevation Mar. 15, 1941. Total capacity (based on 1969 resurvey; new capacity table put into use Jan. 1, 1971), at elevation 3,100.0 ft (944.88 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, 25,600 ft³/s-day (62.64 hm³) June 11, elevation, 3,085.55 ft (940.476 m); minimum, 19,100 ft³/s-day (46.74 hm³) Mar. 9, elevation, 3,074.32 ft (937.053 m).

03514500 FONTANA LAKE.--Lat 35°27'07", long 83°48'18", Graham County, Hydrologic Unit 06010202, at Fontana Dam on Little Tennessee River, 5.7 mi (9.2 km) upstream from Twenty Mile Creek, 9.0 mi (14.5 km) north of Robbinsville, 9.6 mi (15.4 km) upstream from Cheoah Dam, and at mile 61.0 (98.1 km). DRAINAGE AREA, 1,571 mi² (4,069 km²). PERIOD OF RECORD, October 1944 to current year. Prior to November 1944, monthend contents only, published in WSP 1306. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by gravity nonoverflow type concrete dam. Spillway equipped with four radial gates 35 ft (10.7 m) high by 35 ft (10.7 m) wide. Storage began Nov. 7, 1944; dam completed March 1945; water in reservoir first reached minimum pool elevation Jan. 16, 1945. Total capacity (based on 1967 resurvey; new capacity table put into use Jan. 1, 1971), at elevation, 1,710.0 ft (521.208 m), top of gates, is 727,500 ft³/s-day (1,780 hm³), of which 578,000 ft³/s-day (1,414 hm³) is controlled storage above elevation 1,525.0 ft (464.82 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, 544,400 ft³/s-day (1,332 hm³) June 26, elevation, 1,671.87 ft (509.586 m); minimum, 345,600 ft³/s-day (845.7 hm³) Mar. 8, elevation, 1,616.57 ft (492.731 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 122.92 ft (37.466 m) National Geodetic Vertical Datum of 1929 (levels by Aluminum Co. of America); gage readings have been reduced to elevations NGVD. Prior to February 1937, nonrecording gage at same site and datum.

Reservoir is formed by concrete gravity and arch dam with concrete spillway controlled by six taintor gates 12 ft (3.7 m) high by 25 ft (7.6 m) wide. Dam completed and storage began Dec. 7, 1927. Water in reservoir first reached minimum pool elevation December 1927. Total capacity (new capacity table put into use Jan. 1, 1971), at elevation 1,817.0 ft (553.822 m), top of gates, is 78,800 ft³/s-day (192.8 hm³), of which 66,600 ft³/s-day (163.0 hm³) is controlled storage above 1,740.08 ft (530.377 m), minimum pool. Reservoir is used for power. Gage-height record furnished by Aluminum Co. of America; level storage records furnished by Tennessee Valley Authority.

Lakes and Reservoirs in Ohio River basin--Continued

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 81,100 ft³/s-day (198.5 hm³) Sept. 3, 1928, elevation, 1,817.90 ft (554.096 m); minimum, after first filling, 13,100 ft³/s-day (32.06 hm³) Feb. 6, 1940, elevation, 1,741.39 ft (530.776 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 67,300 ft³/s-day (164.7 hm³) May 17, elevation, 1,808.58 ft (551.255 m); minimum, 42,400 ft³/s-day (103.8 hm³) Mar. 8, elevation, 1,786.05 ft (544.388 m).

03546500 CHATUGE LAKE.--Lat 35°01'01", long 83°47'28", Clay County, Hydrologic Unit 06020002, at Chatuge Dam on Hiwassee River, 2.0 mi (3.2 km) upstream from Hyatt Mill Creek, 2.5 mi (4.0 km) downstream from Georgia-North Carolina State line, 2.4 mi (3.9 km) southeast of Hayesville, and at mile 121.0 (194.7 km). DRAINAGE AREA, 189 mi² (490 km²). PERIOD OF RECORD, February 1942 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Aug. 4, 1942, nonrecording gage at same site and datum.

Reservoir is formed by a rolled earthfill dam with side channel spillway equipped with flashboards. Dam completed and storage began Feb. 12, 1942; water in reservoir first reached minimum pool elevation Feb. 26, 1942. Total capacity (based on 1965 resurvey; new capacity table put into use Jan. 1, 1971), at elevation 1,928.0 ft (587.654 m), top of flashboards, is 121,200 ft³/s-day (296.6 hm³), of which 111,900 ft³/s-day (273.8 hm³) is controlled storage above elevation 1,860.0 ft (566.928 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority. (See sta 03548500)

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 124,200 ft³/s-day (303.9 hm³) Apr. 20, 1943, elevation, 1,927.80 ft (587.593 m); minimum, after first filling, 9,400 ft³/s-day (23.0 hm³) Sept. 5, 1947, Jan. 27, 1956; minimum elevation, 1,860.11 ft (566.962 m) Sept. 5, 1947.

EXTREMES FOR CURRENT YEAR: Maximum contents, 99,800 ft³/s-day (244.2 hm³) June 26, elevation, 1,921.52 ft (585.679 m); minimum, 71,700 ft³/s-day (175.4 hm³) Mar. 7, elevation, 1,910.84 ft (582.424 m).

03554500 HIWASSEE LAKE.--Lat 35°09'01", long 84°10'40", Cherokee County, Hydrologic Unit 06020002, at Hiwassee Dam on Hiwassee River, 0.3 mi (0.5 km) northwest of village of Hiwassee Dam, 3.9 mi (6.3 km) upstream from Shoal Creek, and at mile 75.8 (122.0 km). DRAINAGE AREA, 968 mi² (2,507 km²). PERIOD OF RECORD, September 1939 to current year. GAGE, water-stage recorder. Datum of gage is 0.63 ft (0.192 m) below National Geodetic Vertical Datum of 1929.

Reservoir is formed by gravity overflow concrete dam with seven taintor gates 23 ft (7.0 m) high by 32 ft (9.8 m) wide. Slight storage began Apr. 13, 1939, during construction; systematic storage operation began Jan. 14, 1940; dam completed February 1940; water in reservoir first reached minimum pool elevation Feb. 23, 1940. Total capacity (based on 1965 resurvey; new capacity table put into use Jan. 1, 1971), at elevation 1,526.5 ft (465.277 m), top of gates, is 218,800 ft³/s-day (535.4 hm³) of which 182,700 ft³/s-day (447.1 hm³) is controlled storage above elevation 1,415.0 ft (431.292 m), minimum pool. Reservoir is used for navigation flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 223,400 ft³/s-day (546.7 hm³) May 28, 1973, elevation, 1,528.02 ft (465.740 m); minimum, after first filling, 35,800 ft³/s-day (87.60 hm³) Jan. 28, 1948, elevation, 1,413.41 ft (430.807 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 175,600 ft³/s-day (429.7 hm³) Aug. 26, elevation, 1,511.80 ft (460.797 m); minimum, 84,500 ft³/s-day (206.8 hm³) Feb. 28, elevation, 1,466.37 ft (446.950 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 mi² (2,637 km²). PERIOD OF RECORD, February 1943 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by concrete gravity dam. Spillway equipped with 10 radial gates. Dam completed and storage began Feb. 14, 1943; water in reservoir first reached minimum pool elevation Feb. 21, 1943. Total capacity (based on 1965 resurvey; new capacity table put into use Jan. 1, 1971), at elevation 1,280.00 ft (390.144 m), top of gates, is 29,100 ft³/s-day (71.21 hm³), of which 24,500 ft³/s-day (59.95 hm³) is controlled storage above elevation 1,212.00 ft (369.418 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 30,300 ft³/s-day (74.14 hm³) June 13, 1952, elevation, 1,281.40 ft (390.571 m); minimum, after first filling, 15,300 ft³/s-day (37.44 hm³) Apr. 25, 1971, elevation, 1,251.00 ft (381.305 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 29,100 ft³/s-day (71.21 hm³) Jan. 12, elevation, 1,280.00 ft (390.144 m); minimum, 16,000 ft³/s-day (39.15 hm³) Oct. 31, elevation, 1,252.70 ft (381.823 m).

OTHER RESERVOIRS.--The following smaller reservoirs in the Tennessee River basin are described below, but records of contents are not published herein:

03447832 LAKE JULIAN.--Lat 35°28'37", long 82°32'51", Buncombe County, Hydrologic Unit 06010105, cooling water reservoir for Carolina Power and Light Co. plant, on Powells Creek near Skyland. Prior to November 1967, published as Asheville Steam-electric Generating Plant Lake. DRAINAGE AREA, 4.78 mi² (12.38 km²). Total capacity is 4,540 ft³/s-day (11.11 hm³), of which 2,120 ft³/s-day (5.188 hm³) is controlled storage. Storage began Mar. 27, 1963, and lake reached spillway elevation of 2,160 ft (658.4 m) on June 3, 1963. Most of initial storage and occasional supplemental storage provided by pumped diversion from French Broad River.

03448959 BURNETT LAKE.--Lat 35°39'44", long 82°20'43", Buncombe County, Hydrologic Unit 06010105, part of Asheville's municipal water supply, on North Fork Swannanoa River near Black Mountain. DRAINAGE AREA, 21.9 mi² (56.7 km²). Total capacity is 11,600 ft³/s-day (28.39 hm³), crest of spillway, of which 8,900 ft³/s-day (21.78 hm³) is controlled storage. Storage began Jan. 28, 1954. (See sta 03451000)

03450134 BEETREE RESERVOIR.--Lat 35°38'27", long 82°24'04", Buncombe County, Hydrologic Unit 06010105, part of Asheville's municipal water supply, on Beetree Creek near Swannanoa. DRAINAGE AREA, 7.62 mi² (19.74 km²). Total capacity is 844 ft³/s-day (2.065 hm³), of which 823 ft³/s-day (2.014 hm³) is controlled storage. Dam completed December 1926, and storage began Jan. 11, 1927; water in reservoir first reached maximum pool elevation Mar. 8, 1927. No diversion since June 1963.

03455773 LAKE LOGAN.--Lat 35°25'15", long 82°55'30", Haywood County, Hydrologic Unit 06010106, on West Fork Pigeon River near Canton, and at mile 7.0 (11.3 km). DRAINAGE AREA, 33.3 mi² (86.2 km²). Total capacity is 1,040 ft³/s-day (2.545 hm³), top of flashboards, all of which is usable. Storage began November 1931. (See sta 03456000)

03458319 LAKE JUNALUSKA.--Lat 35°31'38", long 82°57'48", Haywood County, Hydrologic Unit 06010106, on Richland Creek at Lake Junaluska and at mile 2.4 (3.9 km). DRAINAGE AREA, 63.6 mi² (164.7 km²). Total surface area, about 195 acres (789,000 m²). Lake reached spillway elevation in the spring of 1913.

Lakes and Reservoirs in Ohio River basin--Continued

03500466 SEQUOYAH LAKE.--Lat 35°04'02", long 83°13'31", Macon County, Hydrologic Unit 06010202, on Cullasaja River near Highlands, and at mile 18.4 (29.6 km). DRAINAGE AREA, 14.4 mi² (37.3 km²). Total capacity is 233 ft³/s-day (570,000 m³), spillway crest, of which approximately 116 ft³/s-day (284,000 m³) is usable. Storage began in 1926.

03507111; 03507131 EAST FORK LAKE AND WOLF CREEK LAKE.--These two reservoirs are operated as a unit for storage of water for the Tennnessee Creek Project. East Fork Dam DRAINAGE AREA, 24.9 mi² (64.5 km²) on Tuckasegee River near Tuckasegee, Jackson County, Hydrologic Unit 06010203, is at lat 35°12'48", long 83°00'08", Wolf Creek Dam DRAINAGE AREA, 15.2 mi² (39.4 km²) on Wolf Creek near Tuckasegee, is at lat 35°13'18", long 83°00'00". Total capacity of East Fork Lake is 671 ft³/s-day (1.642 hm³), of which 625 ft³/s-day (1.529 hm³) is controlled storage. Storage began Apr. 18, 1955. Total capacity of Wolf Creek Lake is 5,070 ft³/s-day (12.41 hm³), of which 3,850 ft³/s-day (9.421 hm³) is controlled storage. Storage began Mar. 22, 1955. (See sta 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 storage. 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 1977 TO SEPTEMBER 1978

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	2231.7	8660	-	2864.38	50600	-	3079.63	22000	-	1656.44	481100	-
Oct. 31	2251.6	11710	+3050	2863.17	49800	-800	3077.76	20900	-1100	1645.68	439300	-41800
Nov. 30	2234.2	9030	-2680	2865.97	51600	+1800	3079.20	21800	+900	1647.11	444400	+5100
Dec. 31	2242.2	10250	+1220	2864.08	50400	-1200	3079.76	22100	+300	1636.66	410200	-34200
CAL YR 1977	-	-	+3230	-	-	+1400	-	-	+800	-	-	+81100
Jan. 31	2252.9	11920	+1670	2867.91	52900	+2500	3081.51	23100	+1000	1641.51	425700	+15500
Feb. 28	2227.2	8020	-3900	2860.75	48200	-4700	3076.36	20200	-2900	1622.62	364100	-61600
Mar. 31	2223.11	7460	-560	2870.49	54700	+6500	3077.86	21000	+800	1643.06	430500	+66400
Apr. 30	2237.2	9490	+2030	2879.06	60800	+6100	3081.48	23100	+2100	1650.44	457000	+26500
May 31	2249.1	11320	+1830	2882.83	63600	+2800	3085.28	25500	+2400	1667.20	524900	+67900
June 30	2242.8	10340	-980	2880.70	62000	-1600	3084.24	24800	-700	1670.10	537000	+12100
July 31	2244.4	10590	+250	2873.92	57100	-4900	3079.65	22000	-2800	1664.64	514400	-22600
Aug. 31	2220.4	7110	-3480	2868.78	53500	-3600	3082.34	23600	+1600	1664.30	513000	-1400
Sept. 30	2190.0	3630	-3480	2860.31	47900	-5600	3081.92	23400	-200	1647.54	446000	-67000
WTR YR 1978	-	-	-5030	-	-	-2700	-	-	+1400	-	-	-35100

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	1793.80	50100	-	1915.36	82900	-	1496.00	137200	-	1276.20	27000	-
Oct. 31	1788.62	44800	-5300	1913.60	78300	-4600	1495.20	135400	-1800	1255.83	17200	-9800
Nov. 30	1789.05	45200	+400	1916.84	86800	+8500	1487.23	119200	-16200	1275.20	26400	+9200
Dec. 31	1793.15	49400	+4200	1915.02	82000	-4800	1474.80	97400	-21800	1275.80	26700	+300
CAL YR 1977	-	-	+6700	-	-	+7400	-	-	+14300	-	-	-500
Jan. 31	1799.38	56200	+6800	1915.65	83700	+1700	1473.50	95300	-2100	1275.60	26600	-100
Feb. 28	1788.97	45200	-11000	1912.15	74700	-9000	1466.73	85000	-10300	1276.80	27300	+700
Mar. 31	1797.09	53600	+8400	1914.44	80500	+5800	1484.46	114200	+29200	1276.20	27000	-300
Apr. 30	1806.26	64400	+10800	1917.78	89300	+8800	1494.18	133200	+19000	1275.85	26800	-200
May 31	1807.13	65500	+1100	1921.11	98600	+9300	1505.10	158500	+25300	1277.30	27600	+800
June 30	1803.34	60800	-4700	1920.86	97800	-800	1506.73	162500	+4000	1278.52	28300	+700
July 31	1795.29	51700	-9100	1918.40	90900	-6900	1507.41	164300	+1800	1278.75	28400	+100
Aug. 31	1790.93	47100	-4600	1916.50	85900	-5000	1510.74	172800	+8500	1277.55	27700	-700
Sept. 30	1786.24	42600	-4500	1911.47	73100	-12800	1496.65	138600	-34200	1277.60	27800	+100
WTR YR 1978	-	-	-7500	-	-	-9800	-	-	+1400	-	-	+800

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 (mi^2)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (ft^3/s)
		Pamlico River basin					
02084148	Chicod Creek at Secondary Road 1565 near Grimesland, N. C.	Lat 35°31'57", long 77°11'13, Pitt County at bridge on Secondary Road 1565, 2.0 miles upstream from Cow Swamp, and 2.2 miles south of Grimesland.	a19	1976-78	11- 7-77	28.05	1,430
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	1976-78	4-26-78	23.57	1,400
		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	1971-78	1-26-78	9.45	3,000
		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 1972-78	11- 7-77	14.29	8,000

‡. Operated as a continuous record gaging station.
a. Approximately.

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 1978

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Roanoke River basin				
02068015 Dan River	Roanoke River	Lat 36°31'33", long 80°22'16", Stokes County, at bridge on Secondary Road 1432, 2.4 miles downstream from Little Dan River, and 2.8 miles east of Asbury.	a110	1970, 1973-74, 1976-77	6-29-78	105
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, 1975-77	7-26-78 9-12-78	519 288
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 Creek, and 1.8 miles southwest of Madison.	a600	1970, 1974, 1976-77	7-26-78	721
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, 1976-77	6-21-78 9-27-78	3.35 1.42
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, 1974-77	6-21-78 9-27-78	45.8 25.2
02075198 Dan River	Roanoke River	Lat 36°32'77", long 79°12'55", Caswell County, at Milton, 0.5 mile upstream from Country Line Creek.	2,322	1970, 1974, 1976-77	6-22-78	2,880
0207520780 Country Line Creek	Dan River	Lat 36°18'46", long 79°30'48", Caswell County, at bridge on Secondary Road 1146, and 1.2 miles south-southwest of Ashland.	a6.7	1974-77	6-22-78 9-28-78	3.38 1.64
0207527050 Country Line Creek	Dan River	Lat 36°32'16", long 79°12'04", Caswell County, at bridge on State Highway 57, 0.4 mile east-southeast of Milton, and 0.8 mile upstream from mouth.	a137	1974-77	6-22-78 9-28-78	44 10.9
0207718130 Hyco Creek	Hyco River	Lat 36°17'24", long 79°15'43", Caswell County, at Secondary Road 1767, 2.8 miles northeast of Baynes, and 3.2 miles upstream from confluence of Lynch Creek.	a5.1	1974-77	6-22-78 9-28-78	1.30 .34
02077227 South Hyco Creek	Sugar Tree Creek	Lat 35°16'00", long 79°08'50", Person County, at bridge on State Highway 49, 1.5 miles southwest of Gordonton, and 2.5 miles upstream from mouth.	a11	1968, 1976	7-18-78	5.44
02077348 Marlowe Creek	Dan River	Lat 36°29'05", long 78°58'47", Person County, at bridge on Secondary Road 1322, downstream from Fishing Branch, and 1.2 miles west of Woodsdale.	21	1970, 1974, 1976	7-18-78	17.8
02077368 Hyco River	Dan River	Lat 36°32'36", long 78°57'52", Person County, at bridge on Secondary Road 1326 at N.C.-Va. State line, 1.5 miles downstream from Storys Creek, and 4 miles north of Woodsdale.	a260	1970, 1974, 1976	7-18-78	189
0207901030 Grassy Creek	Roanoke River	Lat 36°25'35", long 78°46'10", Granville County, at bridge on Secondary Road 1325, 2.9 miles west-southwest of Oak Hill, and 3.7 miles upstream from Bearskin Creek.	a2.0	1974, 1976	7-19-78	.36
0207920940 Island Creek	Roanoke River	Lat 36°26'10", long 78°32'37", Granville County, at bridge on Secondary Road 1430, 0.3 mile downstream from Howlett Creek, and 1.7 miles southeast of Stovall.	a13	1974-76	7-19-78	2.07
02079259 Nutbush Creek	Roanoke River	Lat 36°20'26", long 78°25'12", Vance County, at bridge on Secondary Road 1310, 1.4 miles northwest of Henderson, and 4.4 miles upstream from Crooked Run Creek.	a2.0	1970, 1974-76	7-20-78	1.45

* Base flow.
† Operated as a continuous-record gaging station.
a Approximately.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1978

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Roanoke River basin--Continued				
02079264 Nutbush Creek	Roanoke River	Lat 36°22'10", long 78°24'31", Vance County, at bridge on Secondary Road 1317, 0.1 mile upstream from Buggs Island Reservoir, and 3 miles north of Henderson.	a3.9	1970, 1974, 1976	7-19-78	7.17
02081096 Cashie River	Roanoke River	Lat 36°08'43", long 77°09'54", Bertie County, at bridge on State Highway 11, 1.5 miles northeast of Lewiston, and 2.5 miles upstream from Wahtom Swamp.	a20	1961, 1974-76	6-16-78	0
		Pamlico River basin				
02081933 Tar River	Pamlico River	Lat 35°55'48", long 78°08'54", Nash County, at bridge on U.S. Highway 64, 0.5 mile downstream from Turkey Creek, and 2.3 miles southwest of Spring Hope.	a660	1969, 1974, 1976	6-16-78 7-24-78	211 232
02082812 Swift Creek	Pamlico River	Lat 35°58'04", long 77°35'13", Edgecombe County, at bridge on Secondary Road 1253, 1.5 miles upstream from mouth, and 1.5 miles miles south of Leggett.	a270	1954, 1958, 1969, 1974, 1976	6-16-78 7-24-78	108 172
02082824 Fishing Creek	Tar River	Lat 36°23'06", long 78°19'05", Vance County, at Secondary Road 1501, 1.1 miles south-southwest of Middleburg, and 5.7 miles upstream from mouth.	a3.3	1974-76	7-25-78	2.13
02083390 Fishing Creek	Tar River	Lat 35°58'25", long 77°32'29", Edgecombe County, at bridge on Secondary Road 1500, 2.5 miles southeast of Leggett, and 3.5 miles upstream from Deep Creek.	a760	1961-69, 1974	6-16-78 7-24-78	279 265
02084148 Chicod Creek	Tar River	Lat 35°31'57", long 77°11'13", Pitt County, at bridge on Secondary Road 1565, 2 miles upstream from Cow Swamp, and 2.2 miles south of Grimesland.	a19	1975-77	10- 4-77 11-21-77 12- 9-77 1-20-78 1-21-78 4-24-78 4-26-78 7-10-78	0 11.7 142 538 337 517 578 0
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	1975-77	10- 4-77 11-16-77 1-20-78 4-26-78 7-10-78	.16 14.4 630 1,350 0
		Neuse River basin				
02085034 Eno River	Neuse River	Lat 36°02'47", long 79°00'40", Orange County, at bridge on Secondary Road 1567, 0.5 mile downstream from Stony Creek, and 2 miles northeast of University.	a110	1973, 1976	7-26-78	486
02085039 Eno River	Neuse River	Lat 36°03'22", long 78°58'43", Durham County, at bridge on Secondary Road 1401, 1.2 miles downstream from Rhodes Creek, and 1.2 miles northwest of Huckleberry Spring.	a120	1973	7-24-78	17.7
02085079 Eno River	Neuse River	Lat 36°04'19", long 78°51'47", Durham County, at bridge on Secondary Road 1004, 1.3 miles upstream from Little River, and 1.5 miles northeast of Weaver.	a150	1954-55, 1958, 1968, 1972-74, 1976	7-24-78	18.0
02085302 South Flat River	Flat River	Lat 36°17'40", long 79°03'54", Person County, at bridge on Secondary Road 1112, 1.3 miles upstream from confluence of Bushy Fork Creek, and 1.8 miles northwest of Hurdle Mills.	6.2	1974-76	7-18-78	2.55
0208662450 Knap of Reeds Creek tributary	Knap of Reeds	Lat 36°07'13", long 78°47'27", Granville County, at Secondary Road 1118, 1 mile southwest of Butner, and 1.3 miles upstream from mouth.	a2	1972, 1974, 1976	7-20-78	3.85
02086849 Ellerbe Creek	Neuse River	Lat 36°03'33", long 78°49'58", Durham County, at bridge on Secondary Road 1636, 1.6 miles northwest of Gorman, and 3 miles upstream from mouth.	21.7	1972-73, 1976	7-24-78	8.91

a Approximately.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1978

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Neuse River basin--Continued				
02088030 Middle Creek	Swift Creek	Lat 35°30'27", long 78°24'07", Johnston County, at bridge on State Highway 210, 2.3 miles upstream from mouth, and 3 miles west of Smithfield.	a120	1949-55, 1958, 1974, 1976	6-14-78 7-28-78	86.3 61.5
0208807310 Black Creek	Neuse River	Lat 35°34'12", long 78°43'53", Wake County, at culvert on Secondary Road 2754, 1.7 miles south of Willow Springs, and 6.3 miles upstream from Little Black Creek.	a3.2	1973-74	6-12-78	3.32
02088119 Neuse River	Atlantic Ocean	Lat 35°22'34", long 78°11'52", Johnston County, at bridge on Secondary Road 1201, 0.1 mile downstream from Bawdy Creek, and 3 miles northeast of Cox Mill.	a1,660	1955, 1968, 1976	6-19-78 7-28-78	406 1,400
02088270 Mill Creek	Neuse River	Lat 35°20'31", long 78°12'51", Johnston County, at bridge on Secondary Road 1200, 0.1 mile upstream from Mill Branch, and 0.5 mile north of Cox Mill.	a170	1974, 1976	6-19-78 7-28-78	35.7 7.59
02088332 Neuse River	Atlantic Ocean	Lat 35°21'28", long 78°08'09", Wayne County, downstream from bridge on Secondary Road 1224, downstream from Thoroughfare Swamp, and 1.3 miles north of Stevens Mill.	a2,010		††5-10-63 ††6-11-63 ††7- 2-63 ††8- 8-63 ††8-12-63 ††8-19-63 ††9- 6-63 ††9-27-63 ††12- 4-63 6-26-78 7-27-78	752 670 365 479 307 237 1,420 196 2,440 583 1,060
0208858110 Little River	Neuse River	Lat 35°26'46", long 78°02'36", Wayne County, at bridge on State Highway 581, 3.8 miles north-northeast of Asylum, and 4.9 miles upstream from mouth.	a280	1974, 1976	6-19-78 7-27-78	64.1 208
0209055995 Lee Swamp tributary	Lee Swamp	Lat 35°33'37", long 78°01'20", Wilson County, at bridge on Secondary Road 1645, 0.7 mile upstream from mouth, and 0.9 mile from Lucama.	2.5	1972-74, 1976	5- 1-78 7-27-78	8.19 1.57
02090634 Contentnea Creek	Neuse River	Lat 35°35'10", long 77°48'40", Wilson County, at bridge on State Highway 58, 0.6 mile upstream from Toisnot Swamp, and 1.5 miles southeast of Stantonsburg.	a390	1969-70, 1972-74	7-31-78	204
02091241 Contentnea Creek	Neuse River	Lat 35°27'27", long 77°40'11", Greene County, at bridge on U.S. Highway 258, at Snow Hill, and 0.8 mile upstream from Panther Swamp Creek.	694	1969-70, 1973-74	5- 9-78 7-26-78	2,570 643
02091814 Neuse River	Atlantic Ocean	Lat 35°18'40", long 77°18'20", Craven County, at bridge on Secondary Road 1470, 1.5 miles upstream from Core Creek, and 2 miles east of Fort Barnwell.	a3,900	1970, 1972-73, 1976	7-31-78	3,400
0209184590 Swift Creek	Neuse River	Lat 35°32'16", long 77°25'07", Pitt County, at bridge on Secondary Road 1126, 0.3 mile downstream from Gum Swamp, and 1.1 miles northwest of Winterville.	a7.6	1974, 1976	7-31-78	.01
		New River basin				
02093000 New River	Atlantic Ocean	Lat 34°50'56", long 77°31'11", Onslow County, at bridge on Secondary Road 1314, 0.7 mile downstream from Jenkins Swamp, and 2 miles southwest of Gum Branch.	74.5	†1949-73	3- 3-78	231
		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 1973-77	9-12-78	1.66

† Operated as a continuous-record gaging station.
†† Not previously published.
a Approximately.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1978

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Cape Fear River basin--Continued				
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, 1976-77	6-21-78	23.2
02095554 Buffalo Creek	Reedy Fork	Lat 36°08'34", long 79°38'54", Guilford County, at bridge on Secondary Road 2795, 1.2 miles upstream from Blackwood Creek, and 2.6 miles north of McLeansville.	91.6	1969-71, 1973, 1976-77	6-21-78 9-12-78	51.0 57.0
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, 1976-77	6-22-78	399
02097189 Robeson Creek	Haw River	Lat 35°42'10", long 79°05'41", Chatham County, at bridge on Secondary Road 1939, 0.5 mile upstream from mouth, and 4.5 miles southwest of Seaforth.	a27	1954, 1966, 1970-71, 1973-74, 1976	7-25-78	1.28
02097203 New Hope Creek	New Hope River	Lat 35°59'31", long 79°02'45", Orange County, at bridge on Secondary Road 1730, 0.5 mile downstream from Old Field Creek, and 1.5 miles east of Blackwood.	a22	1962, 1966, 1968, 1971, 1973, 1976	7-26-78	1.68
02097299 Third Fork Creek	New Hope River	Lat 35°54'38", long 78°57'39", Durham County, at bridge on State Highway 751, 0.9 mile upstream from mouth, and 1.6 miles north of Bland.	16.5	1970-71, 1974, 1976	7-24-78	3.53
02097374 Bolin Creek	Little Creek	Lat 35°55'29", long 79°01'34", Orange County, at bridge on U.S. Highway 15, 0.5 mile upstream from Booker Creek, and 1.7 miles northeast of Chapel Hill.	11.6	1973, 1974-76	7-26-78	2.66
02097440 Northeast Creek	New Hope River	Lat 35°51'19", long 78°56'26", Chatham County, at bridge on Secondary Road 1731, 0.5 mile downstream from Kit Long Branch, and 0.8 mile south of O'Kellys Church.	35.0	1963-67, 1970, 1976	7-26-78	12.1
0209746350 Morgan Creek	New Hope River	Lat 35°57'44", long 79°08'06", Orange County, at culvert on Secondary Road 1112, and 1.7 miles east-southeast of Dobson.	a2.2	1974-76	7-26-78	.51
02097521 Morgan Creek	New Hope River	Lat 35°51'48", long 79°00'35", Chatham County, at bridge on Secondary Road 1726, 2 miles upstream from Cub Creek, and 4 miles north of Farrington.	45.6	1970, 1973, 1976	7-26-78	11.9
02098156 New Hope River	Haw River	Lat 35°41'40", long 79°02'31", Chatham County, at bridge on Secondary Road 1700, 0.2 mile downstream from Beaver Creek, and 6 miles northwest of New Hill.	340	1974-76	7-25-78	26.3
02099484 Richland Creek	Deep River	Lat 35°56'26", long 79°54'08", Guilford County, at bridge on Secondary Road 1147, 0.2 mile upstream from mouth, and 4 miles southwest of Groomtown.	16.3	1971, 1973-76	9-28-78	18.3
02101686 North Prong Rocky River	Rocky River	Lat 35°51'51", long 79°32'34", Randolph County, at bridge on State Highway 49, 1.5 miles northeast of Liberty, and 6.3 miles upstream from mouth.	a2.6	1974, 1976-77	6-23-78	7.57
02102550 Upper Little River	Cape Fear River	Lat 35°24'08", long 79°07'47", Lee County, upstream from confluence of Gastors Creek, 1 mile downstream from Secondary Road 1146, and 3.8 miles northeast of Lemon Springs.	a19	1974, 1976	6-23-78	32.6
02103000 Little River	Cape Fear River	Lat 35°11'38", long 78°59'14", Cumberland County, at bridge on State Highway 87, at Manchester, and 0.3 mile upstream from Tank Creek.	348	†1939-50	6-23-78	293

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a Approximately.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1978

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Cape Fear River basin--Continued				
02104279 Rockfish Creek	Cape Fear River	Lat 34°58'10", long 79°06'40", Hoke County, at bridge on Secondary Road 1432, 0.2 mile downstream from Puppy Creek, and 1.2 miles northeast of Arabia.	a150	1973, 1974	6-23-78	318
02106621 Black River	South River	Lat 35°29'26", long 78°42'37", Harnett County, at bridge on Secondary Road 1544, 1.5 miles northwest of Barclaysville, and 15 miles upstream from Popes Pond.	a4.3	1973-74, 1976	6-22-78	.74
02106648 Black River	South River	Lat 35°20'52", long 78°37'28", Harnett County, at bridge on Secondary Road 1722, and 3 miles north-northwest of Dunn.	a38	1977	11-30-77	44.0
02106681 Black River	South River	Lat 35°17'03", long 78°38'21", Harnett County, at bridge on Secondary Road 1780, 1.5 miles downstream from Popes Pond, and 2.2 miles southwest of Dunn.	a49	1973, 1977	11-30-77	84.4
02107586 Northeast Cape Fear River	Cape Fear River	Lat 35°11'35", long 78°01'05", Wayne County, at bridge on Secondary Road 1937, 1.5 miles downstream from Barlow Branch, and 3 miles east of Mount Olive.	a10	1973, 1975-76	5- 5-78	25.8
02107672 Northeast Cape Fear River	Cape Fear River	Lat 35°03'10", long 77°50'17", Duplin County, at bridge on State Highway 11, 0.2 mile upstream from Burn Coal Branch, and 0.8 mile southwest of Kornegay.	a120	1956, 1974, 1976	5- 5-78	289
02108534 Rockfish Creek	Northeast Cape Fear River	Lat 34°43'03", long 77°58'48", Duplin County, at bridge on U.S. Highway 117, 1 mile downstream from Sawyer Creek, and 1.5 miles south of Wallace.	a150	1976	5- 5-78	374
		Pee Dee River basin				
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	1974-77	7-12-78	327
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 of Kernersville, and 2.8 miles upstream from mouth.	a.72	1970-71, 1974-76	5- 3-78	.36
02115954 Muddy Creek	Yadkin River	Lat 35°56'24", long 80°21'29", Davidson County, at bridge on Secondary Road 1485, 1.2 miles upstream from mouth, and 3 miles west of Arcadia.	a260	1968, 1973, 1975-76	8- 1-78 8- 4-78 8-10-78 8-17-78 9- 7-78	285 631 654 213 223
02117022 Dutchmans Creek	Yadkin River	Lat 35°50'18", long 80°28'41", Davie County, at bridge on State Highway 801, 1.2 miles upstream from mouth, and 2.8 miles southwest of Fork.	a130	1970-77	8- 1-78 8- 17-78 9- 7-78	44.2 42.6 49.5
02117055 South Yadkin River	Yadkin River	Lat 36°00'06", long 81°06'38", Alexander County, at bridge on Secondary Road 1403, 0.5 mile northwest of Vashti, and 2.4 miles upstream from confluence of Vashti Creek.	a11	1974-76	6-15-78	9.50
02119000 South Yadkin River	Yadkin River	Lat 35°48'18", long 80°33'30", Davie County, at Coolemee, upstream from State Highway 801, 2.5 miles upstream from Third Creek, and 7.2 miles upstream from mouth.	569	†1928-65, 1970-77	8-10-78 8-17-78	849 566
02120640 Third Creek	South Yadkin River	Lat 35°47'26", long 80°34'17", Rowan County, at bridge on State Highway 801, 1 mile south of Coolemee, and 3 miles upstream from mouth.	a180	1952-53, 1963-69	8- 1-78 8- 7-78 8-11-78 8-17-78 9- 8-78	277 393 178 112 123
02120801 North Second Creek	South Yadkin River	Lat 35°45'43", long 80°30'39", Rowan County, at bridge on State Highway 601, 1.5 miles upstream from mouth, and 2.8 miles north of Franklin.	a140	1948, 1963	8- 1-78 8- 7-78 8-11-78 8-17-78 9- 8-78	77.1 224 58.4 44.7 51.0

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a Approximately.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1978

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Pee Dee River basin--Continued				
02120971 Grants Creek	Yadkin River	Lat 35°42'25", long 80°26'10", Rowan County at bridge on Secondary Road 1915, 1.5 miles upstream from mouth, and 1.5 miles north of Spencer.	a67	1948, 1963, 1970-73	8- 7-78 8-11-78 8-17-78 9- 8-78	214 33.2 22.2 28.8
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, 1975-77	5- 3-78 8-10-78 8-18-78	29 30.6 12.3
02121376 Crane Creek	Yadkin River	Lat 35°40'27", long 80°23'58", Rowan County, at bridge on Secondary Road 1915, 0.9 mile upstream from Town Creek, and 2.4 miles southeast of Spencer.	26.0		8- 1-78 8- 7-78 8-11-78 8-18-78 9- 8-78	3.03 6.23 4.21 2.52 3.87
02121397 Town Creek	Crane Creek	Lat 35°41'10", long 80°24'18", Rowan County, at culvert on Interstate Highway 85, 1.2 miles upstream from Crane Creek, and 2 miles east of Spencer.	17.8	1958, 1970-74	8- 1-78 8- 7-78 8-11-78 9- 8-78	6.03 11.9 7.72 8.86
02121410 Second Creek	Yadkin River	Lat 35°33'52", long 80°21'56", Rowan County, at bridge on Secondary Road 2370, 0.7 mile upstream from Sand Branch, and 2 miles southwest of Liberty.	30.3	1954-59	8- 1-78 8-18-78 9- 8-78	0 7.02 7.97
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 outflow, and 1.9 miles northeast of Mathis.	a1.4	1970-72, 1974-77	5- 3-78	.57
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	1976-77	5- 3-78 6-23-78	19.4 13.8
02121500 Abbotts Creek	Yadkin River	Lat 35°48'23", long 80°14'05", Davidson County, above bridge on Secondary Road 1243, 1.5 miles southeast of Lexington, and 4.9 miles downstream from Rich Fork.	174		5- 3-78	113
02121958 Flat Swamp Creek	High Rock Lake	Lat 35°41'12", long 80°09'06", Davidson County, at bridge on State Highway 47, 1.5 miles upstream from Dry Branch, and 3.4 miles southeast of Silver Hill.	15.4	1954, 1961	8- 1-78 8-10-78 8-18-78 9- 7-78	9.11 .60 .04 .68
02122000 Fourmile Branch	High Rock Lake	Lat 35°40'51", long 80°10'29", Davidson County, at bridge on Secondary Road 2310, 1.4 miles upstream from mouth, and 5 miles east of Southmont.	14.3	†1940-42, 1955-57, 1961, 1963	8- 1-78 8- 4-78 8-18-78 9- 7-78	3.82 .21 .07 .08
02122371 Panther Creek	Yadkin River	Lat 35°35'09", long 80°17'22", Rowan County, at bridge on Secondary Road 2141, 1.1 miles upstream from mouth, and 2.6 miles northeast of Liberty.	a6.0		8- 1-78 8-18-78 9- 8-78	5.84 0 0
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	1961-62, 1974-77	6-23-78	5.09
02123881 Rocky River	Pee Dee River	Lat 35°28'28", long 80°46'47", Mecklenburg County, at bridge on Secondary Road 1608, 1.3 miles upstream from West Branch, and 4.5 miles southeast of Davidson.	13.4	1970-77	5- 2-78	14.5
02124160 Mallard Creek	Rocky River	Lat 35°20'01", long 80°40'06", Cabarrus County, at bridge on Secondary Road 1300, 0.2 mile upstream from mouth, and 1.3 miles northwest of Harrisburg.	41.2	1955-65, 1971, 1973, 1975-77	6-13-78 6-13-78	17.1 16.9
02124374 Irish Buffalo Creek	Rocky River	Lat 35°20'50", long 80°32'52", Cabarrus County, at bridge on Secondary Road 1132, 1 mile south of Faggarts Crossroads, and 1 mile upstream from mouth.	44.7	1974-77	5- 2-78	33.4

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a Approximately.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1978

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Pee Dee River basin--Continued				
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, 1973-77	5- 2-78	278
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	1974-77	5- 2-78	2.00
02127560 Little River	Pee Dee River	Lat 35°37'22", long 79°51'18", Randolph County, at bridge on Secondary Road 1142, 1.8 miles southwest of Ulah, and 1.9 miles upstream from confluence of Big Branch.	a5.3	1974-76	6-23-78	1.84
02134297 Big Marsh Swamp	Big Swamp	Lat 34°46'55", long 78°55'22", Robeson County, at bridge on Secondary Road 1924, 2.8 miles upstream from mouth, and 5.5 miles southeast of Oakland.	a58	1973-75	5- 8-78	297
02134338 Little Marsh Swamp	Gallberry Swamp	Lat 34°51'48", long 78°58'33", Robeson County, at bridge on U.S. Highway 301, 3.2 miles southeast of Parkton, and 7.5 miles upstream from mouth.	a36	1959-60, 1962, 1974-75	5- 8-78	252
02134495 Bryant Swamp	Big Swamp	Lat 34°32'20", long 78°49'22", Bladen County, at bridge on Secondary Road 1178, 0.4 mile upstream from Reedy Branch, and 2.3 miles southeast of Butters.	19.0	1966-67, 1973, 1975	5- 1-78	18.6
02134582 Old Field Swamp	Hog Swamp	Lat 34°29'40", long 79°06'10", Robeson County, at bridge on State Highway 130, and 0.5 mile east of Fairmont.	a17	1973	5- 1-78	24.3
		Santee River basin				
02136500 Catawba River	Santee River	Lat 35°37'14", long 82°10'43", McDowell County, at bridge on Secondary Road 1103, 0.5 mile upstream from Mill Creek, and 0.5 mile south of Old Fort.	12.8	1907, 1949-54, 1956, 1963-64, 1970-75	6- 2-78	*18.4
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	1970-77	4-14-78 6-18-78	9.17 *8.95
02140304 Wilson Creek	Johns River	Lat 37°05'49", long 81°48'28", Avery County, at bridge on U.S. Highway 221, 0.8 mile upstream from Linn Cove Branch, and 2.7 miles northwest of Gragg.	.74	1964, 1969-70	6- 1-78	*.767
02140991 Johns River	Catawba River	Lat 35°50'01", long 81°42'43", Burke County, at bridge on Secondary Road 1438, 0.2 mile downstream from Sims Branch, and 0.8 mile northeast of Arneys Store.	202	1974-77	6-15-78	22.4
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, 1975-77	6-15-78	92.8
02142660 McDowell Creek	Catawba River	Lat 35°23'22", long 80°55'16", Mecklenburg County, at bridge on Beatty Ford Road, 2.1 miles downstream from Torrence Creek, and 11.2 miles north of Charlotte.	26.3	1955-70, 1972-77	6-12-78 6-12-78 9-20-78	14.3 15.1 *4.43
02142916 Long Creek	Catawba River	Lat 35°17'53", 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, 1975-77	6-12-78 7-12-78	13.7 13.8
02143027 Henry Fork	South Fork Catawba River	Lat 35°39'27", long 81°18'33", Catawba County, at bridge on Secondary Road 1143, 1.7 miles upstream from mouth, and 2.5 miles northwest of Startown.	106	1970-71, 1973-74	6-16-78 9-19-78	116 75.2

* Base flow.
a Approximately.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1978

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Santee River basin--Continued				
02143260 Clark Creek	South Fork Catawba River	Lat 35°28'30", long 81°16'00", Lincoln County, at bridge on Secondary Road 1008, at Lincolnton, and 0.2 mile upstream from mouth.	a92	1947, 1949-57, 1962-64, 1970-72, 1975	6-16-78	72.8
02146291 Sugar Creek	Catawba River	Lat 35°12'48", long 80°52'36", Mecklenburg County, at bridge on Remount Road, at Charlotte.	a12	1970-73, 1976-77	6-13-78 6-13-78	14.5 14.2
02146398 Sugar Creek	Catawba River	Lat 35°04'30", long 80°54'20", Mecklenburg County, at railroad bridge on N.C.-S.C. State line, 1 mile upstream from Little Sugar Creek, and 1 mile southwest of Pineville.	a69	1964-77	6-14-78	42.4
02146421 Little Sugar Creek	Sugar Creek	Lat 35°10'21", long 80°50'49", Mecklenburg County, at bridge on Secondary Road 3814, at Charlotte, and 1.3 miles upstream from Briar Creek.	a16	1969-75	6-13-78 6-13-78 9-20-78	6.23 5.98 *3.76
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	1969-77	6-14-78 9-20-78	38.9 *34.9
02146556 McAlpine Creek	Sugar Creek	Lat 35°09'46", long 80°43'57", Mecklenburg County, at bridge on Secondary Road 3156, 0.2 miles upstream from Campbell Creek, and 5 miles west of Mint Hill.	8.66	1969-77	6-14-78	1.80
02146760 McAlpine Creek	Sugar Creek	Lat 35°03'43", long 80°52'39", Mecklenburg County, at bridge on U.S. Highway 521, 1 mile downstream from McMullen Creek, and 2 miles south of Pineville.	92.9	1949-57, 1962-67, 1969-77	6-14-78	42.0
02151742 Sandy Run Creek	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, and 1.8 miles northwest of Boiling Springs.	a52	1970-73, 1977	3- 1-78	64.6

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1978, 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.	34.6	1925, 1955-56, 1960, 1962, 1974-77	6- 1-78	*67.5
03162852 Little River	New River	Lat 36°27'35", long 81°10'04", Alleghany County, at bridge on Secondary Road 1140, 0.6 mile downstream from confluence of Cheek Branch, and 1 mile southwest of Whitehead.	4.8	1974-75	6-21-78	10.9
03162951 Little River	New River	Lat 36°32'33", long 81°01'15", Alleghany County, at bridge on State Highway 18, 1 mile downstream from Brush Creek, and 0.5 mile west of Blevins Crossroads.	a110	1974-75	6-21-78	186
		Tennessee River basin				
03440276 King Creek	French Broad River	Lat 35°14'04", long 82°43'13", Transylvania County, at bridge on Secondary Road 1546, 0.6 mile upstream from mouth, and 0.8 mile east of Brevard.	4.17	1968-69, 1971-75	3- 6-78	15.7
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, 1976-77	5-30-78	594
0344600989 Mills River	French Broad River	Lat 35°23'29", long 82°34'06", Henderson County, at bridge on State Highway 191 and 280, 2.4 miles upstream from mouth, and 0.2 mile north of Mills River.	70.5	1974-77	6- 1-78 7-28-78	134 81.3

* Base flow.
a Approximately.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1978

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Tennessee River basin--Continued				
0344745449 Pinner Creek tributary	Pinner Creek	Lat 35°26'58", long 83°30'00", Buncombe County, 250 ft upstream from mouth, and 0.6 mile southeast of Oak Park.	a0.4	1974-77	3-22-78 6- 2-78	0.95 .38
0344745950 Pinner Creek	Cane Creek	Lat 35°26'22", long 82°29'31", Henderson County, 0.2 mile upstream from mouth, and 1 mile northeast of Fletcher.	a20	1974-77	3-22-78 6- 2-78	2.15 1.60
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	1968-77	3-22-78 6- 2-78 7-28-78	41.3 20.7 7.79
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	1969-77	4-11-78	317
03457138 Pigeon River	French Broad River	Lat 35°32'55", long 82°56'21", Haywood County, at bridge on road connecting Secondary Roads 1513 and 1519, and 0.5 mile upstream from Richlands Creek, 2 miles northeast of Junaluska Dam, and at mile 55.5.	167	1969-77	4-11-78	323
03458421 Richland Creek	Pigeon River	Lat 35°32'51", long 82°56'44", Haywood County, at bridge on Secondary Road 1519, 0.2 mile upstream from mouth, and 2.2 miles northwest of Clyde.	68.4	1969-73, 1975-76	4-11-78	7.51
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 northwest of Clyde.	238	1968-77	4-11-78 7-18-78	315 189
03458620 Crabtree Creek	Pigeon River	Lat 35°36'00", long 82°56'55", Haywood County, 0.2 mile upstream from mouth, and 0.6 mile west of Crabtree.	25.8	1944, 1953-54, 1962-66, 1968-69, 1976	4-11-78	21.0
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	1969-77	4-11-78 7-18-78	371 238
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, 1973-77	6- 5-78	127
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, 1976-77	1-24-78 3- 9-78 5- 1-78 5-31-78	161 171 178 *159
03463021 North Toe River	Nolichucky River	Lat 35°55'46", long 82°06'57", Mitchell County, at bridge on Secondary Road 1162, at Penland, 0.4 mile downstream from Bear Creek, and at mile 27.6.	145	1969-70, 1972-75	1-24-78 3- 9-78 5- 1-78 5-31-78	275 411 472 *265
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	1968-77	6- 2-78	718
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, 1975-77	5-31-78	*88.5
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, 1974-77	6- 2-78	*225
03464500 Nolichucky River	French Broad River	Lat 36°04'29", long 82°20'41", Mitchell County, at Poplar, and 0.7 mile upstream from Hollow Poplar Creek.	608	†1922-45, 1962-63, 1968-72, 1974-77	7-28-78	398
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, 1974-77	6- 1-78	*15.0

* Base flow.
† Operated as a continuous-record gaging station.
a Approximately.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1978

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Tennessee River basin--Continued				
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, 1977	6- 6-78	*109
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 Iotla Creek.	323	†1929-45, 1972-77	6- 6-78	*523
03503561 Nantahala River	Little Tennessee River	Lat 35°05'39, long 83°33'38", Macon County, at Rainbow Springs, and 0.3 mile upstream from Black Creek.	24.2	1953, 1974-77	4-24-78 6- 7-78	*71.7 *61.7
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, 1973-77	6- 6-78	*42.1
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	1974-77	6- 7-78	157
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, 1976-77	4-20-78 6- 6-78 8- 3-78	44.1 *24.6 9.17

* Base flow.
† Operated as a continuous-record station.
a Approximately.

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

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 1977 TO SEPTEMBER 1978

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	ACIDITY (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
CHOWAN RIVER BASIN												
02053021 - JACKS SWAMP NR PLEASANT HILL N C (LAT 36 30 55 LONG 077 32 35)												
DEC , 1977												
08...	0900	35	5.0	.0	--	11.7	--	--	--	--	--	--
02053249 - DEEP CREEK AT N C 45 NR COFIELD N C (LAT 36 22 25 LONG 076 56 00)												
MAR , 1978												
23...	1245	48	6.7	12.0	--	10.4	--	--	--	--	--	--
ROANOKE RIVER BASIN												
02070806 - HUFFINES MILL CR NR BETHANY N C (LAT 36 20 00 LONG 079 51 26)												
DEC , 1977												
07...	1245	43	6.6	3.5	--	11.9	--	--	--	--	--	--
02077629 - MAYO CREEK TRIB NEAR ALLENSVILLE N C (LAT 36 23 55 LONG 078 54 05)												
DEC , 1977												
07...	1445	56	6.0	5.5	34	10.8	13	1	--	--	3.2	1.2
02081026 - INDIAN CREEK TRIB AT SR1123 NEAR CAHABA N C (LAT 36 01 02 LONG 077 10 38)												
MAR , 1978												
23...	1405	45	5.0	14.5	300	3.0	14	9	--	--	3.0	1.5
APR												
26...	1345	37	4.9	13.0	130	--	10	8	--	--	2.3	1.1
02081031 - CONIOTT CREEK AT SR 1108 NR CAHABA N C (LAT 36 00 41 LONG 077 08 05)												
OCT , 1977												
14...	1245	45	4.3	12.5	75	--	11	11	.0	.0	3.0	.9
DEC												
05...	1045	40	6.2	10.0	200	2.4	13	5	--	--	3.2	1.1
02081082 - HARDISON CREEK NR ROBERSON STORE N C (LAT 35 43 20 LONG 076 57 30)												
DEC , 1977												
08...	1100	57	5.4	5.0	--	10.2	--	--	--	--	--	--
APR , 1978												
26...	1230	51	4.2	15.0	--	--	--	--	--	--	--	--
PAMLICO RIVER BASIN												
02082625 - WALNUT CREEK AT SR1225 AT KINGSBORO N C (LAT 35 55 35 LONG 077 40 34)												
MAR , 1978												
23...	1600	30	4.5	15.0	80	7.1	4	2	.0	.0	1.1	.4
APR												
26...	1030	30	4.5	13.0	0	--	5	5	.0	.0	1.3	.5
26...	1520	29	--	--	--	--	--	--	--	--	--	--
NEUSE RIVER BASIN												
02087173 - HORSE CREEK TRIB AT SR 1140 NR POCOMOKE N C (LAT 36 02 33 LONG 078 31 03)												
DEC , 1977												
08...	1330	51	6.9	4.5	--	13.1	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
CHOWAN RIVER BASIN--Continued												
02053021 - JACKS SWAMP NR PLEASANT HILL N C (LAT 36 30 55 LONG 077 32 35)												
DEC , 1977												
08...	--	--	--	--	--	--	--	--	--	--	--	--
02053249 - DEEP CREEK AT N C 45 NR COFIELD N C (LAT 36 22 25 LONG 076 56 00)												
MAR , 1978												
23...	--	--	--	--	--	--	--	--	--	--	--	--
ROANOKE RIVER BASIN--Continued												
02070806 - HUFFINES MILL CR NR BETHANY N C (LAT 36 20 00 LONG 079 51 26)												
DEC , 1977												
07...	--	--	--	--	--	--	--	--	--	--	--	--
02077629 - MAYO CREEK TRIB NEAR ALLENSVILLE N C (LAT 36 23 55 LONG 078 54 05)												
DEC , 1977												
07...	5.4	44	.7	1.6	14	0	11	22	6.3	5.0	.1	20
02081026 - INDIAN CREEK TRIB AT SR1123 NEAR CAHABA N C (LAT 36 01 02 LONG 077 10 38)												
MAR , 1978												
23...	3.0	30	.4	1.4	6	0	5	96	7.9	5.0	.0	7.6
APR												
26...	2.4	30	.3	1.4	3	0	2	60	8.6	5.2	.0	6.7
02081031 - CONIOTT CREEK AT SR 1108 NR CAHABA N C (LAT 36 00 41 LONG 077 08 05)												
OCT , 1977												
14...	2.7	30	.4	2.0	0	0	0	.0	10	3.6	.0	5.3
DEC												
05...	2.6	28	.3	1.5	9	0	7	9.1	6.2	6.0	.0	13
02081082 - HARDISON CREEK NR ROBERSON STORE N C (LAT 35 43 20 LONG 076 57 30)												
DEC , 1977												
08...	--	--	--	--	--	--	--	--	--	--	--	--
APR , 1978												
26...	--	--	--	--	--	--	--	--	--	--	--	--
PAMLICO RIVER BASIN--Continued												
02082625 - WALNUT CREEK AT SR1225 AT KINGSBORO N C (LAT 35 55 35 LONG 077 40 34)												
MAR , 1978												
23...	2.8	53	.6	.8	3	0	2	152	6.3	3.6	.0	7.5
APR												
26...	1.8	37	.3	1.1	0	0	0	.0	7.0	1.9	.0	3.5
26...	--	--	--	--	--	--	--	--	--	--	--	--
NEUSE RIVER BASIN--Continued												
02087173 - HORSE CREEK TRIB AT SR 1140 NR POCOMOKE N C (LAT 36 02 33 LONG 078 31 03)												
DEC , 1977												
08...	--	--	--	--	--	--	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)
CHOWAN RIVER BASIN--Continued												
02053021 - JACKS SWAMP NR PLEASANT HILL N C (LAT 36 30 55 LONG 077 32 35)												
DEC , 1977												
08...	--	--	--	.02	.00	.02	.01	.00	.01	.01	.34	.30
02053249 - DEEP CREEK AT N C 45 NR COFIELD N C (LAT 36 22 25 LONG 076 56 00)												
MAR , 1978												
23...	--	--	--	.47	.00	.47	.45	.00	.00	.00	.38	.48
ROANOKE RIVER BASIN--Continued												
02070806 - HUFFINES MILL CR NR BETHANY N C (LAT 36 20 00 LONG 079 51 26)												
DEC , 1977												
07...	--	--	--	.37	.00	.37	.37	.01	.01	.01	.11	.19
02077629 - MAYO CREEK TRIB NEAR ALLENSVILLE N C (LAT 36 23 55 LONG 078 54 05)												
DEC , 1977												
07...	60	50	.08	.45	.01	.46	.49	.00	.00	.00	.30	.20
02081026 - INDIAN CREEK TRIB AT SR1123 NEAR CAHABA N C (LAT 36 01 02 LONG 077 10 38)												
MAR , 1978												
23...	82	33	.11	.00	.01	.00	.00	.05	.01	.01	1.1	1.1
APR												
26...	57	30	.08	.00	.01	.01	.00	.04	.01	.01	.85	.83
02081031 - CONIOTT CREEK AT SR 1108 NR CAHABA N C (LAT 36 00 41 LONG 077 08 05)												
OCT , 1977												
14...	39	28	.05	.09	.01	.10	.09	.03	.00	.00	.69	.35
DEC												
05...	98	39	.13	.00	.00	.00	.00	.01	.04	.05	1.2	.40
02081082 - HARDISON CREEK NR ROBERSON STORE N C (LAT 35 43 20 LONG 076 57 30)												
DEC , 1977												
08...	--	--	--	.09	.00	.09	.09	.00	.00	.00	.43	.41
APR , 1978												
26...	--	--	--	--	--	--	--	--	--	--	--	--
PAMLICO RIVER BASIN--Continued												
02082625 - WALNUT CREEK AT SR1225 AT KINGSBORO N C (LAT 35 55 35 LONG 077 40 34)												
MAR , 1978												
23...	36	24	.05	.00	.00	.00	.01	.00	.00	.00	.40	.40
APR												
26...	50	17	.07	.00	.01	.00	.01	.01	.00	.00	.66	.42
26...	--	--	--	--	--	--	--	--	--	--	--	--
NEUSE RIVER BASIN--Continued												
02087173 - HORSE CREEK TRIB AT SR 1140 NR POCOMOKE N C (LAT 34 02 33 LONG 078 31 03)												
DEC , 1977												
08...	--	--	--	.05	.00	.05	.05	.01	.00	.00	.15	.06

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	ARSENIC TOTAL (UG/L AS AS)
CHOWAN RIVER BASIN--Continued												
02053021 - JACKS SWAMP NR PLEASANT HILL N C (LAT 36 30 55 LONG 077 32 35)												
DEC , 1977												
08...	.34	.03	.31	.36	1.6	.05	--	.01	.04	.00	.00	0
02053249 - DEEP CREEK AT N C 45 NR COFIELD N C (LAT 36 22 25 LONG 076 56 00)												
MAR , 1978												
23...	.38	.00	.48	.85	3.8	.02	.06	.05	.00	.02	.06	--
ROANOKE RIVER BASIN--Continued												
02070806 - HUFFINES MILL CR NR BETHANY N C (LAT 36 20 00 LONG 079 51 26)												
DEC , 1977												
07...	.12	.00	.20	.49	2.2	--	--	--	--	--	--	--
02077629 - MAYO CREEK TRIB NEAR ALLENSVILLE N C (LAT 36 23 55 LONG 078 54 05)												
DEC , 1977												
07...	.30	.10	.20	.76	3.4	.02	--	.01	.01	.00	.00	0
02081026 - INDIAN CREEK TRIB AT SR1123 NEAR CAHABA N C (LAT 36 01 02 LONG 077 10 38)												
MAR , 1978												
23...	1.1	.00	1.1	1.1	4.9	.10	.31	.08	.04	.02	.06	1
APR												
26...	.89	.05	.84	.90	4.0	--	--	--	.03	.01	.03	1
02081031 - CONIOTT CREEK AT SR 1108 NR CAHABA N C (LAT 36 00 41 LONG 077 08 05)												
OCT , 1977												
14...	.72	.37	.35	.82	3.6	.09	--	.04	.05	.01	.03	0
DEC												
05...	1.2	.76	.44	1.2	5.3	.05	--	.04	.02	.01	.03	1
02081082 - HARDISON CREEK NR ROBERSON STORE N C (LAT 35 43 20 LONG 076 57 30)												
DEC , 1977												
08...	.43	.02	.41	.52	2.3	.01	--	.00	.00	.00	.00	0
APR , 1978												
26...	--	--	--	--	--	--	--	--	--	--	--	--
PAMLICO RIVER BASIN--Continued												
02082625 - WALNUT CREEK AT SR1225 AT KINGSBORO N C (LAT 35 55 35 LONG 077 40 34)												
MAR , 1978												
23...	.40	.00	.40	.40	1.8	.01	.03	.01	.00	.00	.00	0
APR												
26...	.67	.25	.42	.67	3.0	.04	.12	.01	.01	.00	.00	1
26...	--	--	--	--	--	--	--	--	--	--	--	--
NEUSE RIVER BASIN--Continued												
02087173 - HORSE CREEK TRIB AT SR 1140 NR POCOMOKE N C (LAT 36 02 33 LONG 078 31 03)												
DEC , 1977												
08...	.16	.10	.06	.21	.93	.01	--	.07	.01	.02	.06	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)
CHOWAN RIVER BASIN--Continued									
02053021 - JACKS SWAMP NR PLEASANT HILL N C (LAT 36 30 55 LONG 077 32 35)									
DEC , 1977									
08...	<10	<10	0	4	3	1	1200	690	10
02053249 - DEEP CREEK AT N C 45 NR COFIELD N C (LAT 36 22 25 LONG 076 56 00)									
MAR , 1978									
23...	--	--	--	--	--	--	--	--	--
ROANOKE RIVER BASIN--Continued									
02070806 - HUFFINES MILL CR NR BETHANY N C (LAT 36 20 00 LONG 079 51 26)									
DEC , 1977									
07...	--	--	--	--	--	--	--	--	--
02077629 - MAYO CREEK TRIB NEAR ALLENSVILLE N C (LAT 36 23 55 LONG 078 54 05)									
DEC , 1977									
07...	<20	<20	0	3	3	0	600	150	2
02081026 - INDIAN CREEK TRIB AT SR1123 NEAR CAHABA N C (LAT 36 01 02 LONG 077 10 38)									
MAR , 1978									
23...	<10	<9	1	4	0	7	1700	910	14
APR									
26...	<10	<8	2	4	0	5	2000	950	0
02081031 - CONIOTT CREEK AT SR 1108 NR CAHABA N C (LAT 36 00 41 LONG 077 08 05)									
OCT , 1977									
14...	10	10	0	6	3	3	1100	130	--
DEC									
05...	<10	<10	0	2	2	0	1400	1100	0
02081082 - HARDISON CREEK NR ROBERSON STORE N C (LAT 35 43 20 LONG 076 57 30)									
DEC , 1977									
08...	<10	<9	1	3	2	1	430	390	10
APR , 1978									
26...	--	--	--	--	--	--	--	--	--
PAMLICO RIVER BASIN--Continued									
02082625 - WALNUT CREEK AT SR1225 AT KINGSBORO N C (LAT 35 55 35 LONG 077 40 34)									
MAR , 1978									
23...	<10	<10	0	2	1	1	200	170	6
APR									
26...	<10	<9	1	3	0	4	370	320	6
26...	--	--	--	--	--	--	--	--	--
NEUSE RIVER BASIN--Continued									
02087173 - HORSE CREEK TRIB AT SR 1140 NR POCOMOKE N C (LAT 36 02 33 LONG 078 31 03)									
DEC , 1977									
08...	--	--	--	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)
CHOWAN RIVER BASIN--Continued								
02053021 - JACKS SWAMP NR PLEASANT HILL N C (LAT 36 30 55 LONG 077 32 35)								
DEC , 1977								
08...	10	0	<.5	0	10	0	10	6
02053249 - DEEP CREEK AT N C 45 NR COFIELD N C (LAT 36 22 25 LONG 076 56 00)								
MAR , 1978								
23...	--	--	--	--	--	--	--	10
ROANOKE RIVER BASIN--Continued								
02070806 - HUFFINES MILL CR NR BETHANY N C (LAT 36 20 00 LONG 079 51 26)								
DEC , 1977								
07...	--	--	--	--	--	--	--	7
02077629 - MAYO CREEK TRIB NEAR ALLENSVILLE N C (LAT 36 23 55 LONG 078 54 05)								
DEC , 1977								
07...	2	0	<.5	0	10	10	0	8
02081026 - INDIAN CREEK TRIB AT SR1123 NEAR CAHABA N C (LAT 36 01 02 LONG 077 10 38)								
MAR , 1978								
23...	13	1	<.5	0	20	0	20	29
APR								
26...	0	3	<.5	0	10	0	10	12
020A1031 - CONIOTT CREEK AT SR 1108 NR CAHABA N C (LAT 36 00 41 LONG 077 08 05)								
OCT , 1977								
14...	--	1	<.5	0	20	10	10	35
DEC								
05...	0	2	<.5	0	10	0	10	24
02081082 - HARDISON CREEK NR ROBERSON STORE N C (LAT 35 43 20 LONG 076 57 30)								
DEC , 1977								
08...	4	6	<.5	0	10	10	0	4
APR , 1978								
26...	--	--	--	--	--	--	--	145
PAMLICO RIVER BASIN--Continued								
02082625 - WALNUT CREEK AT SR1225 AT KINGSBORO N C (LAT 35 55 35 LONG 077 40 34)								
MAR , 1978								
23...	2	4	<.5	0	10	10	0	4
APR								
26...	0	6	<.5	0	10	0	10	11
26...	--	--	--	--	--	--	--	4
NEUSE RIVER BASIN--Continued								
02087173 - HORSE CREEK TRIB AT SR 1140 NR POCOMOKE N C (LAT 36 02 33 LONG 078 31 03)								
DEC , 1977								
08...	--	--	--	--	--	--	--	3

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 to SEPTEMBER 1978

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	ACIDITY (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
NEUSE RIVER BASIN--Continued												
02089168 - MILL CREEK NEAR SEVENS SPRINGS N C (LAT 35 14 14 LONG 077 52 57)												
DEC , 1977												
08...	1600	49	5.4	10.5	--	7.0	--	--	--	--	--	--
JAN , 1978												
20...	1100	42	4.6	--	--	--	--	--	--	--	--	--
MAR												
24...	1100	50	5.5	13.5	--	--	--	--	--	--	--	--
APR												
26...	1000	42	--	--	--	--	--	--	--	--	--	--
27...	1445	48	--	--	--	--	--	--	--	--	--	--
02090666 - WHITE OAK SWAMP NEAR MOUNT PLEASANT N C (LAT 35 48 55 LONG 078 04 42)												
APR , 1978												
26...	0930	30	5.8	14.0	--	--	--	--	--	--	--	--
02091476 - RAINBOW CREEK AT US 258 NEAR BROWNTOWN N C (LAT 35 24 00 LONG 077 34 50)												
APR , 1978												
26...	1230	51	4.5	--	--	--	--	--	--	--	--	--
27...	1230	57	--	--	--	--	--	--	--	--	--	--
02091949 - CLAYFOOT SWAMP NEAR SHELMERDINE N C (LAT 35 27 16 LONG 077 13 12)												
DEC , 1977												
08...	0930	38	5.5	1.0	21	9.7	7	3	--	--	1.8	.6
JAN , 1978												
20...	1310	33	4.7	8.5	45	--	6	5	--	--	1.3	.7
MAR												
23...	0950	29	4.6	9.5	35	8.2	6	2	.0	.0	1.4	.6
APR												
26...	1630	23	5.0	15.0	--	--	--	--	--	--	--	--
27...	1100	29	--	--	--	--	--	--	--	--	--	--
02091961 - CREEPING SWAMP TRIB AT SUTTON ROAD NR WILMAR N C (LAT 35 25 07 LONG 077 10 40)												
MAR , 1978												
23...	1140	80	3.5	12.0	75	11.4	2	2	.4	20	.2	.3
APR												
26...	1430	90	3.9	13.5	300	9.0	3	3	.6	30	.4	.5
27...	1030	82	4.5	12.5	--	--	--	--	--	--	--	--
02092551 - CROOKED RUN AT SR 1123 NEAR TRENTON N C (LAT 35 02 25 LONG 077 22 07)												
DEC , 1977												
08...	1500	78	4.1	6.0	120	7.4	6	6	.8	40	1.5	.6
JAN , 1978												
20...	1215	68	5.6	--	--	--	--	--	--	--	--	--
MAR												
24...	0745	86	5.8	11.0	--	--	--	--	--	--	--	--
APR												
26...	1115	65	3.7	--	--	--	--	--	--	--	--	--
27...	1330	67	--	--	--	--	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NEUSE RIVER BASIN--Continued												
02089168 - MILL CREEK NEAR SEVENS SPRINGS N C (LAT 35 14 14 LONG 077 52 57)												
DEC , 1977												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JAN , 1978												
20...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
24...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
26...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
02090666 - WHITE OAK SWAMP NEAR MOUNT PLEASANT N C (LAT 35 48 55 LONG 078 04 42)												
APR , 1978												
26...	--	--	--	--	--	--	--	--	--	--	--	--
02091476 - RAINBOW CREEK AT US 258 NEAR BROWNTOWN N C (LAT 35 24 00 LONG 077 34 50)												
APR , 1978												
26...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
02091949 - CLAYFOOT SWAMP NEAR SHELMERDINE N C (LAT 35 27 16 LONG 077 13 12)												
DEC , 1977												
08...	4.0	53	.7	.5	5	0	4	25	4.8	5.6	.0	11
JAN , 1978												
20...	2.2	42	.4	.4	1	0	1	32	5.7	3.1	.1	4.8
MAR												
23...	3.9	57	.7	.4	5	0	4	201	6.1	4.2	.0	7.4
APR												
26...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
02091961 - CREEPING SWAMP TRIB AT SUTTON ROAD NR WILMAR N C (LAT 35 25 07 LONG 077 10 40)												
MAR , 1978												
23...	3.4	77	1.1	.4	0	0	0	.0	9.1	5.2	.0	5.7
APR												
26...	2.3	54	.6	.9	0	0	0	.0	12	3.7	.0	4.1
27...	--	--	--	--	--	--	--	--	--	--	--	--
02092551 - CROOKED RUN AT SR 1123 NEAR TRENTON N C (LAT 35 02 25 LONG 077 22 07)												
DEC , 1977												
08...	3.3	53	.6	.1	0	0	0	.0	12	5.9	.0	7.3
JAN , 1978												
20...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
24...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
26...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)
NEUSE RIVER BASIN--Continued												
02089168 - MILL CREEK NEAR SEVENS SPRINGS N C (LAT 35 14 14 LONG 077 52 57)												
DEC , 1977												
08...	--	--	--	.05	.00	.05	.05	.00	.00	.00	.14	.11
JAN , 1978												
20...	--	--	--	.05	.00	.05	.05	.00	.00	.00	.25	.05
MAR												
24...	--	--	--	.07	.00	.07	.08	.00	.00	.00	.15	.10
APR												
26...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
02090666 - WHITE OAK SWAMP NEAR MOUNT PLEASANT N C (LAT 35 48 55 LONG 078 04 42)												
APR , 1978												
26...	--	--	--	.59	.03	.62	.61	.07	.03	.04	1.1	.51
02091476 - RAINBOW CREEK AT US 258 NEAR BROWNTOWN N C (LAT 35 24 00 LONG 077 34 50)												
APR , 1978												
26...	--	--	--	.56	.02	.58	.57	.25	.22	.28	.75	.45
27...	--	--	--	--	--	--	--	--	--	--	--	--
02091949 - CLAYFOOT SWAMP NEAR SHELMERDINE N C (LAT 35 27 16 LONG 077 13 12)												
DEC , 1977												
08...	41	31	.04	.00	.00	.00	.00	.00	.00	.00	.12	.13
JAN , 1978												
20...	37	20	.05	.15	.02	.17	.16	.01	.01	.01	.46	.31
MAR												
23...	32	27	.04	.00	.00	.00	.01	.00	.00	.00	.18	.24
APR												
26...	--	--	--	.05	.03	.08	.08	.03	.01	.01	.80	.26
27...	--	--	--	--	--	--	--	--	--	--	--	--
02091961 - CREEPING SWAMP TRIB AT SUTTON ROAD NR WILMAR N C (LAT 35 25 07 LONG 077 10 40)												
MAR , 1978												
23...	49	25	.07	.00	.00	.00	.01	.00	.01	.01	.33	.42
APR												
26...	79	25	.11	.20	.01	.21	.20	.06	.05	.06	1.1	.77
27...	--	--	--	.07	.01	.08	.08	.01	.02	.03	.88	.66
02092551 - CROOKED RUN AT SR 1123 NEAR TRENTON N C (LAT 35 02 25 LONG 077 22 07)												
DEC , 1977												
08...	70	32	.10	.01	.00	.01	.00	.00	.00	.00	.53	.63
JAN , 1978												
20...	--	--	--	.00	.01	.01	.00	.00	.00	.00	.52	.30
MAR												
24...	--	--	--	.00	.00	.00	.01	.00	.02	.03	.59	.56
APR												
26...	--	--	--	.06	.01	.07	.07	.01	.00	.00	.59	.38
27...	--	--	--	--	--	--	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO. TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	ARSENIC TOTAL (UG/L AS AS)
NEUSE RIVER BASIN--Continued												
02089168 - MILL CREEK NEAR SEVENS SPRINGS N C (LAT 35 14 14 LONG 077 52 57)												
DEC , 1977												
08...	.14	.03	.11	.19	.84	.00	--	.00	.00	.00	.00	0
JAN , 1978												
20...	.25	.20	.05	.30	1.3	.01	.03	.00	.00	.00	.00	0
MAR												
24...	.15	.05	.10	.22	.97	.01	.03	.00	.00	.00	.00	--
APR												
26...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
02090666 - WHITE OAK SWAMP NEAR MOUNT PLEASANT N C (LAT 35 48 55 LONG 078 04 42)												
APR , 1978												
26...	1.2	.66	.54	1.8	8.1	.06	.18	.06	.12	.03	.09	--
02091476 - RAINBOW CREEK AT US 258 NEAR BROWNTOWN N C (LAT 35 24 00 LONG 077 34 50)												
APR , 1978												
26...	1.0	.33	.67	1.6	7.0	.11	.34	.03	.05	.02	.06	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
02091949 - CLAYFOOT SWAMP NEAR SHELMERDINE N C (LAT 35 27 16 LONG 077 13 12)												
DEC , 1977												
08...	.12	.00	.13	.12	.53	.01	--	.00	.00	.00	.00	0
JAN , 1978												
20...	.47	.15	.32	.64	2.8	.02	.06	.01	.02	.00	.00	--
MAR												
23...	.18	.00	.24	.18	.80	.01	.03	.01	.00	.00	.00	--
APR												
26...	.83	.56	.27	.91	4.0	.09	.28	.02	.04	.01	.03	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
02091961 - CREEPING SWAMP TRIB AT SUTTON ROAD NR WILMAR N C (LAT 35 25 07 LONG 077 10 40)												
MAR , 1978												
23...	.33	.00	.43	.33	1.5	.01	.03	.01	.00	.00	.00	0
APR												
26...	1.2	.38	.82	1.4	6.2	.06	.18	.01	.02	.02	.06	1
27...	.89	.21	.68	.97	4.3	.01	.03	.01	.01	.01	.03	--
02092551 - CROOKED RUN AT SR 1123 NEAR TRENTON N C (LAT 35 02 25 LONG 077 22 07)												
DEC , 1977												
08...	.53	.00	.63	.54	2.4	.02	--	.02	.02	.01	.03	1
JAN , 1978												
20...	.52	.22	.30	.53	2.3	.04	.12	.03	.03	.01	.03	0
MAR												
24...	.59	.01	.58	.59	2.6	.02	.06	.02	.01	.01	.03	--
APR												
26...	.60	.22	.38	.67	3.0	.04	.12	.04	.05	.03	.09	--
27...	--	--	--	--	--	--	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 to SEPTEMBER 1978

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOV. (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
NEUSE RIVER BASIN--Continued									
02089168 - MILL CREEK NEAR SEVENS SPRINGS N C (LAT 35 14 14 LONG 077 52 57)									
DEC , 1977									
08...	<20	<20	0	4	3	1	80	60	4
JAN , 1978									
20...	<10	<7	3	3	1	2	90	20	5
MAR									
24...	--	--	--	--	--	--	--	--	--
APR									
26...	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--
02091476 - RAINBOW CREEK AT US 258 NEAR BROWNTOWN N C (LAT 35 24 00 LONG 077 34 50)									
APR , 1978									
26...	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--
02091949 - CLAYFOOT SWAMP NEAR SHELMERDINE N C (LAT 35 27 16 LONG 077 13 12)									
DEC , 1977									
08...	<10	<9	1	2	1	1	300	130	4
JAN , 1978									
20...	<10	<10	0	5	4	1	390	170	9
MAR									
23...	--	--	--	--	--	--	--	--	--
APR									
26...	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--
02091961 - CREEPING SWAMP TRIB AT SUTTON ROAD NR WILMAR N C (LAT 35 25 07 LONG 077 10 40)									
MAR , 1978									
23...	10	10	0	1	0	1	320	320	7
APR									
26...	10	6	4	4	3	1	380	260	3
27...	--	--	--	--	--	--	--	--	--
02092551 - CROOKED RUN AT SR 1123 NEAR TRENTON N C (LAT 35 02 25 LONG 077 22 07)									
DEC , 1977									
08...	<10	<9	1	2	1	1	140	150	1
JAN , 1978									
20...	<10	<10	0	3	2	1	150	150	0
MAR									
24...	--	--	--	--	--	--	--	--	--
APR									
26...	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)
NEUSE RIVER BASIN--Continued								
02089168 - MILL CREEK NEAR SEVENS SPRINGS N C (LAT 35 14 14 LONG 077 52 57)								
DEC , 1977								
08...	0	4	<.5	0	10	10	0	1
JAN , 1978								
20...	4	1	<.5	0	10	0	10	3
MAR								
24...	--	--	--	--	--	--	--	3
APR								
26...	--	--	--	--	--	--	--	15
27...	--	--	--	--	--	--	--	2
02091476 - RAINBOW CREEK AT US 258 NEAR BROWNTOWN N C (LAT 35 24 00 LONG 077 34 50)								
APR , 1978								
26...	--	--	--	--	--	--	--	113
27...	--	--	--	--	--	--	--	23
02091949 - CLAYFOOT SWAMP NEAR SHELMERDINE N C (LAT 35 27 16 LONG 077 13 12)								
DEC , 1977								
08...	4	0	<.5	0	10	10	0	3
JAN , 1978								
20...	8	1	--	--	10	0	10	37
MAR								
23...	--	--	--	--	--	--	--	12
APR								
26...	--	--	--	--	--	--	--	236
27...	--	--	--	--	--	--	--	33
02091961 - CREEPING SWAMP TRIB AT SUTTON ROAD NR WILMAR N C (LAT 35 25 07 LONG 077 10 40)								
MAR , 1978								
23...	4	3	<.5	0	10	10	0	2
APR								
26...	2	1	<.5	0	20	10	10	56
27...	--	--	--	--	--	--	--	5
02092551 - CROOKED RUN AT SR 1123 NEAR TRENTON N C (LAT 35 02 25 LONG 077 22 07)								
DEC , 1977								
08...	1	0	<.5	0	10	10	0	3
JAN , 1978								
20...	0	7	<.5	0	10	10	0	9
MAR								
24...	--	--	--	--	--	--	--	3
APR								
26...	--	--	--	--	--	--	--	16
27...	--	--	--	--	--	--	--	11

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	ACIDITY (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
NEUSE RIVER BASIN--Continued												
02092569 - BRICE CREEK AT SR 1100 AT CROATAN N C (LAT 34 57 56 LONG 076 58 26)												
DEC , 1977												
08...	1330	60	4.1	7.5	--	8.0	--	--	--	--	--	--
JAN , 1978												
20...	1400	50	6.6	--	--	--	--	--	--	--	--	--
MAR												
24...	0845	54	4.0	12.0	400	--	7	7	.3	15	1.5	.8
CAPE FEAR RIVER BASIN												
02096845 - CANE CREEK NEAR BUCKHORN N C (LAT 36 01 19 LONG 079 10 29)												
DEC , 1977												
07...	0800	44	6.5	3.0	--	13.2	--	--	--	--	--	--
APR , 1978												
26...	1330	30	5.5	--	--	--	--	--	--	--	--	--
02097715 - NEW HOPE CR TRIB AT SR 1715 NR FARRINGTON N C (LAT 35 47 08 LONG 079 01 50)												
DEC , 1977												
07...	1430	46	6.3	8.0	--	9.6	--	--	--	--	--	--
02100459 - SANDY CREEK TRIB AT MELANCTON N C (LAT 35 50 26 LONG 079 39 17)												
DEC , 1977												
07...	0915	66	6.0	3.0	--	11.8	--	--	--	--	--	--
02101357 - BIG GOVERNORS CREEK TRIB NEAR CARTHAGE N C (LAT 35 23 05 LONG 079 19 56)												
DEC , 1977												
07...	1300	73	6.9	4.0	--	14.8	--	--	--	--	--	--
02102237 - PARKERS CREEK TRIB NEAR COKESBURY N C (LAT 35 32 19 LONG 078 55 17)												
DEC , 1977												
20...	1200	46	6.6	7.0	17	10.1	13	0	--	--	2.9	1.4
APR , 1978												
26...	1100	25	5.4	--	--	--	--	--	--	--	--	--
02102908 - FLAT CREEK NEAR INVERNESS N C (LAT 35 10 54 LONG 079 10 40)												
DEC , 1977												
07...	0830	12	6.8	5.0	--	11.0	--	--	--	--	--	--
APR , 1978												
26...	1650	28	4.1	--	--	--	--	--	--	--	--	--
02105524 - ELLIS CREEK TRIB AT SR1325 NEAR WHITE OAK N C (LAT 34 46 02 LONG 078 41 24)												
MAR , 1978												
23...	1220	26	5.5	15.0	250	--	3	0	--	--	.7	.3
APR												
26...	1345	29	4.5	--	--	--	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NEUSE RIVER BASIN--Continued												
02092569 - BRICE CREEK AT SR 1100 AT CROATAN N C (LAT 34 57 56 LONG 076 58 26)												
DEC , 1977 08...	--	--	--	--	--	--	--	--	--	--	--	--
JAN , 1978 20...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 24...	3.5	51	.6	.3	0	0	0	.0	11	4.6	.0	3.8
CAPE FEAR RIVER BASIN--Continued												
02096845 - CANE CREEK NEAR BUCKHORN N C (LAT 36 01 19 LONG 079 10 29)												
DEC , 1977 07...	--	--	--	--	--	--	--	--	--	--	--	--
APR , 1978 26...	--	--	--	--	--	--	--	--	--	--	--	--
02097715 - NEW HOPE CR TRIB AT SR 1715 NR FARRINGTON N C (LAT 35 47 08 LONG 079 01 50)												
DEC , 1977 07...	--	--	--	--	--	--	--	--	--	--	--	--
02100459 - SANDY CREEK TRIB AT MELANCTON N C (LAT 35 50 26 LONG 079 39 17)												
DEC , 1977 07...	--	--	--	--	--	--	--	--	--	--	--	--
02101357 - BIG GOVERNORS CREEK TRIB NEAR CARTHAGE N C (LAT 35 23 05 LONG 079 19 56)												
DEC , 1977 07...	--	--	--	--	--	--	--	--	--	--	--	--
02102237 - PARKERS CREEK TRIB NEAR COKESBURY N C (LAT 35 32 19 LONG 078 55 17)												
DEC , 1977 20...	4.7	42	.6	.7	21	0	17	8.4	2.1	3.1	.0	23
APR , 1978 26...	--	--	--	--	--	--	--	--	--	--	--	--
02102908 - FLAT CREEK NEAR INVERNESS N C (LAT 35 10 54 LONG 079 10 40)												
DEC , 1977 07...	--	--	--	--	--	--	--	--	--	--	--	--
APR , 1978 26...	--	--	--	--	--	--	--	--	--	--	--	--
02105524 - ELLIS CREEK TRIB AT SR1325 NEAR WHITE OAK N C (LAT 34 46 02 LONG 078 41 24)												
MAR , 1978 23...	2.4	60	.6	.4	4	0	3	20	5.3	2.7	.0	7.7
APR 26...	--	--	--	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)
NEUSE RIVER BASIN--Continued												
02092569 - BRICE CREEK AT SR 1100 AT CROATAN N C (LAT 34 57 56 LONG 076 58 26)												
DEC , 1977												
08...	--	--	--	.01	.00	.01	.01	.00	.00	.00	.56	.41
JAN , 1978												
20...	--	--	--	.24	.01	.25	.24	.02	.00	.00	.44	.37
MAR												
24...	50	26	.07	.02	.01	.03	.03	.00	.01	.01	.38	.36
CAPE FEAR RIVER BASIN--Continued												
02096845 - CANE CREEK NEAR BUCKHORN N C (LAT 36 01 19 LONG 079 10 29)												
DEC , 1977												
07...	--	--	--	.01	.00	.01	.01	.00	.00	.00	.51	.20
APR , 1978												
26...	--	--	--	.02	.01	.03	.03	.03	.00	.00	.37	.34
02097715 - NEW HOPE CR TRIB AT SR 1715 NR FARRINGTON N C (LAT 35 47 08 LONG 079 01 50)												
DEC , 1977												
07...	--	--	--	.01	.00	.01	.01	.01	.02	.03	.16	.11
02100459 - SANDY CREEK TRIB AT MELANCTON N C (LAT 35 50 26 LONG 079 39 17)												
DEC , 1977												
07...	--	--	--	.44	.01	.45	.46	.01	.01	.01	.33	.13
02101357 - BIG GOVERNORS CREEK TRIB NEAR CARTHAGE N C (LAT 35 23 05 LONG 079 19 56)												
DEC , 1977												
07...	--	--	--	.16	.01	.17	.17	.01	.00	.00	.25	.21
02102237 - PARKERS CREEK TRIB NEAR COKESBURY N C (LAT 35 32 19 LONG 078 55 17)												
DEC , 1977												
20...	57	48	.08	.00	.00	.00	.00	.00	.00	.00	.07	.10
APR , 1978												
26...	--	--	--	.00	.01	.01	.00	.02	.00	.00	.51	.28
0210290B - FLAT CREEK NEAR INVERNESS N C (LAT 35 10 54 LONG 079 10 40)												
DEC , 1977												
07...	--	--	--	.03	.00	.03	.04	.00	.00	.00	.33	.11
APR , 1978												
26...	--	--	--	.02	.01	.03	.03	.01	.00	.00	.44	.38
02105524 - ELLIS CREEK TRIB AT SR1325 NEAR WHITE OAK N C (LAT 34 46 02 LONG 078 41 24)												
MAR , 1978												
23...	42	22	.06	.00	.00	.00	.03	.00	.01	.01	.36	.45
APR												
26...	--	--	--	.00	.02	.01	.01	.02	.01	.01	.66	.50

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	ARSENIC TOTAL (UG/L AS AS)
					NEUSE RIVER BASIN--Continued							
					02092569 - BRICE CREEK AT SR 1100 AT CROATAN N C (LAT 34 57 56 LONG 076 58 26)							
DEC , 1977												
08...	.56	.15	.41	.57	2.5	--	--	--	--	--	--	--
JAN , 1978												
20...	.46	.09	.37	.71	3.1	.02	.06	.00	.01	.00	.00	0
MAR												
24...	.38	.01	.37	.41	1.8	.01	.03	.01	.01	.00	.00	--
					CAPE FEAR RIVER BASIN--Continued							
					02096845 - CANE CREEK NEAR BUCKHORN N C (LAT 36 01 19 LONG 079 10 29)							
DEC , 1977												
07...	.51	.31	.20	.52	2.3	.05	--	.00	.03	.00	.00	1
APR , 1978												
26...	.40	.06	.34	.43	1.9	.03	.09	.01	.01	.00	.00	--
					02097715 - NEW HOPE CR TRIB AT SR 1715 NR FARRINGTON N C (LAT 35 47 08 LONG 079 01 50)							
DEC , 1977												
07...	.17	.04	.13	.18	.80	.01	--	.01	.00	.00	.00	0
					02100459 - SANDY CREEK TRIB AT MELANCTON N C (LAT 35 50 26 LONG 079 39 17)							
DEC , 1977												
07...	.34	.20	.14	.79	3.5	.02	--	.01	.01	.00	.00	0
					02101357 - BIG GOVERNORS CREEK TRIB NEAR CARTHAGE N C (LAT 35 23 05 LONG 079 19 56)							
DEC , 1977												
07...	.26	.05	.21	.43	1.9	.01	--	--	.00	--	--	--
					02102237 - PARKERS CREEK TRIB NEAR COKESBURY N C (LAT 35 32 19 LONG 078 55 17)							
DEC , 1977												
20...	.07	.00	.10	.07	.31	.01	.03	.01	.02	.00	.00	2
APR , 1978												
26...	.53	.25	.28	.54	2.4	.04	.12	.00	.01	.00	.00	--
					0210290B - FLAT CREEK NEAR INVERNESS N C (LAT 35 10 54 LONG 079 10 40)							
DEC , 1977												
07...	.33	.22	.11	.36	1.6	.00	--	--	.00	--	--	--
APR , 1978												
26...	.45	.07	.38	.48	2.1	.01	.03	.00	.01	.00	.00	--
					02105524 - ELLIS CREEK TRIB AT SR1325 NEAR WHITE OAK N C (LAT 34 46 02 LONG 078 41 24)							
MAR , 1978												
23...	.36	.00	.46	.36	1.6	.02	.06	.04	.01	.02	.06	0
APR												
26...	.68	.17	.51	.69	3.1	.03	.09	.02	.02	.01	.03	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
NEUSE RIVER BASIN--Continued									
02092569 - BRICE CREEK AT SR 1100 AT CROATAN N C (LAT 34 57 56 LONG 076 58 26)									
DEC , 1977 08...	--	--	--	--	--	--	--	--	--
JAN , 1978 20...	<10	<10	0	4	3	1	280	220	0
MAR 24...	--	--	--	--	--	--	--	--	--
CAPE FEAR RIVER BASIN--Continued									
02096845 - CANE CREEK NEAR BUCKHORN N C (LAT 36 01 19 LONG 079 10 29)									
DEC , 1977 07...	10	10	0	4	1	3	620	160	5
APR , 1978 26...	--	--	--	--	--	--	--	--	--
02097715 - NEW HOPE CR TRIB AT SR 1715 NR FARRINGTON N C (LAT 35 47 08 LONG 079 01 56)									
DEC , 1977 07...	<10	<10	0	4	3	1	160	40	4
02100459 - SANDY CREEK TRIB AT MELANCTON N C (LAT 35 50 26 LONG 079 39 17)									
DEC , 1977 07...	<10	<10	0	3	2	1	1100	180	6
02101357 - BIG GOVERNORS CREEK TRIB NEAR CARTHAGE N C (LAT 35 23 05 LONG 079 19 56)									
DEC , 1977 07...	--	--	--	--	--	--	--	--	--
02102237 - PARKERS CREEK TRIB NEAR COKESBURY N C (LAT 35 32 19 LONG 078 55 17)									
DEC , 1977 20...	<20	<19	1	0	0	0	340	120	8
APR , 1978 26...	--	--	--	--	--	--	--	--	--
02102908 - FLAT CREEK NEAR INVERNESS N C (LAT 35 10 54 LONG 079 10 40)									
OCT , 1977 03...	--	--	--	--	--	--	--	--	--
NOV 28...	--	--	--	--	--	--	--	--	--
DEC 07...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
FEB , 1978 10...	--	--	--	--	--	--	--	--	--
MAR 21...	--	--	--	--	--	--	--	--	--
APR 26...	--	--	--	--	--	--	--	--	--
MAY 08...	--	--	--	--	--	--	--	--	--
02105524 - ELLIS CREEK TRIB AT SR1325 NEAR WHITE OAK N C (LAT 34 46 02 LONG 078 41 24)									
MAR , 1978 23...	10	10	0	5	3	2	1200	490	7
APR 26...	--	--	--	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)
NEUSE RIVER BASIN--Continued								
02092569 - BRICE CREEK AT SR 1100 AT CROATAN N C (LAT 34 57 56 LONG 076 58 26)								
DEC , 1977								
08...	--	--	--	--	--	--	--	3
JAN , 1978								
20...	0	3	<.5	0	10	0	10	5
MAR								
24...	--	--	--	--	--	--	--	6
CAPE FEAR RIVER BASIN--Continued								
02096845 - CANE CREEK NEAR BUCKHORN N C (LAT 36 01 1° LONG 079 10 29)								
DEC , 1977								
07...	4	1	<.5	0	0	0	0	13
APR , 1978								
26...	--	--	--	--	--	--	--	23
02097715 - NEW HOPE CR TRIB AT SR 1715 NR FARRINGTON N C (LAT 35 47 08 LONG 079 01 50)								
DEC , 1977								
07...	0	4	<.5	0	10	10	0	5
02100459 - SANDY CREEK TRIB AT MELANCTON N C (LAT 35 50 26 LONG 079 39 17)								
DEC , 1977								
07...	0	6	<.5	0	0	0	0	13
02101357 - BIG GOVERNORS CREEK TRIB NEAR CARTHAGE N C (LAT 35 23 05 LONG 079 19 56)								
DEC , 1977								
07...	--	--	--	--	--	--	--	6
02102237 - PARKERS CREEK TRIB NEAR COKESBURY N C (LAT 35 32 19 LONG 078 55 17)								
DEC , 1977								
20...	0	8	<.5	0	10	0	10	3
APR , 1978								
26...	--	--	--	--	--	--	--	100
02102908 - FLAT CREEK NEAR INVERNESS N C (LAT 35 10 54 LONG 079 10 40)								
OCT , 1977								
03...	--	--	--	--	--	--	--	6
NOV								
28...	--	--	--	--	--	--	--	2
DEC								
07...	--	--	--	--	--	--	--	2
29...	--	--	--	--	--	--	--	4
FEB , 1978								
10...	--	--	--	--	--	--	--	4
MAR								
21...	--	--	--	--	--	--	--	6
APR								
26...	--	--	--	--	--	--	--	129
MAY								
08...	--	--	--	--	--	--	--	40
02105524 - ELLIS CREEK TRIB AT SR1325 NEAR WHITE OAK N C (LAT 34 46 02 LONG 078 41 24)								
MAR , 1978								
23...	5	2	<.5	0	10	10	0	11
APR								
26...	--	--	--	--	--	--	--	25

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	ACIDITY (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
CAPE FEAR RIVER BASIN--Continued												
02107154 - SOUTH RIVER TRIB AT N C 41 AT TOMAHAWK N C (LAT 34 42 15 LONG 078 20 25)												
DEC , 1977												
07...	1300	49	3.9	9.0	--	8.6	--	--	--	--	--	--
JAN , 1978												
20...	1220	51	6.3	--	--	--	--	--	--	--	--	--
MAR												
23...	1010	45	5.7	11.0	--	--	--	--	--	--	--	--
APR												
26...	1255	47	--	--	--	--	--	--	--	--	--	--
02108608 - LILLINGTON CREEK NEAR ST HELENA N C (LAT 34 30 27 LONG 077 48 57)												
DEC , 1977												
07...	1530	43	4.7	8.0	280	9.8	11	10	--	--	3.3	.6
MAR , 1978												
23...	1530	42	5.5	16.0	--	--	--	--	--	--	--	--
WACCAMAW RIVER BASIN												
02109481 - JUNIPER CREEK AT N C 211 NEAR PROSPECT N C (LAT 34 06 07 LONG 078 18 25)												
DEC , 1977												
07...	1030	45	3.8	7.0	--	3.2	--	--	--	--	--	--
MAR , 1978												
23...	1412	58	3.5	11.5	300	--	2	2	.4	20	.2	.3
PEE DEE RIVER BASIN												
02111275 - BIG WARRIOR CREEK SUBTRIB NEAR BOOMER N C (LAT 36 03 04 LONG 081 15 47)												
MAR , 1978												
10...	1200	19	6.4	--	--	--	--	--	--	--	--	--
02114256 - EAST PRONG LITTLE YADKIN R TRIB NEAR CAPELLA N C (LAT 36 21 49 LONG 080 21 08)												
DEC , 1977												
07...	1130	39	5.5	4.0	7	11.2	10	2	--	--	2.4	.9
02117485 - OLIN CREEK AT SR 1868 NEAR UNION GROVE N C (LAT 35 59 15 LONG 080 55 16)												
DEC , 1977												
07...	0930	24	6.0	4.0	40	--	8	1	--	--	1.7	.8
MAR , 1978												
10...	1305	38	5.7	--	--	--	--	--	--	--	--	--
02120507 - TRIB TO THIRD CREEK TRIB NR BARBER, N.C. (LAT 35 44 02 LONG 080 39 04)												
DEC , 1977												
13...	1200	42	6.3	7.0	85	11.7	18	11	--	--	3.4	2.3
02123532 - SPENCER CREEK AT S R 1303 AT UWHARRIE N C (LAT 35 25 22 LONG 079 59 53)												
OCT , 1977												
25...	0930	50	6.5	12.0	23	10.2	14	0	--	--	3.7	1.1
26...	1300	38	5.6	15.0	60	9.2	8	6	--	--	2.1	.7

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
CAPE FEAR RIVER BASIN--Continued												
02107154 - SOUTH RIVER TRIB AT N C 41 AT TOMAHAWK N C (LAT 34 42 15 LONG 078 20 25)												
DEC , 1977												
07...	--	--	--	--	--	--	--	--	--	--	--	--
JAN , 1978												
20...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
23...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
26...	--	--	--	--	--	--	--	--	--	--	--	--
02108608 - LILLINGTON CREEK NEAR ST HELENA N C (LAT 34 30 27 LONG 077 48 57)												
DEC , 1977												
07...	3.1	38	.4	.3	1	0	1	32	11	6.8	.0	4.6
MAR , 1978												
23...	--	--	--	--	--	--	--	--	--	--	--	--
WACCAMAW RIVER BASIN--Continued												
02109481 - JUNIPER CREEK AT N C 211 NEAR PROSPECT N C (LAT 34 06 07 LONG 078 18 25)												
DEC , 1977												
07...	--	--	--	--	--	--	--	--	--	--	--	--
MAR , 1978												
23...	2.4	74	.8	.1	0	0	0	.0	9.1	3.3	.0	1.5
PEE DEE RIVER BASIN--Continued												
02111275 - BIG WARRIOR CREEK SUBTRIB NEAR BOOMER N C (LAT 36 03 04 LONG 081 15 47)												
MAR , 1978												
10...	--	--	--	--	--	--	--	--	--	--	--	--
02114256 - EAST PRONG LITTLE YADKIN R TRIB NEAR CAPELLA N C (LAT 36 21 49 LONG 080 21 08)												
DEC , 1977												
07...	3.3	38	.5	1.5	9	0	7	46	4.1	2.6	.0	18
02117485 - OLIN CREEK AT SR 1868 NEAR UNION GROVE N C (LAT 35 59 15 LONG 080 55 16)												
DEC , 1977												
07...	1.4	25	.2	1.1	8	0	7	13	2.8	2.1	.0	8.2
MAR , 1978												
10...	--	--	--	--	--	--	--	--	--	--	--	--
02120507 - TRIB TO THIRD CREEK TRIB NR BARBER, N.C. (LAT 35 44 02 LONG 080 39 04)												
DEC , 1977												
13...	1.2	12	.1	.4	9	0	7	7.2	12	2.7	.0	13
02123532 - SPENCER CREEK AT S R 1303 AT UWHARRIE N C (LAT 35 25 22 LONG 079 59 53)												
OCT , 1977												
25...	5.9	44	.7	1.8	28	0	23	14	2.4	3.1	.0	28
26...	2.5	34	.4	1.8	3	0	2	12	8.1	2.9	.0	8.1

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)
CAPE FEAR RIVER BASIN--Continued												
02107154 - SOUTH RIVER TRIB AT N C 41 AT TOMAHAWK N C (LAT 34 42 15 LONG 078 20 25)												
DEC , 1977												
07...	--	--	--	.00	.01	.01	.01	.00	.01	.01	.50	.09
JAN , 1978												
20...	--	--	--	.00	.01	.01	.01	.01	.01	.01	.46	.46
MAR												
23...	--	--	--	.01	.00	.01	.03	.01	.01	.01	.30	.31
APR												
26...	--	--	--	--	--	--	--	--	--	--	--	--
0210860B - LILLINGTON CREEK NEAR ST HELENA N C (LAT 34 30 27 LONG 077 48 57)												
DEC , 1977												
07...	83	31	.11	.00	.01	.01	.01	.00	.00	.00	.76	.57
MAR , 1978												
23...	--	--	--	.00	.00	.00	.01	.00	.01	.01	.67	.43
WACCAMAW RIVER BASIN--Continued												
02109481 - JUNIPER CREEK AT N C 211 NEAR PROSPECT N C (LAT 34 06 07 LONG 078 18 25)												
DEC , 1977												
07...	--	--	--	.00	.00	.00	.01	.00	.01	.01	.54	.53
MAR , 1978												
23...	46	17	.06	.00	.00	.00	.00	.00	.01	.01	.47	.40
PEE DEE RIVER BASIN--Continued												
02111275 - BIG WARRIOR CREEK SUBTRIB NEAR BOOMER N C (LAT 36 03 04 LONG 081 15 47)												
MAR , 1978												
10...	--	--	--	.04	.01	.05	.06	.01	.01	.01	.08	.05
02114256 - EAST PRONG LITTLE YADKIN R TRIB NEAR CAPELLA N C (LAT 36 21 49 LONG 080 21 08)												
DEC , 1977												
07...	41	37	.06	.15	.00	.15	.16	.00	.01	.01	.08	.07
02117485 - OLIN CREEK AT SR 1868 NEAR UNION GROVE N C (LAT 35 59 15 LONG 080 55 16)												
DEC , 1977												
07...	24	22	.03	.17	.00	.17	.20	.00	.00	.00	.19	.06
MAR , 1978												
10...	--	--	--	.47	.09	.56	.53	.20	.09	.12	.80	.24
02120507 - TRIB TO THIRD CREEK TRIB NR BARBER, N.C. (LAT 35 44 02 LONG 080 39 04)												
DEC , 1977												
13...	82	40	.11	.00	.01	.01	.01	.01	.03	.04	.24	.21
02123532 - SPENCER CREEK AT S R 1303 AT UWHARRIE N C (LAT 35 25 22 LONG 079 59 53)												
OCT , 1977												
25...	60	60	.08	.00	.00	.00	.00	.01	.00	.00	.16	.13
26...	53	28	.07	.00	.00	.00	.00	.01	.00	.00	.69	.66

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	ARSENIC TOTAL (UG/L AS AS)
CAPE FEAR RIVER BASIN--Continued												
02107154 - SOUTH RIVER TRIB AT N C 41 AT TOMAHAWK N C (LAT 34 42 15 LONG 078 20 25)												
DEC , 1977												
07...	.50	.40	.10	.51	2.3	.07	--	.00	.07	.00	.00	--
JAN , 1978												
20...	.47	.00	.47	.48	2.1	.02	.06	.01	.00	.00	.00	--
MAR												
23...	.31	.00	.32	.32	1.4	.01	.03	.00	.00	.00	.00	--
APR												
26...	--	--	--	--	--	--	--	--	--	--	--	--
02108608 - LILLINGTON CREEK NEAR ST HELENA N C (LAT 34 30 27 LONG 077 48 57)												
DEC , 1977												
07...	.76	.19	.57	.77	3.4	.02	--	.02	.01	.01	.03	1
MAR , 1978												
23...	.67	.23	.44	.67	3.0	.02	.06	.01	.01	.01	.03	1
WACCAMAW RIVER BASIN--Continued												
02109481 - JUNIPER CREEK AT N C 211 NEAR PROSPECT N C (LAT 34 06 07 LONG 078 18 25)												
DEC , 1977												
07...	.54	.00	.54	.54	2.4	.00	--	.01	.00	.00	.00	0
MAR , 1978												
23...	.47	.06	.41	.47	2.1	.01	.03	.00	.00	.00	.00	--
PEE DEE RIVER BASIN--Continued												
02111275 - BIG WARRIOR CREEK SUBTRIB NEAR BOOMER N C (LAT 36 03 04 LONG 081 15 47)												
MAR , 1978												
10...	.09	.03	.06	.14	.62	.01	.03	.01	.01	.00	.00	0
02114256 - EAST PRONG LITTLE YADKIN R TRIB NEAR CAPELLA N C (LAT 36 21 49 LONG 080 21 08)												
DEC , 1977												
07...	.08	.00	.08	.23	1.0	.02	--	.01	.01	.00	.00	0
02117485 - OLIN CREEK AT SR 1868 NEAR UNION GROVE N C (LAT 35 59 15 LONG 080 55 16)												
DEC , 1977												
07...	.19	.13	.06	.36	1.6	.01	--	.00	.00	.00	.00	0
MAR , 1978												
10...	1.0	.67	.33	1.6	6.9	.35	1.1	.07	.19	.06	.18	0
02120507 - TRIB TO THIRD CREEK TRIB NR BARBER, N.C. (LAT 35 44 02 LONG 080 39 04)												
DEC , 1977												
13...	.25	.01	.24	.26	1.2	.02	--	.02	.01	.00	.00	1
02123532 - SPENCER CREEK AT S R 1303 AT UWHARRIE N C (LAT 35 25 22 LONG 079 59 53)												
OCT , 1977												
25...	.17	.04	.13	.17	.75	.01	--	.00	.01	.00	.00	0
26...	.70	.04	.66	.70	3.1	.03	--	.01	.01	.00	.00	1

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOV. (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
CAPE FEAR RIVER BASIN--Continued									
02107154 - SOUTH RIVER TRIB AT N C 41 AT TOMAHAWK N C (LAT 34 42 15 LONG 078 20 25)									
DEC , 1977									
07...	--	--	--	--	--	--	--	--	--
JAN , 1978									
20...	--	--	--	--	--	--	--	--	--
MAR									
23...	--	--	--	--	--	--	--	--	--
APR									
26...	--	--	--	--	--	--	--	--	--
02108608 - LILLINGTON CREEK NEAR ST HELENA N C (LAT 34 30 27 LONG 077 48 57)									
DEC , 1977									
07...	<10	<9	1	3	3	0	380	440	1
MAR , 1978									
23...	10	10	0	2	0	2	410	340	6
WACCAMAW RIVER BASIN--Continued									
02109481 - JUNIPER CREEK AT N C 211 NEAR PROSPECT N C (LAT 34 06 07 LONG 078 18 25)									
DEC , 1977									
07...	<10	<9	1	3	3	0	340	350	1
MAR , 1978									
23...	--	--	--	--	--	--	--	--	--
PEE DEE RIVER BASIN--Continued									
02111275 - BIG WARRIOR CREEK SUBTRIB NEAR BOOMER N C (LAT 36 03 04 LONG 081 15 47)									
MAR , 1978									
10...	<10	<9	1	3	0	4	1600	60	13
02114256 - EAST PRONG LITTLE YADKIN R TRIB NEAR CAPELLA N C (LAT 36 21 49 LONG 080 21 08)									
DEC , 1977									
07...	<10	<9	1	3	3	0	120	80	4
02117485 - OLIN CREEK AT SR 1868 NEAR UNION GROVE N C (LAT 35 59 15 LONG 080 55 16)									
DEC , 1977									
07...	10	9	1	4	3	1	600	90	9
MAR , 1978									
10...	<20	<18	2	7	3	4	16000	940	13
02120507 - TRIB TO THIRD CREEK TRIB NR BARBER, N.C. (LAT 35 44 02 LONG 080 39 04)									
DEC , 1977									
13...	<20	<20	0	9	7	2	3000	70	3
02123532 - SPENCER CREEK AT S R 1303 AT UWHARRIE N C (LAT 35 25 22 LONG 079 59 53)									
OCT , 1977									
25...	<10	<10	0	4	2	2	230	180	5
26...	<10	<10	0	3	0	3	770	270	5

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 to SEPTEMBER 1978

DATE	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)
CAPE FEAR RIVER BASIN--Continued								
02107154 - SOUTH RIVER TRIB AT N C 41 AT TOMAHAWK N C (LAT 34 42 15 LONG 078 20 25)								
DEC , 1977								
07...	--	--	--	--	--	--	--	7
JAN , 1978								
20...	--	--	--	--	--	--	--	23
MAR								
23...	--	--	--	--	--	--	--	3
APR								
26...	--	--	--	--	--	--	--	17
02108608 - LILLINGTON CREEK NEAR ST HELENA N C (LAT 34 30 27 LONG 077 48 57)								
DEC , 1977								
07...	1	0	<.5	0	10	0	10	5
MAR , 1978								
23...	5	1	<.5	0	0	0	0	7
WACCAMAW RIVER BASIN--Continued								
02109481 - JUNIPER CREEK AT N C 211 NEAR PROSPECT N C (LAT 34 06 07 LONG 078 18 25)								
DEC , 1977								
07...	1	0	<.5	0	10	10	0	4
MAR , 1978								
23...	--	--	--	--	--	--	--	2
PEE DEE RIVER BASIN--Continued								
02111275 - BIG WARRIOR CREEK SUBTRIB NEAR BOOMER N C (LAT 36 03 04 LONG 081 15 47)								
MAR , 1978								
10...	13	0	<.5	0	10	0	10	58
02114256 - EAST PRONG LITTLE YADKIN R TRIB NEAR CAPELLA N C (LAT 36 21 49 LONG 080 21 08)								
DEC , 1977								
07...	4	0	<.5	0	10	10	0	3
02117485 - OLIN CREEK AT SR 1868 NEAR UNION GROVE N C (LAT 35 59 15 LONG 080 55 16)								
DEC , 1977								
07...	--	--	<.5	0	20	20	0	4
MAR , 1978								
10...	13	0	<.5	0	20	10	10	--
02120507 - TRIB TO THIRD CREEK TRIB NR BARBER, N.C. (LAT 35 44 02 LONG 080 39 04)								
DEC , 1977								
13...	0	3	<.5	0	10	0	10	11
02123532 - SPENCER CREEK AT S R 1303 AT UWHARRIE N C (LAT 35 25 22 LONG 079 59 53)								
OCT , 1977								
25...	5	0	<.5	0	0	0	10	2
26...	2	3	<.5	0	10	0	10	108

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	ACIDITY (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
PEE DEE RIVER BASIN--Continued												
02127228 - GOULDS FORK AT S R 1205 NEAR WADESBORO N C (LAT 34 57 23 LONG 080 07 23)												
OCT , 1977												
26...	1600	48	6.4	17.5	200	9.0	15	9	--	--	3.6	1.5
DEC												
07...	1100	116	6.7	2.0	45	14.1	42	6	--	--	10	4.1
SANTEE RIVER BASIN												
02142122 - LOWER LITTLE R TRIB AT SR 1124 NR TAYLORSVILLE N (LAT 35 53 24 LONG 081 13 52)												
DEC , 1977												
07...	1100	17	6.6	6.0	--	--	--	--	--	--	--	--
MAR , 1978												
10...	1045	16	6.3	--	--	--	--	--	--	--	--	--
02142692 - KILLIAN CREEK AT SR 1349 NEAR DENVER N C (LAT 35 32 10 LONG 080 03 13)												
DEC , 1977												
07...	1430	49	6.5	5.0	50	--	14	0	--	--	3.7	1.2
MAR , 1978												
10...	0930	54	6.2	--	--	--	--	--	--	--	--	--
02142988 - HENRY FORK TRIB AT SR 1924 NR PLEASANT GROVE N C (LAT 35 39 07 LONG 081 36 28)												
DEC , 1977												
07...	1230	17	6.0	4.0	2	--	5	1	--	--	.9	.6
MAR , 1978												
10...	1130	16	6.0	--	--	--	--	--	--	--	--	--
MAY												
04...	1410	21	--	--	--	--	--	--	--	--	--	--
TENNESSEE RIVER BASIN												
03445376 - NORTH FORK MILLS RIVER ABOVE MILLS RIVER N C (LAT 35 24 25 LONG 082 38 47)												
MAR , 1978												
10...	0900	18	--	--	--	--	--	--	--	--	--	--
03450000 - BEETREE CREEK NEAR SWANNANOA N C (LAT 35 39 11 LONG 082 24 20)												
MAR , 1978												
10...	0930	23	--	--	--	--	--	--	--	--	--	--
03463292 - LOCUST CREEK NEAR CELO N C (LAT 35 48 42 LONG 082 11 52)												
OCT , 1977												
03...	1100	18	--	12.0	--	--	--	--	--	--	--	--
MAR , 1978												
10...	0910	17	--	--	--	--	--	--	--	--	--	--
03510815 - MINGUS CREEK AT RAVENSFORD (LAT 35 31 12 LONG 083 18 30)												
OCT , 1977												
03...	1130	12	--	13.5	--	--	--	--	--	--	--	--
MAR , 1978												
10...	1210	16	--	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
PEE DEE RIVER BASIN--Continued												
02127228 - GOULDS FORK AT S R 1205 NEAR WADESBORO N C (LAT 34 57 23 LONG 080 07 23)												
OCT , 1977												
26...	4.0	34	.4	1.1	8	0	7	5.1	8.4	5.4	.0	7.9
DEC												
07...	7.3	27	.5	1.5	44	0	36	14	8.2	10	.1	13
SANTEE RIVER BASIN--Continued												
02142122 - LOWER LITTLE R TRIB AT SR 1124 NR TAYLORSVILLE N (LAT 35 53 24 LONG 081 13 52)												
DEC , 1977												
07...	--	--	--	--	--	--	--	--	--	--	--	--
MAR , 1978												
10...	--	--	--	--	--	--	--	--	--	--	--	--
02142692 - KILLIAN CREEK AT SR 1349 NEAR DENVER N C (LAT 35 32 10 LONG 080 03 13)												
DEC , 1977												
07...	3.9	35	.5	1.2	19	0	16	9.6	3.2	3.1	.1	18
MAR , 1978												
10...	--	--	--	--	--	--	--	--	--	--	--	--
02142988 - HENRY FORK TRIB AT SR 1924 NR PLEASANT GROVE N C (LAT 35 39 07 LONG 081 36 28)												
DEC , 1977												
07...	1.0	27	.2	.9	4	0	3	6.4	2.5	1.2	.0	7.2
MAR , 1978												
10...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
04...	--	--	--	--	--	--	--	--	--	--	--	--
TENNESSEE RIVER BASIN--Continued												
03445376 - NORTH FORK MILLS RIVER ABOVE MILLS RIVER N C (LAT 35 24 25 LONG 082 38 47)												
MAR , 1978												
10...	--	--	--	--	--	--	--	--	--	--	--	--
03450000 - BEETREE CREEK NEAR SWANNANOA N C (LAT 35 39 11 LONG 082 24 20)												
MAR , 1978												
10...	--	--	--	--	--	--	--	--	--	--	--	--
03463292 - LOCUST CREEK NEAR CELO N C (LAT 35 48 42 LONG 082 11 52)												
OCT , 1977												
03...	--	--	--	--	--	--	--	--	--	--	--	--
MAR , 1978												
10...	--	--	--	--	--	--	--	--	--	--	--	--
03510815 - MINGUS CREEK AT RAVENSFORD (LAT 35 31 12 LONG 083 18 30)												
OCT , 1977												
03...	--	--	--	--	--	--	--	--	--	--	--	--
MAR , 1978												
10...	--	--	--	--	--	--	--	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)
PEE DEE RIVER BASIN--Continued												
02127228 - GOULDS FORK AT S R 1205 NEAR WADESBORO N C (LAT 34 57 23 LONG 080 07 23)												
OCT , 1977												
26...	52	36	.07	.00	.00	.00	.00	.02	.00	.00	--	.00
DEC												
07...	98	78	.13	.01	.01	.02	--	.00	.00	.00	.14	.18
SANTEE RIVER BASIN--Continued												
02142122 - LOWER LITTLE R TRIB AT SR 1124 NR TAYLORSVILLE N (LAT 35 53 24 LONG 081 13 52)												
DEC , 1977												
07...	--	--	--	.07	.00	.07	.08	.01	.00	.00	.26	.10
MAR , 1978												
10...	--	--	--	.05	.01	.06	.06	.01	.02	.03	.14	.07
02142692 - KILLIAN CREEK AT SR 1349 NEAR DENVER N C (LAT 35 32 10 LONG 080 03 13)												
DEC , 1977												
07...	46	45	.06	.25	.01	.26	.27	.01	.01	.01	.09	.13
MAR , 1978												
10...	--	--	--	.61	.08	.69	.67	.25	.16	.21	.75	.19
02142988 - HENRY FORK TRIB AT SR 1924 NR PLEASANT GROVE N C (LAT 35 39 07 LONG 081 36 28)												
DEC , 1977												
07...	14	16	.02	.05	.00	.05	.05	.00	.00	.00	.04	.00
MAR , 1978												
10...	--	--	--	.05	.01	.06	.05	.02	.00	.00	.18	.06
MAY												
04...	--	--	--	--	--	--	--	--	--	--	--	--
TENNESSEE RIVER BASIN--Continued												
03445376 - NORTH FORK MILLS RIVER ABOVE MILLS RIVER N C (LAT 35 24 25 LONG 082 38 47)												
MAR , 1978												
10...	--	--	--	.08	.00	.08	.08	.01	.01	.01	.09	.02
03450000 - BEETREE CREEK NEAR SWANNANOA N C (LAT 35 39 11 LONG 082 24 20)												
MAR , 1978												
10...	--	--	--	.34	.00	.34	.35	.01	.01	.01	.07	.11
03463292 - LOCUST CREEK NEAR CELO N C (LAT 35 48 42 LONG 082 11 52)												
OCT , 1977												
03...	--	--	--	.06	.00	.06	.07	.00	.00	.00	.00	.00
MAR , 1978												
10...	--	--	--	.27	.00	.27	.27	.01	.01	.01	.08	.06
03510815 - MINGUS CREEK AT RAVENSFORD (LAT 35 31 12 LONG 083 18 30)												
OCT , 1977												
03...	--	--	--	.00	.00	.00	.00	.00	.00	.00	.00	.00
MAR , 1978												
10...	--	--	--	.01	.00	.01	.01	.01	.01	.01	.12	.09

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG, SUSP, TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS, (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	ARSENIC TOTAL (UG/L AS AS)
PEE DEE RIVER BASIN--Continued												
02127228 - GOULDS FORK AT S R 1205 NEAR WADESBORO N C (LAT 34 57 23 LONG 080 07 23)												
OCT , 1977												
26...	--	--	.00	--	--	--	--	--	--	--	--	1
DEC												
07...	.14	.00	.18	.16	.71	.04	--	.04	.02	.02	.06	0
SANTEE RIVER BASIN--Continued												
02142122 - LOWER LITTLE R TRIB AT SR 1124 NR TAYLORSVILLE N (LAT 35 53 24 LONG 081 13 52)												
DEC , 1977												
07...	.27	.17	.10	.34	1.5	.02	--	--	.00	.00	.00	--
MAR , 1978												
10...	.15	.06	.09	.21	.93	.02	.06	.00	.01	.00	.00	0
02142692 - KILLIAN CREEK AT SR 1349 NEAR DENVER N C (LAT 35 32 10 LONG 080 03 13)												
DEC , 1977												
07...	.10	.00	.14	.36	1.6	.02	--	.00	.01	.00	.00	0
MAR , 1978												
10...	1.0	.65	.35	1.7	7.5	.26	.80	.01	.13	.01	.03	0
02142988 - HENRY FORK TRIB AT SR 1924 NR PLEASANT GROVE N C (LAT 35 39 07 LONG 081 36 28)												
DEC , 1977												
07...	.04	.04	.00	.09	.40	.00	--	.00	.00	.00	.00	0
MAR , 1978												
10...	.20	.14	.06	.26	1.2	.00	.00	.00	.00	.00	.00	0
MAY												
04...	--	--	--	--	--	--	--	--	--	--	--	--
TENNESSEE RIVER BASIN--Continued												
03445376 - NORTH FORK MILLS RIVER ABOVE MILLS RIVER N C (LAT 35 24 25 LONG 082 38 47)												
MAR , 1978												
10...	.10	.07	.03	.18	.80	.02	.06	.00	.00	.00	.00	0
03450000 - BEETREE CREEK NEAR SWANNANOA N C (LAT 35 39 11 LONG 082 24 20)												
MAR , 1978												
10...	.08	.00	.12	.42	1.9	.00	.00	.00	.00	.00	.00	0
03463292 - LOCUST CREEK NEAR CELO N C (LAT 35 48 42 LONG 082 11 52)												
OCT , 1977												
03...	.00	.00	.00	.06	.27	.01	--	.01	.00	.00	.00	0
MAR , 1978												
10...	.09	.02	.07	.36	1.6	.01	.03	.01	.00	.00	.00	0
03510815 - MINGUS CREEK AT RAVENSFORD (LAT 35 31 12 LONG 083 18 30)												
OCT , 1977												
03...	.00	.00	.00	.00	.00	.01	--	.01	.00	.00	.00	0
MAR , 1978												
10...	.13	.03	.10	.14	.62	.01	.03	.00	.00	.00	.00	0

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)
PEE DEE RIVER BASIN--Continued									
02127228 - GOULDS FORK AT S R 1205 NEAR WADESBORO N C (LAT 34 57 23 LONG 080 07 23)									
OCT , 1977									
26...	10	9	1	5	0	6	2400	210	8
DEC									
07...	<10	<10	0	10	9	1	380	340	4
SANTEE RIVER BASIN--Continued									
02142122 - LOWER LITTLE R TRIB AT SR 1124 NR TAYLORSVILLE N (LAT 35 53 24 LONG 081 13 52)									
DEC , 1977									
07...	--	--	--	--	--	--	--	--	--
MAR , 1978									
10...	<10	<9	1	3	2	1	350	130	10
02142692 - KILLIAN CREEK AT SR 1349 NEAR DENVER N C (LAT 35 32 10 LONG 080 03 13)									
DEC , 1977									
07...	<10	<10	0	3	1	2	1300	450	22
MAR , 1978									
10...	<20	<18	2	3	0	6	18000	240	9
MAY									
04...	--	--	--	--	--	--	--	--	--
02142988 - HENRY FORK TRIB AT SR 1924 NR PLEASANT GROVE N C (LAT 35 39 07 LONG 081 36 28)									
DEC , 1977									
07...	<10	<9	1	3	3	0	90	20	--
MAR , 1978									
10...	10	9	1	2	1	1	1000	610	8
MAY									
04...	--	--	--	--	--	--	--	--	--
TENNESSEE RIVER BASIN--Continued									
03445376 - NORTH FORK MILLS RIVER ABOVE MILLS RIVER N C (LAT 35 24 25 LONG 082 38 47)									
MAR , 1978									
10...	<10	<10	0	4	2	2	1200	50	3
AUG									
07...	--	--	--	--	--	--	--	--	--
03450000 - BEETREE CREEK NEAR SWANNANOA N C (LAT 35 39 11 LONG 082 24 20)									
MAR , 1978									
10...	<10	<10	0	3	2	1	300	0	6
03463292 - LOCUST CREEK NEAR CELO N C (LAT 35 48 42 LONG 082 11 52)									
OCT , 1977									
03...	<10	<7	3	2	0	2	220	50	5
MAR , 1978									
10...	<10	<9	1	3	3	0	70	60	6
03510815 - MINGUS CREEK AT RAVENSFORD (LAT 35 31 12 LONG 083 18 30)									
OCT , 1977									
03...	<10	<10	0	1	1	0	100	10	16
MAR , 1978									
10...	<10	<10	0	3	3	0	20	30	2

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 to SEPTEMBER 1978

DATE	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)
PEE DEE RIVER BASIN--Continued								
02127228 - GOULDS FORK AT S R 1205 NEAR WADESBORO N C (LAT 34 57 23 LONG 080 07 23)								
OCT , 1977								
26...	8	0	<.5	0	10	10	0	62
DEC								
07...	2	2	<.5	0	10	10	0	5
SANTEE RIVER BASIN--Continued								
02142122 - LOWER LITTLE R TRIB AT SR 1124 NR TAYLORSVILLE N (LAT 35 53 24 LONG 081 13 52)								
DEC , 1977								
07...	--	--	--	--	--	--	--	10
MAR , 1978								
10...	7	3	<.5	0	0	0	0	8
02142692 - KILLIAN CREEK AT SR 1349 NEAR DENVER N C (LAT 35 32 10 LONG 080 03 13)								
DEC , 1977								
07...	11	11	<.5	0	20	0	20	17
MAR , 1978								
10...	7	2	<.5	0	40	30	10	482
MAY								
04...	--	--	--	--	--	--	--	318
02142988 - HENRY FORK TRIB AT SR 1924 NR PLEASANT GROVE N C (LAT 35 39 07 LONG 081 36 28)								
DEC , 1977								
07...	--	--	<.5	0	--	--	0	2
MAR , 1978								
10...	3	5	<.5	0	20	20	0	11
MAY								
04...	--	--	--	--	--	--	--	236
TENNESSEE RIVER BASIN--Continued								
03445376 - NORTH FORK MILLS RIVER ABOVE MILLS RIVER N C (LAT 35 24 25 LONG 082 38 47)								
MAR , 1978								
10...	2	1	<.5	0	10	10	0	30
AUG								
07...	--	--	--	--	--	--	--	73
03450000 - BEETREE CREEK NEAR SWANNANOA N C (LAT 35 39 11 LONG 082 24 20)								
MAR , 1978								
10...	1	5	<.5	0	10	10	0	6
03463292 - LOCUST CREEK NEAR CELO N C (LAT 35 48 42 LONG 082 11 52)								
OCT , 1977								
03...	0	5	<.5	0	0	0	0	2
MAR , 1978								
10...	0	6	<.5	0	10	10	0	7
03510815 - MINGUS CREEK AT RAVENSFORD (LAT 35 31 12 LONG 083 18 30)								
OCT , 1977								
03...	11	5	<.5	0	0	0	0	3
MAR , 1978								
10...	0	3	<.5	0	0	0	0	9

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
ROANOKE RIVER BASIN					
02077660 - MAYO CREEK NEAR WOODSDALE N C (LAT 36 31 48 LONG 078 52 42)					
OCT , 1977					
03...	1720	.53	249	.36	--
PAMLICO RIVER BASIN					
02082770 - SWIFT CREEK AT HILLIARDSTON, N. C. (LAT 36 06 42 LONG 077 55 16)					
JUN , 1978					
12...	1225	96	8	2.1	--
SEP					
11...	1130	39	24	2.5	--
02082950 - LITTLE FISHING CREEK NEAR WHITE OAK N C (LAT 36 11 08 LONG 077 52 34)					
JUN , 1978					
12...	1415	55	22	3.3	--
SEP					
08...	1200	23	17	1.1	--
NEUSE RIVER BASIN					
02085500 - FLAT RIVER AT BAHAMA, N. C. (LAT 36 10 57 LONG 078 52 44)					
JUL , 1978					
20...	1205	44	36	4.3	--
AUG					
31...	1145	8.1	12	.26	--
02088315 - BEAVERDAM CREEK NEAR GRANTHAM NC (LAT 35 17 08 LONG 078 15 17)					
JUN , 1978					
19...	1140	.68	11	.02	--
AUG					
09...	1745	1.1	4	.01	--
25...	0945	.04	31	.00	--
02089216 - DAILEYS CREEK NEAR LIDDELL NC (LAT 35 12 30 LONG 077 48 32)					
JUN , 1978					
27...	1435	46	124	15	--
AUG					
09...	1528	3.0	9	.07	--
25...	1250	2.2	5	.03	--
02089222 - BEAR CREEK NEAR PARKSTOWN NC (LAT 35 22 22 LONG 077 48 10)					
JUN , 1978					
22...	1415	1.1	21	.06	--
JUL					
26...	1440	16	22	.95	--
AUG					
09...	1216	1.9	14	.07	--
25...	1458	.34	13	.01	--
02090512 - HOMINY SWAMP AT PHILLIPS ST. AT WILSON NC (LAT 35 42 39 LONG 077 55 01)					
SEP , 1978					
08...	1230	.18	12	.01	--

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
CAPE FEAR RIVER BASIN					
02096960 - HAW RIVER NEAR BYNUM N C (LAT 35 45 48 LONG 079 08 02)					
JUL , 1978					
17...	1258	7080	471	9000	--
AUG					
08...	1500	4200	195	2210	--
02102000 - DEEP RIVER AT MONCURE, N.C. (LAT 35 37 41 LONG 079 06 48)					
SEP , 1978					
01...	1030	244	27	18	--
PEE DEE RIVER BASIN					
02112000 - YADKIN RIVER AT WILKESBORO N C (LAT 36 09 LONG 081 09)					
OCT , 1977					
31...	1150	548	23	34	--
NOV					
08...	1325	5700	2250	34600	10
02125557 - GOURDVINE CREEK AT SR 1715 NEAR OLIVE BRANCH NC (LAT 35 06 02 LONG 080 20 11)					
AUG , 1978					
03...	1400	1.4	241	.91	--
09...	1248	.28	32	.02	--
SEP					
19...	0825	.002	16	.00	--
02125696 - LANE CREEK AT SR 2115 NEAR TRINITY NC (LAT 34 50 39 LONG 080 28 49.01)					
AUG , 1978					
03...	0950	.003	17	.00	--
09...	1540	.30	24	.02	--
21...	1130	.51	32	.04	--
02125699 - WICKER BRANCH AT SR 1940 NEAR TRINITY NC (LAT 34 52 53 LONG 080 26 24.01)					
AUG , 1978					
03...	1145	.62	6	.01	--
09...	1340	.38	35	.04	--
SEP					
19...	1005	.05	6	.00	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
SANTEE RIVER BASIN					
02143040 - JACOB FORK AT RAMSEY, N. C. (LAT 35 35 26 LONG 081 34 02)					
NOV , 1977					
07...	1150	466	179	225	--
02146500 - LITTLE SUGAR CREEK NEAR CHARLOTTE N C (LAT 35 09 13 LONG 080 51 18)					
OCT , 1977					
26...	0520	3690	886	8830	66
TENNESSEE RIVER BASIN					
03448500 - HOMINY CREEK AT CANDLER, N.C. (LAT 35 32 28 LONG 082 40 35)					
OCT , 1977					
19...	1500	52	2	.28	--
03461976 - NORTH TOE RIVER NEAR INGALLS NC (LAT 35 58 42 LONG 082 00 59)					
JAN , 1978					
24...	1255	161	2	.87	--
MAR					
09...	1130	171	11	5.1	--
MAY					
01...	1335	178	5	2.4	--
31...	1125	159	37	16	--
03463021 - NORTH TOE RIVER AT PENLAND NC (LAT 35 55 46 LONG 082 06 57)					
JAN , 1978					
24...	1130	275	77	57	--
MAR					
09...	1300	411	78	87	--
MAY					
01...	1220	470	24	30	--
31...	1245	265	44	31	--

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, 69.92 ft (21.31 m) below land surface datum, Sept. 19, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	69.25	---	67.99	67.27	69.29	66.79	67.57	66.03	66.54	66.76	66.87	68.59
10	69.49	68.79	67.54	67.06	66.36	66.32	66.88	65.95	66.70	66.88	66.89	69.27
15	69.51	68.72	67.43	66.65	66.43	66.60	66.58	65.85	66.83	66.92	66.62	68.81
20	69.09	69.10	67.41	66.59	66.88	66.84	66.26	66.10	66.98	66.99	66.94	69.82
25	68.76	68.81	67.12	66.39	66.62	67.07	66.43	66.39	66.45	66.69	67.77	69.12
EOM	---	68.84	67.23	68.86	67.14	67.46	66.15	66.52	66.88	66.64	68.47	69.17

WTR YR 1978 MEAN 67.35 HIGH 64.94 APR 27 LOW 69.91 SEP 19

353314077041001. Local number, NC-14.
LOCATION.--Lat 35°33'14", long 77°04'10", Hydrologic Unit 03020104, at Washington. Owner: National Spinning Company.
AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 111 ft (33.8 m), drilled to 158 ft (48.2 m), gravel walled to 90 ft (27.4 m).
DATUM.--Land-surface datum is 9.42 ft (2.871 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, at land-surface datum.
REMARKS.--Water levels affected by pumping from nearby wells.
PERIOD OF RECORD.--May 1948 to November 1961, February 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.02 ft (0.31 m) above land-surface datum, Apr. 10, 1964; lowest, 25.37 ft (7.73 m) below land-surface datum, July 22, 1972.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	19.22	7.55	16.28	21.11	20.06	17.79	19.74	13.07	19.59	20.27
2		---	18.99	13.96	16.25	21.22	11.59	19.15	19.77	12.03	19.96	13.96
3		---	18.11	17.94	16.34	21.28	19.57	19.59	15.78	11.76	20.11	10.20
4		---	9.45	18.18	15.31	21.28	20.76	19.74	9.61	11.66	19.79	9.40
5		---	16.21	18.22	13.90	13.29	21.00	20.14	14.69	11.59	13.92	15.37
6		---	18.24	18.52	15.52	20.91	21.07	19.60	19.41	11.52	12.18	18.89
7		---	19.19	18.71	16.52	21.33	21.05	14.76	19.48	11.60	16.10	18.95
8		---	19.50	13.69	16.54	21.09	20.92	18.61	19.59	11.59	19.44	18.53
9		---	18.92	17.36	16.58	21.04	11.41	19.44	19.66	11.48	19.77	13.02
10		---	14.74	18.79	16.62	21.16	18.28	19.37	17.16	15.90	19.93	9.89
11		---	9.43	18.76	15.90	12.44	20.59	19.76	12.01	19.38	20.12	18.68
12		---	17.54	18.80	11.64	8.68	20.77	19.52	14.73	19.43	12.52	19.54
13		---	19.19	16.40	17.04	18.24	20.78	18.96	18.85	19.49	9.63	19.79
14		---	18.94	13.33	21.50	20.76	20.89	10.91	19.28	20.08	17.93	19.90
15		18.70	19.38	9.67	21.12	20.68	20.71	17.54	19.40	18.28	19.82	19.91
16		18.72	18.44	13.41	21.27	20.72	11.25	19.45	19.76	12.61	20.13	20.01
17		19.01	15.57	15.92	21.39	20.99	17.80	19.74	18.36	16.74	20.42	14.24
18		19.35	9.02	16.15	20.92	21.19	20.61	19.80	12.53	19.73	20.36	18.03
19		13.31	15.70	16.27	10.41	11.82	20.39	19.81	16.93	19.84	15.59	19.74
20		8.82	18.55	15.91	19.54	18.85	20.54	19.64	19.63	19.85	13.50	19.92
21		16.98	18.69	15.31	20.81	20.66	20.69	11.06	19.71	20.25	18.98	20.07
22		18.73	18.57	14.92	20.94	21.13	11.93	18.08	20.02	18.56	19.65	20.16
23		18.85	13.40	15.45	21.55	20.92	9.33	19.72	20.04	12.84	20.05	15.18
24		10.07	8.85	15.62	21.10	21.33	17.39	19.81	19.84	19.12	20.16	10.03
25		8.34	8.37	15.61	20.80	11.81	19.94	20.18	13.04	19.40	20.26	15.78
26		7.96	8.13	15.75	12.05	8.73	20.18	19.72	19.10	18.34	19.73	19.65
27		8.13	7.69	16.03	18.47	8.31	20.49	19.02	19.97	19.83	11.05	19.87
28		13.70	7.53	15.32	21.35	18.20	19.81	12.32	19.89	18.94	16.97	20.06
29		18.43	7.44	11.81	---	20.38	20.19	15.49	20.28	12.91	19.92	19.99
30		18.48	7.52	15.00	---	20.58	14.15	19.18	19.58	11.47	20.20	17.19
31		---	7.54	15.53	---	20.62	---	19.60	---	17.73	20.37	---
MEAN		14.85	14.45	15.61	17.77	18.41	18.47	18.31	17.93	16.03	18.00	17.21

WTR YR 1978 MEAN 17.09 HIGH 7.44 LOW 21.55

353227076374001. Local number, NC-15.
LOCATION.--Lat 35°32'27", long 76°37'40", Hydrologic Unit 03020104, Belhaven. Owner: City of Belhaven.
AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 246 ft (75.0 m), drilled to 260 ft (79.2 m), cased to 260 ft (79.2 m).
DATUM.--Land-surface datum is 3.50 ft (1.066 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 5.00 ft (1.52 m) above land-surface datum.
PERIOD OF RECORD.--February 1965 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.25 ft (0.08 m) below land-surface datum, July 24, 1965; lowest, 14.87 ft (4.53 m) below land-surface datum, Oct. 4, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 13	11.78	Dec. 28	11.40	Mar. 21	10.90	June 14	10.93	July 26	11.38	Sept. 6	11.77
Nov. 17	11.63	Feb. 8	11.08	May 3	11.08						

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 (4.252 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.00 ft (0.30 m) below land-surface datum.
PERIOD OF RECORD.--December 1965 to August 1978 (discontinued).
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 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.10	7.08	7.16	7.10	6.76	6.99	7.61	6.49	7.37	8.12		
10	8.84	6.27	7.71	7.42	6.89	6.78	7.58	6.44	7.40	8.89		
15	8.18	6.76	7.36	7.11	6.97	6.88	7.42	6.71	7.67	8.45		
20	8.26	7.04	7.07	6.55	6.79	7.31	7.05	7.01	8.15	8.24		
25	8.12	6.94	6.93	6.32	7.09	7.33	7.08	7.27	8.05	8.49		
EOM	7.15	7.14	7.12	6.85	7.02	7.07	6.47	7.27	8.21	8.63		

WTR YR 1978 MEAN 7.36 HIGH 6.27 NOV 10 LOW 9.16 OCT 6

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, 14.65 ft (4.46 m) below land-surface datum, Mar. 23, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.55	7.72	7.52	7.62	8.79	6.82	6.56	5.65	5.89	7.98	8.17	8.79
10	9.17	---	8.34	7.70	7.34	6.25	6.94	5.32	5.75	7.66	8.57	8.51
15	9.42	---	8.33	8.53	6.28	6.29	7.38	5.17	6.11	7.86	8.92	9.00
20	9.22	7.36	7.64	7.18	6.30	6.46	6.29	5.89	6.38	7.78	8.51	9.30
25	9.19	7.46	7.11	6.79	6.89	8.81	6.28	5.98	6.91	8.75	9.39	9.29
EOM	8.23	7.94	7.44	7.52	6.94	7.06	5.63	5.92	7.65	8.20	9.34	9.84

WTR YR 1978 MEAN 7.58 HIGH 5.08 MAY 9 LOW 13.51 MAR 23

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 (17.568 m) National Geodetic Vertical Datum of 1929.
PERIOD OF RECORD.--January 1972 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 36.94 ft (11.26 m) NGVD, Feb. 3, 1972; lowest, 30.86 ft (9.41 m) NGVD, Dec. 7, 1973.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	33.20	34.11	35.34	35.72	36.23	35.94	35.83	35.76	35.16	33.93	33.16	32.71
10	33.17	34.52	35.16	35.83	36.23	36.13	35.73	35.77	35.02	33.61	33.14	32.54
15	33.23	34.68	35.40	35.98	36.13	36.01	35.59	35.80	34.83	33.24	33.08	32.37
20	33.20	34.86	35.43	36.27	36.12	35.95	35.66	35.68	34.73	33.17	33.02	32.18
25	33.35	35.18	35.62	36.27	36.07	35.90	35.56	35.57	34.54	33.17	32.95	31.96
EOM	33.73	35.21	35.73	36.17	36.00	35.90	35.66	35.36	34.29	33.12	32.82	31.71

WTR YR 1978 MEAN 34.70 MAX 36.34 JAN 26 MIN 31.71 SEP 30

352615077083402. Local number, NC-138.
LOCATION.--Lat 36°26'15", long 77°08'34", Hydrologic Unit, 03020202, near Wilmar. Owner: N.C. Department of Transportation.
AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in (0.10 m), depth 12 ft (3.7 m), cased to 7 ft (2.1 m).
DATUM.--Measuring point: Top of casing, 58.14 ft (17.721 m) National Geodetic Vertical Datum of 1929.
PERIOD OF RECORD.--August 1971 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 57.39 ft (17.49 m) NGVD, Nov. 6, 1977; lowest, 51.70 ft (15.76 m) NGVD, Dec. 7, 1973.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	56.87	---	56.85	56.87	56.86	56.62	57.04	55.78	53.61	54.50	52.62
10	---	56.91	---	56.94	56.77	57.05	56.30	56.94	56.37	53.28	53.99	52.44
15	56.33	56.74	---	56.97	56.71	56.85	56.62	56.72	55.36	53.10	53.64	52.26
20	56.07	56.62	56.89	57.27	56.83	56.71	56.92	56.38	54.71	53.40	53.25	---
25	55.66	56.70	56.94	57.10	56.75	56.60	56.75	55.90	54.28	53.44	52.96	---
EOM	56.78	---	57.05	56.88	56.72	56.81	56.93	55.27	53.86	53.43	52.72	---

WTR YR 1978 MEAN 55.67 MAX 57.27 JAN 20 MIN 52.12 SEP 19

BERTIE COUNTY

355930076570001. Local number, NC-32.
LOCATION.--Lat 35°59'30", long 76°57'00", Hydrologic Unit 03010107, at Windsor. Owner: Town of Windsor.
AQUIFER.--Sand of Black Creek Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 78 ft (23.8 m), drilled to 360 ft (106.7 m), gravel-walled.
DATUM.--Land-surface datum is 28.38 ft (8.650 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 1.40 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 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	30.71	29.07	27.77	27.71	27.14	27.33	26.80	26.67	26.26	27.26	27.82	27.88
10	30.67	28.30	27.84	27.52	27.19	26.87	26.90	26.67	26.74	27.78	27.53	28.28
15	30.19	28.44	27.72	27.65	27.24	26.81	27.12	26.31	26.67	27.72	27.60	28.48
20	29.88	28.26	27.56	27.42	27.08	26.89	26.92	26.46	26.73	27.56	27.74	28.37
25	29.83	28.01	27.40	27.24	27.10	27.02	27.03	26.35	26.77	27.72	27.68	28.25
EOM	29.60	28.00	27.61	27.16	27.11	26.73	26.74	26.27	27.09	27.64	27.64	28.27

WTR YR 1978 MEAN 27.62 HIGH 26.24 MAY 16 AND OTHERS LOW 31.08 OCT 1

BRUNSWICK COUNTY

335535078011001. Local number, NC-22
LOCATION.--Lat 33°55'35", long 78°01'10", Hydrologic Unit 03030005, at Southport. Owner: Town of Southport.
AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 10 in (0.25 m), depth 163 ft (49.7 m), cased to 60 ft (18.3 m).
DATUM.--Land-surface datum is 20.5 ft (6.25 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 5.27 ft (1.61 m) above land-surface datum.
REMARKS.--Water levels affected by pumping from nearby municipal wells.
PERIOD OF RECORD.--February 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.14 ft (4.61 m) below land-surface datum, Mar. 29, 1965; lowest, 31.90 ft (9.72 m) below land-surface datum, Apr. 16, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.75	22.23	22.07	22.19	21.51	21.81	21.80	19.96	21.27	21.41	22.27	21.16
10	23.36	21.89	22.06	22.15	21.32	21.53	21.24	20.55	19.27	20.24	22.22	21.09
15	22.51	22.08	23.61	22.39	21.82	21.82	21.69	21.10	19.44	21.75	21.45	21.38
20	22.77	22.29	22.12	21.52	21.64	22.01	21.37	21.57	22.00	21.98	21.61	21.23
25	22.83	21.82	22.06	21.20	21.90	21.97	18.66	21.52	20.60	22.33	21.38	21.20
EOM	22.26	22.11	22.16	21.43	21.80	21.76	19.43	21.31	22.32	21.92	21.32	20.94

WTR YR 1978 MEAN 21.62 HIGH 17.78 MAY 2 LOW 25.78 DEC 16

CARTERET COUNTY

344323076451301. Local number, NC-139.
LOCATION.--Lat 34°43'23", long 76°45'13", Hydrologic Unit 03020106, Morehead City. Owner: North Carolina Department of Natural and Economic Resources.
AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 192 ft (58.5 m), cased to 180 ft (54.9 m).
DATUM.--Land-surface datum is 8.72 ft (2.658 m) National Geodetic Vertical Datum of 1929 (levels by N.C. Department of Natural and Economic Resources). Measuring point: Top of casing, 1.73 ft (0.53 m) above land-surface datum.
PERIOD OF RECORD.--January 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.23 ft (1.29 m) below land-surface datum, Dec. 7, 1976; lowest, 8.52 ft (2.60 m) below land-surface datum, Sept. 23, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.78	---	5.43	5.20	---	5.09	---	5.20	6.08	6.93	7.35	7.57
10	---	---	5.97	---	5.19	5.06	---	5.41	6.30	7.24	7.66	7.75
15	---	6.06	---	5.45	5.18	5.29	---	5.32	6.56	7.43	7.60	7.52
20	---	6.00	---	5.45	5.09	5.49	5.14	5.71	7.11	7.48	7.69	7.74
25	---	5.96	---	5.79	5.21	5.71	5.30	6.04	6.98	7.55	7.76	7.66
EOM	---	---	5.76	---	5.18	5.84	5.18	6.06	7.12	7.68	7.73	7.50

WTR YR 1978 MEAN 6.29 HIGH 5.05 MAR 3 LOW 8.00 SEP 23

CHOWAN COUNTY

361842076364001. Local number, NC-31.
LOCATION.--Lat 36°18'42", long 76°36'40", Hydrologic Unit 03010203, near Gliden. Owner: U.S. Geological Survey.
AQUIFER.--Beaufort Formation of Paleocene age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 2 in (0.05 m), depth 242 ft (73.8 m), cased to 232 ft (70.7 m), screened from 232 ft (70.7 m) to 242 ft (73.8 m).
DATUM.--Land-surface datum is 37.50 (11.430 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.05 ft (0.62 m) above land-surface datum.
PERIOD OF RECORD.--October 1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.12 ft (4.61 m) below land-surface datum, Feb. 25, 1965; lowest measured, 18.40 ft (5.61 m) below land-surface datum, Sept. 5, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 5	18.33	Dec. 30	17.94	Mar. 23	17.89	June 20	18.06	July 25	18.19	Sept. 5	18.40
Nov. 15	17.95	Feb. 10	17.84	May 5	17.52						

361427076393001. Local number, NC-58.
LOCATION.--Lat 36°14'27", long 76°39'30", Hydrologic Unit 03010203, Chowan County High School, near Icaria.
Owner: Chowan County Board of Education.
AQUIFER.--Sands of Paleocene age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 320 ft (97.5 m), reported cased to 320 ft (97.5 m).
DATUM.--Land-surface datum is 26.58 ft (8.102 m) National Geodetic Vertical DAtum of 1929. Measuring point: Top of casing, 0.90 ft (0.27 m) above land-surface datum.
PERIOD OF RECORD.--June 1955 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.91 ft (2.41 m) below land-surface datum, Mar. 13, 1957; lowest measured, 13.38 ft (4.08 m) below land-surface datum, Oct. 5, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 5	13.38	Dec. 30	11.95	Mar. 23	11.64	June 20	11.60	July 25	11.62	Sept. 5	11.94
Nov. 15	12.10	Feb. 10	12.79	May 5	11.35						

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, 0.03 ft (0.009 m) above land-surface datum, May 4, 1978; 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 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.43	.94	2.72	1.17	---	.74	1.87	.55	1.66	3.78	2.82	4.78
10	6.55	.97	3.13	.79	1.30	.46	2.48	.65	.53	4.25	3.98	5.18
15	2.00	1.60	.62	.73	1.42	1.09	2.81	.57	1.79	4.06	1.17	5.54
20	4.43	2.44	.73	.48	.88	1.54	2.21	1.48	2.95	2.06	2.96	5.82
25	5.15	2.71	.85	---	1.01	1.69	3.20	1.46	1.95	3.02	3.94	6.06
EOM	1.40	2.55	.56	---	1.17	1.25	1.24	2.63	3.26	4.10	4.40	6.27

WTR YR 1978 MEAN 2.44 HIGH .42 MAY 8 LOW 6.57 OCT 12

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, 22.98 ft (7.00 m) below land-surface datum, Sept. 7, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 11	22.94	Dec. 20	22.73	Mar. 22	22.70	June 12	22.66	July 27	22.78	Sept. 7	22.98
Nov. 14	22.76	Feb. 7	22.72	May 1	22.64						

351049077175501. Local number, NC-44.
LOCATION.--Lat 35°10'49", long 77°17'55", Hydrologic Unit 03020202, Cove City. Owner: City of New Bern.
AQUIFER.--Black Creek Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 2 in (0.05 m), depth 854 ft (260.3 m), multi-screened. Screened intervals: 705-715 ft (214.9-217.9 m), 781-786 ft (238.0-239.6 m), 828-833 ft (252.4-253.9 m).
DATUM.--Land-surface datum is 36.73 ft (11.195 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 2.06 ft (0.63 m) above land-surface datum.
REMARKS.--Water levels affected by nearby pumping.
PERIOD OF RECORD.--March 1965 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.01 ft (1.83 m) below land-surface datum, Aug. 25-26, 1965; lowest measured, 83.62 ft (25.49 m) below land-surface datum, Aug. 15, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	77.81	77.05	76.51	74.17	74.48	76.48	76.58	76.38	78.27	79.18	---	---
10	77.94	76.40	75.17	76.57	76.56	76.48	76.94	77.98	78.55	79.89	---	---
15	77.50	---	73.91	77.44	76.63	76.82	76.80	77.29	79.74	---	---	---
20	76.27	76.23	76.40	74.16	76.15	77.09	76.27	77.45	80.54	---	79.70	---
25	77.52	78.09	76.24	75.30	77.62	76.82	76.34	77.91	78.52	---	80.35	---
EOM	75.54	78.27	77.38	77.01	77.05	76.78	76.37	78.26	79.36	---	81.89	82.23

WTR YR 1978 MEAN 77.42 HIGH 73.91 DEC 15 LOW 82.42 SEP 2 AND OTHERS

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, 1.42 ft (0.43 m) below land-surface datum, Jan. 19, 1978; 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 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.43	6.37	4.65	4.10	3.29	3.53	3.99	---	5.40	7.39	8.28	6.83
10	10.61	4.66	4.87	3.75	3.56	3.41	4.44	2.90	4.73	7.87	8.66	7.30
15	9.57	5.03	4.79	3.37	3.90	3.59	---	3.19	4.87	8.19	8.16	7.87
20	9.15	5.54	4.59	2.79	3.77	4.01	---	3.73	5.59	8.54	6.91	8.41
25	9.34	4.91	4.11	2.85	3.90	4.35	---	4.28	6.24	8.48	7.26	8.88
EOM	6.28	4.85	4.12	3.10	4.07	3.62	---	4.85	6.85	7.85	7.01	9.29

WTR YR 1978 MEAN 5.73 HIGH 2.63 JAN 26 LOW 10.66 OCT 11

350904077130601. Local number, NC-48.
LOCATION.--Lat 35°09'04", long 77°13'06", Hydrologic Unit 03020202, Tuscarora. Owner: International Paper Company.
AQUIFER.--Sand of Black Creek Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 2 in (0.05 m), depth 310 ft (94.5 m), drilled to 887 ft (270.4 m), cased to 440 ft (134.1 m).
DATUM.--Altitude of land-surface datum is 38 ft (12 m). Measuring point: Top of casing, 2.60 ft (0.79 m) above land-surface datum.
PERIOD OF RECORD.--November 1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.55 ft (0.17 m) above land-surface datum, June 24, 1963; lowest, 7.58 ft (2.31 m) below land-surface datum, Sept. 29, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.94	6.74	6.65	6.87	6.88	6.88	6.97	6.84	7.10	7.30	7.31	7.33
10	6.90	6.64	6.86	6.80	6.82	6.69	6.98	6.89	7.07	7.34	7.35	7.40
15	6.72	6.78	6.70	6.74	6.89	6.85	6.96	6.87	7.18	7.33	7.34	7.45
20	6.78	6.85	6.74	6.61	6.83	6.98	6.80	7.03	7.21	7.39	7.37	7.48
25	6.87	6.64	6.67	6.68	6.85	6.97	6.91	7.03	7.23	7.34	7.40	7.52
EOM	6.75	6.74	6.73	6.88	6.89	6.94	6.88	7.06	7.26	7.30	7.45	7.57

WTR YR 1978 MEAN 7.00 HIGH 6.58 NOV 7 LOW 7.57 SEP 30

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 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	33.08	32.87	32.73	32.70	32.44	32.37	32.26	31.97	32.16	32.28	32.71	32.86
10	32.96	32.83	32.95	32.62	32.37	32.08	32.21	31.95	32.12	32.36	32.71	32.94
15	32.86	32.90	32.72	32.52	32.40	32.17	32.22	31.89	32.28	32.40	32.78	32.95
20	32.92	32.96	32.69	32.38	32.35	32.28	32.00	32.02	32.31	32.48	32.75	33.02
25	32.97	32.79	32.55	32.31	32.29	32.25	32.09	32.04	32.29	32.52	32.79	33.13
EOM	32.98	32.88	32.62	32.44	32.34	32.38	32.04	32.08	32.22	32.56	32.84	33.15

WTR YR 1978 MEAN 32.52 HIGH 31.86 MAY 14 LOW 33.17 SEP 23 AND OTHERS

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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 1	19.80	Dec. 3	17.92	Feb. 11	16.11	Apr. 15	17.33	June 17	18.39	Aug. 19	18.40
8	20.01	10	17.39	18	16.45	22	16.91	25	17.70	26	18.66
15	20.13	17	17.60	25	16.76	29	16.81	July 1	17.91	Sept. 2	18.96
22	20.32	24	17.66	Mar. 4	17.01	May 6	15.32	10	18.23	9	18.95
29	18.80	31	17.76	11	15.40	13	15.69	15	18.24	16	19.17
Nov. 5	16.83	Jan. 7	17.93	18	16.33	20	16.15	22	18.40	25	19.42
14	18.02	14	16.20	25	16.51	26	16.42	29	18.62	30	19.60
19	18.27	21	15.11	Apr. 1	16.05	June 3	16.80	Aug. 5	18.81		
26	18.31	Feb. 6	16.00	8	16.36	12	17.16	12	18.25		

DUPLIN COUNTY

350030078060001. Local number, NC-69.
LOCATION.--Lat 35°00'30", long 78°06'00", Hydrologic Unit 03030006, at Warsaw. Owner: City of Warsaw.
AQUIFER.--Black Creek Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 10 in (0.25 m), depth 102 ft (31.1 m), believed cased to 102 ft (31.1 m).
DATUM.--Altitude of land-surface datum is 145 ft (44 m). Measuring point: Top of casing, 1.00 ft (0.30 m) above land-surface datum.
REMARKS.--Water levels affected by intermittent pumping from nearby municipal wells.
PERIOD OF RECORD.--January 1963 to October 1964, January 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 43.69 ft (13.32 m) below land-surface datum, Feb. 23, 1967; lowest, 49.89 ft (15.21 m) below land-surface datum, Aug. 23, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47.58	47.11	46.76	46.58	46.16	45.83	45.65	45.37	46.90	46.92	47.30	46.54
2	47.28	47.10	46.80	46.56	46.11	45.86	45.66	45.38	46.91	46.71	46.65	46.53
3	47.74	47.36	46.79	46.59	46.09	45.78	45.70	45.38	46.48	46.58	46.34	46.54
4	47.82	47.80	46.80	46.61	46.08	45.77	45.66	45.31	46.22	46.55	46.42	46.61
5	47.88	47.46	46.75	46.57	45.97	45.82	45.79	45.31	46.66	46.55	46.46	46.88
6	47.56	47.05	46.71	46.52	45.84	45.82	45.86	45.35	47.00	46.57	46.45	46.71
7	47.79	47.00	46.79	46.49	45.92	45.82	46.05	45.41	47.12	46.57	46.42	46.66
8	47.55	47.05	46.81	46.46	45.93	45.80	45.93	45.38	47.21	46.58	46.42	46.66
9	47.26	46.99	46.77	46.35	45.84	45.76	45.76	45.72	47.19	46.59	46.42	46.67
10	47.20	47.47	46.81	46.45	45.94	45.59	45.72	45.62	46.68	47.12	46.43	46.71
11	47.17	47.26	46.84	46.44	45.97	45.70	45.95	45.81	46.40	47.47	46.39	46.73
12	47.14	47.05	46.86	46.44	45.98	45.71	46.03	45.67	46.31	47.57	46.40	46.72
13	47.04	47.03	46.71	46.35	45.95	45.74	46.19	45.48	46.83	47.64	46.41	46.74
14	46.98	47.01	46.72	46.31	45.93	45.71	45.93	45.38	47.11	47.62	46.39	46.79
15	47.01	46.97	46.61	46.33	45.96	45.67	45.69	45.31	46.88	47.09	46.41	46.80
16	47.00	46.93	46.66	46.37	45.95	45.65	45.68	45.38	47.22	46.77	46.41	46.79
17	47.02	46.89	46.65	46.30	45.92	45.69	45.66	45.44	46.87	47.22	46.43	46.82
18	47.02	46.90	46.62	46.25	45.89	45.76	45.55	45.76	46.57	47.52	46.45	46.86
19	47.02	46.93	46.62	46.24	45.86	45.78	45.83	46.12	46.88	47.58	46.48	46.89
20	47.04	46.94	46.64	46.13	45.91	45.78	45.72	45.86	47.30	47.65	46.46	46.91
21	47.08	46.93	46.55	46.17	46.29	45.75	45.42	45.69	47.43	47.67	46.47	46.94
22	47.09	46.92	46.59	46.22	45.95	45.72	45.47	46.24	47.38	47.16	46.47	46.96
23	47.11	46.89	46.64	46.32	45.92	45.72	45.51	46.54	47.28	46.90	46.50	46.99
24	47.13	46.88	46.63	46.52	45.89	45.74	45.70	46.59	46.87	47.37	46.54	47.01
25	47.11	46.84	46.57	46.17	45.88	45.75	45.69	46.69	46.63	47.69	46.54	46.98
26	47.47	46.78	46.60	46.02	45.90	45.70	45.65	46.81	47.17	47.66	46.54	47.00
27	47.42	46.86	46.61	46.05	45.91	45.63	45.63	46.33	47.44	47.67	46.55	47.01
28	47.74	46.85	46.63	46.06	45.89	45.64	45.44	46.05	47.46	47.72	46.58	47.01
29	47.42	46.85	46.64	46.08	---	45.65	45.44	45.97	47.46	47.11	46.53	47.07
30	47.18	46.82	46.64	46.17	---	45.65	45.41	46.49	47.40	46.78	46.50	47.09
31	47.15	---	46.56	46.16	---	45.65	---	46.80	---	47.25	46.53	---
MEAN	47.29	47.03	46.69	46.33	45.96	45.73	45.71	45.83	46.98	47.16	46.49	46.82

WTR YR 1978 MEAN 46.50 HIGH 45.31 LOW 47.88

EDGECOMBE COUNTY

355845077264501. Local number, NC-72.
LOCATION.--Lat 35°58'45", long 77°26'45", Hydrologic Unit 03020102, Speed. Owner: Melvin Howell.
AQUIFER.--Sands of Tuscaloosa Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diamter 4 in (0.10 m), depth 94 ft (28.7 m), drilled to 100 ft (30.5 m), cased to 95 ft (29.0 m).
DATUM.--Land-surface datum is 54.51 (16.615 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.90 ft (0.58 m) above land-surface datum.
PERIOD OF RECORD.--March 1946 to May 1965, April 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.17 ft (0.05 m) below land-surface datum, Sept. 27, 1955; lowest measured, 12.16 ft (3.71 m) below land-surface datum, June 11, 1953.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.90	8.07	6.99	6.46	---	---	5.68			---	7.57	7.21
10	8.90	7.67	6.85	6.16	5.85	---	5.90			---	7.63	7.37
15	8.57	7.55	6.80	---	---	---	6.02			---	7.58	7.25
20	8.57	7.41	6.62	---	---	---	5.98			---	7.60	7.41
25	8.59	7.23	6.49	---	---	5.79	6.10			7.49	7.59	7.48
EOM	8.29	7.13	6.45	---	---	5.62	5.69			7.59	7.43	7.57

WTR YR 1978 MEAN 7.16 HIGH 5.58 APR 1 LOW 8.95 OCT 6 AND OTHERS

GATES COUNTY

362044076362301. Local number, NC-30.
LOCATION.--Lat 36°20'44", long 76°36'23", Hydrologic Unit 03010203, Hobbsville. Owner: Mrs. T. W. Blanchard.
AQUIFER.--Black Creek Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 494 ft (150.6 m), believed cased to 494 ft (150.6 m).
DATUM--Land-surface datum is 38.16 ft (11.631 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.50 ft (0.15 m) above land-surface datum.
PERIOD OF RECORD.--November 1961 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.40 ft (5.61 m) below land-surface datum, Mar. 8, 1962; lowest measured, 23.24 ft (7.08 m) below land-surface datum, Sept. 5, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 5	23.10	Dec. 30	22.65	Mar. 23	22.65	June 20	22.84	July 25	22.83	Sept. 5	23.24
Nov. 15	22.71	Feb. 10	22.56	May 5	22.52						

362751076484701. Local number, NC-54.
LOCATION.--Lat 36°27'51", long 76°48'47", Hydrologic Unit 03010203, Roduco. Owner: James Wright.
AQUIFER.--Beaufort Formation of Paleocene age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 231 ft (70.4 m), cased to 217 ft (66.1 m).
DATUM.--Land-surface datum is 37.35 ft (11.384 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 1.80 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, 18.61 ft (5.67 m) below land-surface datum, Feb. 10-11, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.80	16.50	16.39	16.52	16.85	---	16.71	---	16.76	16.85	16.98	16.87
10	16.94	16.55	16.40	16.51	18.55	---	16.61	---	16.53	16.97	17.20	16.79
15	17.41	16.52	16.45	16.66	---	---	16.56	16.42	16.55	17.01	17.03	17.45
20	16.69	16.52	16.47	16.39	---	---	16.42	16.50	16.58	17.01	16.93	17.30
25	16.83	16.42	16.61	16.54	---	16.75	16.35	16.46	16.76	17.04	16.97	17.89
EOM	16.57	16.44	16.52	16.60	---	16.67	---	16.55	16.92	17.24	16.98	17.38

WTR YR 1978 MEAN 16.77 HIGH 16.30 NOV 26 AND OTHERS LOW 18.55 FEB 10

HARNETT COUNTY

352052078372801. Local number, HR-52.
LOCATION.--Lat 35°20'52", long 78°37'28", Hydrologic Unit 03030006, at SR 1722 near Dunn. Owner: U.S. Geological Survey.
AQUIFER.--Fluvial deposits of sand and clay of Pliestocene age.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 8.4 ft (2.56 m), cased to 8.4 ft (2.56 m).
DATUM.--Measuring point: File cut on top of casing, 178.83 ft (54.507 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).
PERIOD OF RECORD.--July 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 176.41 ft (53.77 m) NGVD, Nov. 7, 1977; lowest, 170.45 ft (51.95 m) NGVD, Sept. 8, 1977.

WATER LEVEL, IN FEET NGVD, 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
July 13	173.40	Aug. 1	170.65	Aug. 16	170.49	Sept. 8	170.45	Sept. 15	174.84	Sept. 22	174.38
July 18	171.65	Aug. 2	171.02	Sept. 1	170.61	Sept. 13	175.70	Sept. 19,	174.32		

WATER LEVEL, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 4	173.55	Nov. 30	175.20	Jan. 14	176.05	May 12	176.07	June 19	174.03	Aug. 10	173.57
Oct. 14	174.57	Jan. 9	175.71	Feb. 14	175.25	May 31	174.32	July 25	173.15	Aug. 31	172.07
Nov. 7	176.41	Jan. 11	175.60	Mar. 29	175.38						

352052078372802. Local number HR-53.
LOCATION.--Lat 35°20'52", long 78°37'28", Hydrologic Unit 03030006, at SR 1722 near Dunn. Owner: U.S. Geological Survey.
AQUIFER.--Fluvial deposits of sand and clay of Pliestocene age.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 8.4 ft (2.56 m), cased to 8.4 ft (2.56 m).
DATUM.--Measuring point: File cut on top of casing, 179.04 ft (54.571 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).
PERIOD OF RECORD.--July 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 176.26 ft (53.72 m) NGVD, Nov. 7, 1977; lowest, 170.44 ft (51.95 m) NGVD, Aug. 1, 1977.

WATER LEVELS, IN FEET NGVD, 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
July 13	172.40	Aug. 1	170.44	Aug. 16	170.49	Sept. 8	171.96	Sept. 15	174.96	Sept. 22	174.27
July 18	171.50	Aug. 2	171.03	Sept. 1	170.84	Sept. 13	175.60	Sept. 19	174.53		

WATER LEVELS, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 4	173.38	Nov. 30	175.15	Jan. 14	175.99	May 12	175.98	June 19	174.07	Aug. 10	173.67
Oct. 14	174.98	Jan. 9	175.57	Feb. 14	175.22	May 31	174.24	July 25	173.20	Aug. 31	172.04
Nov. 7	176.26	Jan. 11	175.52	Mar. 29	174.35						

352052078372201. Local number, HR-54.
LOCATION.--Lat 35°20'52", long 78°37'22", Hydrologic Unit 03030006, at SR 1722 near Dunn. Owner: U.S. Geological Survey.
AQUIFER.--Fluvial deposits of sand and clay of Pliestocene age.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 7.5 ft (2.29 m), cased to 7.5 ft (2.29 m).
DATUM.--Measuring point: File cut on top of casing, 178.08 ft (54.279 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).
PERIOD OF RECORD.--July 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 176.77 ft (53.88 m) NGVD, Apr. 29, 1978; lowest, 172.86 ft (52.69 m) NGVD, Aug. 1, 1977.

WATER LEVEL, IN FEET NGVD, 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
July 13	175.10	Aug. 1	172.86	Aug. 16	174.72	Sept. 8	175.77	Sept. 15	175.56	Sept. 22	175.27
July 18	173.82	Aug. 2	174.63	Sept. 1	173.65	Sept. 13	175.90	Sept. 19	175.49		

WATER LEVEL, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 4	174.30	Nov. 30	175.76	Jan. 14	176.31	Apr. 29	176.77	May 31	175.35	Aug. 10	175.19
Oct. 14	176.02	Jan. 9	175.96	Feb. 14	175.89	May 5	175.96	June 19	175.33	Aug. 31	174.19
Nov. 7	176.61	Jan. 11	175.92	Mar. 29	175.93	May 12	176.14	July 25	176.41		

HARNETT COUNTY--Continued

351659078381501. Local number, HR-55.
LOCATION.--Lat 35°16'59", long 78°38'15", Hydrologic Unit 03030006, at Secondary Road 1780 near Dunn. 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 8.0 ft (2.44 m), cased to 8.0 ft (2.44 m).
DATUM.--Measuring point: File cut on top of casing, 155.76 ft (47.475 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).
PERIOD OF RECORD.--July 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 152.85 ft (46.59 m) NGVD, Apr. 29, 1978; lowest, 149.99 ft (45.72 m) NGVD, July 20, 1977.

ELEVATION, IN FEET NGVD, WATER YEAR JULY 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5												
10										---	150.24	150.06
15										---	150.13	151.02
20										---	150.18	151.56
25										150.00	150.38	150.93
EOM										150.01	150.34	150.62
										150.01	150.12	150.50

WTR YR 1977 MEAN 150.43 MAX 152.57 SEP 12 MIN 150.00 JUL 19 AND OTHERS

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	150.23	151.30	151.54	151.74	151.74	151.63	151.33	151.66	150.50	150.20	---	150.36
10	150.24	152.28	151.50	151.76	151.60	152.07	151.11	151.96	151.19	150.09	150.51	150.18
15	150.95	151.66	151.36	152.02	151.48	152.18	151.14	151.65	151.40	150.44	150.33	150.21
20	151.34	---	151.84	152.41	151.48	151.72	151.30	151.61	150.58	150.36	150.17	150.12
25	150.90	---	151.90	152.24	151.46	151.52	151.29	151.01	150.37	150.18	150.09	150.08
EOM	151.75	151.50	151.77	152.03	151.46	151.49	152.61	150.64	150.35	---	150.32	150.03

WTR YR 1978 MEAN 151.18 MAX 152.83 APR 29 MIN 150.03 SEP 29 AND OTHERS

351659078381502. Local number, HR-56.
LOCATION.--Lat 35°16'59", long 78°38'15", Hydrologic Unit 03030006, at SR 1780 near Dunn. Owner: U.S. Geological Survey.
AQUIFER.--Fluvial deposits of sand and clay of Pliestocene age.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 10.8 ft (3.29 m), cased to 10.8 ft (3.29 m).
DATUM.--Measuring point: File cut on top of casing, 156.61 ft (47.735 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).
PERIOD OF RECORD.--July 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 152.24 ft (46.40 m) NGVD, Apr. 27, 1978; lowest, 149.42 ft (45.54 m) NGVD, Aug. 1, 1977.

WATER LEVEL, IN FEET NGVD, 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
July 13	149.58	Aug. 1	149.42	Aug. 16	149.79	Sept. 8	150.41	Sept. 15	151.56	Sept. 22	150.66
July 18	149.55	Aug. 2	149.62	Sept. 1	149.78	Sept. 13	152.15	Sept. 19	151.01		

WATER LEVEL, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 4	150.03	Nov. 30	151.46	Jan. 14	151.88	Apr. 27	152.24	May 12	152.01	July 25	150.21
Oct. 14	150.66	Jan. 9	151.62	Feb. 14	151.46	Apr. 29	151.81	May 31	150.63	Aug. 10	150.40
Nov. 7	151.64	Jan. 11	151.66	Mar. 29	151.45	May 5	151.62	June 19	150.54	Aug. 31	150.01

HARNETT COUNTY--Continued

351657078381001. Local number, HR-57.
LOCATION.--Lat 35°16'57", long 78°38'10", Hydrologic Unit 03030006, at SR 1780 near Dunn. Owner: U.S. Geological Survey.
AQUIFER.--Fluvial deposits of sand and clay of Pliestocene age.
WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 6.8 ft (2.07 m), cased to 6.8 ft (2.07 m).
DATUM.--Measuring point: File cut on top of casing, 159.32 ft (48.561 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).
PERIOD OF RECORD.--July 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 157.93 ft (48.13 m) NGVD, Jan. 14 and May 5, 1978; lowest, 156.62 ft (47.74 m) NGVD, Aug. 1, 1977.

WATER LEVEL, IN FEET NGVD, 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
July 13	157.20	Aug. 1	156.62	Aug. 16	157.23	Sept. 8	157.70	Sept. 15	157.28	Sept. 22	157.26
July 18	156.83	Aug. 2	156.91	Sept. 1	157.04	Sept. 13	157.35	Sept. 19	157.45		

WATER LEVEL, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 4	157.14	Nov. 30	157.50	Jan. 14	157.93	Apr. 27	157.91	May 12	157.87	July 25	157.61
Oct. 14	157.73	Jan. 9	157.84	Feb. 14	157.86	Apr. 29	157.86	May 31	157.84	Aug. 10	157.87
Nov. 7	157.83	Jan. 11	157.76	Mar. 29	157.82	May 5	157.93	June 19	157.59	Aug. 31	157.38

HAYWOOD COUNTY

352315082484401. Local number, NC-40.
LOCATION.--Lat 35°23'15", long 82°48'44", Hydrologic Unit 06010106, near Cruso. Owner: Champion Paper and Fiber Company
AQUIFER.--Phyllitic rock of the Snowbird Group of Precambrian age.
WELL CHARACTERISTICS.--Dug observation water-table well, diameter 12 in (0.30 m), depth 19 ft (5.8 m), cased to 19 ft (5.8 m).
DATUM.--Land surface datum is 3,148.26 ft (959.590 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.00 ft (0.30 m) above land-surface datum.
PERIOD OF RECORD.--December 1955 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.24 ft (0.38 m) below land-surface datum, Mar. 12, 1977; lowest, 6.27 ft (1.91 m) below land-surface datum, Nov. 1, 1963.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.15	3.61	3.66	4.23	3.30	4.07	4.04	4.00	4.42	4.75	5.13	5.44
10	5.03	4.16	3.92	3.87	3.47	3.34	4.02	4.08	4.41	4.82	4.42	5.53
15	5.14	4.26	3.97	4.12	3.63	3.96	4.03	4.13	4.37	4.90	4.74	5.46
20	5.21	3.99	4.05	3.73	3.79	4.15	4.04	4.26	4.42	4.99	5.02	5.55
25	4.87	3.89	4.00	2.98	3.92	3.86	4.10	4.31	4.55	4.99	5.17	5.61
EOM	4.88	3.86	4.17	3.38	4.00	4.02	4.12	4.31	4.67	5.12	5.33	5.68

WTR YR 1978 MEAN 4.39 HIGH 2.88 JAN 26 LOW 5.68 SEP 30

HERTFORD COUNTY

362845077005501. Local number, NC-55.
LOCATION.--Lat 36°28'45", long 77°00'55", Hydrologic Unit 03010203, Como. Owner: Charles DeLoatch.
AQUIFER.--Sands of Tuscaloosa Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 2 in (0.05 m), depth 340 ft (103.6 m), cased to 340 ft (103.6 m).
DATUM.--Land-surface datum is 28.40 ft (8.656 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.79 ft (0.85 m) above land-surface datum.
REMARKS.--Measuring point was changed in December 1975.
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, 89.69 ft (27.34 m) below land-surface datum, Sept. 5, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 5	87.68	Jan. 4	87.44	Mar. 22	87.71	June 21	88.90	July 25	89.35	Sept. 5	89.69
Nov. 15	87.22	Feb. 9	87.48	May 4	87.82						

HERTFORD COUNTY--Continued

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 (3.989 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 4.89 ft (1.49 m) above land-surface datum.
PERIOD OF RECORD.--February 1964 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.26 ft (1.91 m) above land-surface datum, Apr. 8, 1964; lowest, 1.12 ft (0.34 m) below land-surface datum, Sept. 25, 1971.

WATER LEVEL, IN FEET ABOVE LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 5	0.01	Jan. 4	0.26	Mar. 22	0.22	June 21	0.02	July 25	-0.02	Sept. 5	-0.3
Nov. 14	0.48	Feb. 9	0.23	May 4	1.18						

362351076555401. Local number, NC-82.
LOCATION.--Lat 36°23'51", long 76°55'54", Hydrologic Unit 03010203, Winton. Owner: Town of Winton.
AQUIFER.--Sand of Black Creek Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 283 ft (86.3 m), drilled to 309 ft (94.2 m), cased to 237 ft (72.2 m).
DATUM.--Land-surface datum is 41.70 ft (12.710 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 0.70 ft (0.21 m) above land-surface datum.
PERIOD OF RECORD.--October 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 27.58 ft (8.41 m) below land-surface datum, Sept. 17, 1967; lowest, 30.35 ft (9.25 m) below land-surface datum, Mar. 18, 1973.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 5	29.86	Dec. 27	29.54	Mar. 22	29.32	June 20	29.10	July 25	29.36	Sept. 5	29.50
Nov. 15	29.61	Feb. 9	29.50	May 4	29.07						

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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 5	6.58	Dec. 9	6.69	Feb. 14	5.28	Apr. 19	5.59	July 13	5.97	Sept. 21	6.60
Nov. 2	6.62	Jan. 11	6.30	Mar. 14	5.12	June 2	5.51	Aug. 17	5.70		

JONES COUNTY

350103077150601. Local number, NC-73.
LOCATION.--Lat 35°01'03", long 77°15'06", Hydrologic Unit 03020204, near Pollocksville. Owners: Oak Grove Marine Air Station.
AQUIFER.--Castle Hayne Limestone Formation of middle and late Eocene age.
WELL CHARACTERISTICS.--Driven observation water-table well, diameter 8 in (0.20 m), depth 18 ft (5.5 m), cased to 18 ft (5.5 m).
DATUM.--Land-surface datum is 11.31 ft (3.447 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf 3.40 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 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.29	8.48	8.33	8.40	5.95	7.09	7.57	6.21	6.69	7.82	8.30	7.79
10	9.34	8.18	8.47	8.38	6.18	7.14	7.67	6.03	6.92	7.93	8.41	7.93
15	9.18	8.01	8.56	8.27	6.44	7.24	7.78	5.83	7.10	8.08	7.74	8.00
20	9.25	8.09	8.60	7.91	6.64	7.37	7.78	5.94	7.32	8.22	7.64	8.13
25	9.29	8.14	8.48	6.91	6.83	7.51	7.70	6.19	7.51	8.10	7.57	8.20
EOM	8.69	8.23	8.48	6.10	6.96	7.52	6.85	6.47	7.67	8.13	7.71	8.23

WTR YR 1978 MEAN 7.69 HIGH 5.83 MAY 15 AND OTHERS LOW 9.35 OCT 11 AND OTHERS

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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 4	55.12	Feb. 9	53.44	Mar. 23	53.39	May 4	53.49	June 23	53.61	Sept. 5	54.38
Dec. 28	54.16										

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 (10.21 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.10 ft (0.64 m) above land-surface datum.
PERIOD OF RECORD.--September 1968 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 34.83 ft (10.62 m) below land-surface datum, Dec. 30, 1968; lowest, 68.36 ft (20.84 m) below land-surface datum, Oct. 7-8, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	68.19	67.28	63.42	62.15	62.14	62.43	59.86	57.48	60.26	60.76	61.65	63.58
10	67.93	66.18	63.46	62.08	62.97	61.41	59.87	58.10	59.75	60.51	62.12	63.71
15	67.88	65.98	63.28	62.19	63.04	60.18	59.91	58.42	59.81	60.86	62.51	63.97
20	67.84	65.47	62.92	61.70	62.61	59.51	59.47	58.60	60.16	60.65	63.04	64.25
25	67.75	64.29	62.59	61.30	62.71	60.54	59.40	59.43	60.83	60.93	63.32	64.40
EOM	66.98	63.60	62.27	61.42	62.65	60.01	58.59	59.75	61.01	60.89	63.55	64.41

WTR YR 1978 MEAN 62.28 HIGH 57.40 MAY 7 LOW 68.32 OCT 7

MARTIN COUNTY

355734077180001. Local number, NC-43.
LOCATION.--Lat 35°57'34", long 77°18'00", Hydrologic Unit 03010107, at West Martin School, Oak City. Owner: Martin County Board of Education.
AQUIFER.--Black Creek Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 88 ft (26.8 m), cased to 88 ft (26.8 m).
DATUM.--Land-surface datum is 81.75 ft (24.917 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of 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 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.73	13.91	12.96	12.57	12.15	12.51	12.43	12.55	13.13	13.70		16.69
10	15.80	13.29	13.04	12.38	12.38	12.32	12.63	12.36	13.31	13.85		16.71
15	15.87	13.03	13.08	12.40	12.46	12.19	12.81	12.19	13.44	14.17		16.83
20	15.33	12.91	13.02	12.23	12.49	12.22	12.96	12.28	13.49	14.37		17.11
25	15.00	12.92	12.70	12.19	12.49	12.44	12.95	12.47	13.48	---		17.28
EOM	14.24	12.95	12.55	12.03	12.50	12.44	12.74	12.77	13.48	---		17.56

WTR YR 1978 MEAN 13.41 HIGH 12.02 JAN 26 AND OTHERS LOW 17.56 SEP 30

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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 5	47.00	Dec. 9	47.00	Jan. 21	42.51	Mar. 14	32.01	June 1	33.25	Aug. 17	42.85
27	47.00	Jan. 11	47.00	Feb. 14	33.14	Apr. 19	33.05	July 13	38.75	Sept. 21	44.25
Nov. 2	47.00										

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 (6.492 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 0.06 ft (0.02 m) above land-surface datum.
PERIOD OF RECORD.--November 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.42 ft (2.87 m) below land-surface datum, June 10, 1966; lowest, 19.94 ft (6.08 m) below land-surface datum, June 10, 1973.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	16.44	14.18	14.42	13.37	13.50	14.47	13.92	16.94	15.34	14.54	14.78
10	---	14.64	14.21	14.41	13.28	13.33	15.86	13.74	17.10	15.46	14.10	15.23
15	16.57	14.25	13.95	14.27	13.36	13.62	14.80	13.58	17.86	14.54	14.68	14.75
20	16.53	14.16	14.20	13.49	13.23	14.25	14.38	13.83	18.61	13.92	14.46	15.29
25	16.58	14.21	14.28	12.71	13.40	14.18	15.02	14.58	18.31	14.71	15.12	15.81
EOM	16.08	14.27	14.32	13.15	13.53	13.86	14.50	15.76	16.89	14.31	14.76	15.68

WTR YR 1978 MEAN 14.73 HIGH 12.19 JAN 26 LOW 18.61 JUN 18 AND OTHERS

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 (4.855 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.00 ft (0.61 m) above land-surface datum.
PERIOD OF RECORD.--September 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.86 ft (0.57 m) below land-surface datum, Sept. 4, 1968; lowest, 24.29 ft (7.40 m) below land-surface datum, Sept. 30, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5		---		10.66	12.32	16.01	20.48	21.52	21.95	22.68	23.61	23.98
10		---		11.34	12.70	16.82	20.28	21.45	22.07	22.79	23.71	24.03
15		---		12.02	13.22	17.94	20.86	21.49	22.18	22.85	23.76	24.09
20		10.27		11.77	13.58	19.38	20.91	21.59	22.36	22.92	23.78	24.16
25		9.54		11.84	14.39	---	21.29	21.72	22.53	22.99	23.87	24.19
EOM		9.22		12.21	14.67	---	21.70	21.81	22.61	23.50	23.94	24.28

WTR YR 1978 MEAN 19.47 HIGH 9.22 NOV 30 LOW 24.28 SEP 30

NORTHAMPTON COUNTY

361608077162601. Local number, NC-27.
LOCATION.--Lat 36°16'08", long 77°16'26", Hydrologic Unit 03010204, at Rich Square. Owner: Boomer Ice Company.
AQUIFER.--Sand of Tuscaloosa Formation of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 57 ft (17.4 m), drilled to 88 ft (26.8 m), cased to 78 ft (23.8 m).
DATUM.--Land-surface datum is 74.44 ft (22.689 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 1.70 ft (0.52 m) above land-surface datum.
PERIOD OF RECORD.--January 1958 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.86 ft (1.48 m) below land-surface datum, Feb. 25, 1960; lowest, 14.99 ft (4.57 m) below land-surface datum, Sept. 29-30, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.40	13.27	11.95	10.72	8.46	8.04	7.21	7.49	9.08	10.53	11.32	11.82
10	13.47	12.25	12.15	10.23	8.74	6.98	7.93	6.12	8.82	10.81	11.17	11.94
15	13.43	12.40	11.84	9.52	9.31	6.48	8.59	6.20	9.10	10.84	11.33	12.06
20	13.63	12.50	11.35	8.20	9.02	7.09	8.78	7.20	9.74	10.68	11.48	12.20
25	13.68	12.08	10.36	7.78	9.00	7.80	9.33	8.09	10.18	10.88	11.61	12.28
EOM	13.34	12.03	10.70	8.02	9.14	6.61	7.32	8.87	10.02	11.10	11.81	12.41

WTR YR 1978 MEAN 10.14 HIGH 6.12 MAY 10 AND OTHERS LOW 13.69 OCT 24

ONSLOW COUNTY

344425077272501. Local number, NC-52.
LOCATION.--Lat 34°44'25", long 77°27'25", Hydrologic Unit 03030001, at Camp Geiger, near Jacksonville. Owner: U.S. Marine Corps.
AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 18 in (0.46 m), depth 68 ft (20.7 m), drilled to 70 ft (21.3 m), cased to 23 ft (7.0 m).
DATUM.--Land-surface datum is 24.45 ft (7.452 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 1.90 ft (0.58 m) above land-surface datum.
PERIOD OF RECORD.--January 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.97 ft (0.60 m) below land-surface datum, Jan. 26, 1978; lowest, 10.44 ft (3.18 m) below land-surface surface datum, Jan. 3, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.16	4.86	4.22	4.00	3.84	4.82	4.75	2.78	5.36	4.85	6.05	5.75
10	6.42	3.78	4.49	3.48	4.36	4.50	5.08	2.37	5.66	5.16	6.21	6.12
15	4.62	4.47	4.52	3.16	4.78	4.60	4.62	3.35	5.87	5.16	5.35	6.37
20	5.08	4.90	4.63	2.26	4.58	5.05	3.83	4.22	6.10	4.88	5.69	6.65
25	5.39	4.17	4.05	2.71	4.91	5.21	4.29	4.62	5.98	5.37	6.07	6.81
EOM	4.51	4.53	3.64	3.75	5.07	4.34	3.34	5.09	6.01	5.76	6.12	7.06

WTR YR 1978 MEAN 4.84 HIGH 2.26 JAN 20 LOW 7.07 SEP 29

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 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.15	13.96	13.20	12.53	12.25	---	11.52	12.08	11.91	12.57	13.51	13.24
10	15.28	13.75	13.53	12.45	12.21	---	11.36	12.00	12.49	12.83	13.95	13.81
15	15.12	13.89	13.25	12.55	---	---	11.97	11.07	12.96	13.09	13.88	13.95
20	15.11	14.18	12.95	12.20	---	---	11.95	10.53	12.85	13.17	13.50	13.90
25	14.65	13.69	12.38	12.27	---	12.23	12.12	11.62	13.56	12.90	13.36	14.05
EOM	14.23	13.64	12.50	12.50	---	11.96	12.15	11.50	13.56	13.40	13.24	14.38

WTR YR 1978 MEAN 13.05 HIGH 10.49 MAY 21 LOW 15.30 OCT 8

ORANGE COUNTY

355522079043001. Local number, NC-126.
LOCATION.--Lat 35°55'22", long 79°04'30", Hydrologic Unit 03030002, Chapel Hill. Owner: Chi Psi Fraternity.
AQUIFER.--Weathered granite of Paleozoic age.
WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in (0.91 m), depth 48 ft (14.6 m), lined with rock.
DATUM.--Land-surface datum is 511.50 ft (155.905 m) National Geodetic Vertical DAtum of 1929. Measuring point: gage pointer, 3.15 ft (0.96 m) above land-surface datum.
PERIOD OF RECORD.--August 1938 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 36.43 ft (11.10 m) below land-surface datum, May 9, 1960; lowest measured, dry, Oct. 11 to Dec. 31, 1940.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 3	46.06	Dec. 5	46.43	Feb. 20	44.70	Apr. 24	43.32	July 5	41.05	Sept. 25	41.90
10	46.18	12	46.43	27	44.64	May 1	42.77	10	41.05		
17	46.25	19	46.45	Mar. 6	44.51	8	42.38	18	41.10		
24	46.36	27	46.46	13	44.19	15	41.75	24	41.15		
31	46.38	Jan. 9	46.45	20	43.99	22	41.50	31	41.25		
Nov. 7	46.39	16	46.42	28	43.73	30	41.23	Aug. 14	41.30		
14	46.43	23	46.02	Apr. 3	43.66	June 5	41.15	28	41.58		
21	46.41	30	45.33	10	43.45	12	41.03	Sept. 5	41.62		
28	46.43	Feb. 6	44.99	17	43.39	19	40.95	18	41.85		

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 (2.286 m) National Geodetic Vertical Datum of 1929. 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 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.75	7.58	7.68	7.43	8.22	7.57	7.28	7.18	7.60	8.20	8.56	8.85
10	8.71	6.85	8.14	7.33	8.26	7.43	7.50	6.81	7.58	8.17	8.57	8.85
15	8.74	7.36	7.97	7.33	7.78	6.83	7.57	6.81	7.97	8.40	8.47	8.99
20	8.57	7.60	7.69	7.00	7.75	7.15	7.56	6.97	7.97	8.56	8.64	8.88
25	8.67	7.72	6.97	6.95	7.54	7.80	7.74	7.21	8.15	8.40	8.72	8.96
EOM	8.60	7.93	7.34	7.31	7.58	7.15	7.36	7.56	8.34	8.48	8.83	8.97

WTR YR 1978 MEAN 7.88 HIGH 6.76 JAN 26 AND OTHERS LOW 9.11 OCT 14

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 (3.819 m) National Geodetic Vertical Datum of 1929. 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 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	-5.91	-4.36	-2.06	-0.44	-0.85	.08	-1.24	.04	---	---	-3.24	-4.28
10	-5.94	-1.02	-2.32	-0.18	-0.85	.23	-1.53	.09	---	---	-3.53	-4.39
15	-5.44	-1.69	-1.14	.25	-0.93	-0.26	-1.72	.15	---	-2.45	-3.73	-4.48
20	-5.41	-2.10	-0.05	.40	-0.17	-1.10	-1.72	-1.08	.93	-1.49	-3.90	-4.59
25	-5.51	-1.98	-0.25	.20	-0.78	-1.13	-2.10	-1.64	---	-2.22	-4.04	-4.67
EOM	-4.35	-2.13	.03	-0.84	-1.04	-0.64	-1.05	---	---	-2.80	-4.20	-4.78

WTR YR 1978 MEAN -2.05 MAX .93 JUN 20 MIN -5.97 OCT 12

361556076102402. Local number, NC-141.
LOCATION.--Lat 36°15'56", long 76°10'24", Hydrologic Unit 03010205, U.S. Coast Guard Air Base, near Elizabeth City. Owner: U.S. Coast Guard.
AQUIFER.--Yorktown Formation of Miocene age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 3 in (0.08 m), depth 64 ft (19.4 m).
DATUM.--Land surface datum is 8.59 ft (2.618 m) National Geodetic Vertical Datum of 1929. Measuring Point: Top of casing, 1.50 ft (0.46 m) below land-surface datum.
REMARKS.--Well located 180 ft (54,9 m) west of observation well NC-29 which is scheduled to be demolished in late 1978.
PERIOD OF RECORD.--June 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.28 ft (1.91 m) below land surface datum, June 9, 1978; lowest recorded, 8.00 ft (2.44 m), below land surface datum, Sept. 11-19, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR JUNE 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5									---	7.11	7.51	7.80
10									6.40	7.13	7.51	7.80
15									6.71	7.27	---	8.00
20									6.80	7.31	---	---
25									6.85	---	---	---
EOM									7.07	7.39	---	---

WTR YR 1978 MEAN 7.25 HIGH 6.33 JUN 9 LOW 8.00 SEP 12 AND OTHERS

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 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.65	---	1.76	1.64	1.55	1.94	1.99	1.68	2.37	1.91	2.26	2.47
10	2.77	---	1.81	1.49	1.71	1.93	2.14	1.69	2.50	1.96	2.18	2.63
15	2.61	---	1.94	1.40	1.84	1.92	2.20	1.64	2.59	1.85	1.84	2.80
20	---	1.89	1.90	1.32	1.82	2.00	2.00	1.79	2.71	1.73	1.88	2.98
25	---	1.89	1.74	1.33	1.87	2.12	1.97	1.99	2.63	1.96	2.10	3.19
EOM	---	1.86	1.71	1.40	1.94	1.88	1.64	2.21	2.34	2.13	2.31	3.43

WTR YR 1978 MEAN 2.04 HIGH 1.25 JAN 22 AND OTHERS LOW 3.43 SEP 30

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 (8.665 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).
REMARKS.--During most summers, water levels affected for short periods by nearby pumping used for irrigation of row crops.
PERIOD OF RECORD.--December 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 25.54 ft (7.78 m) NGVD, May 5, 1978; lowest, 19.06 ft (5.81 m) NGVD, July 6, 1978.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.99	23.45	23.09	23.45	23.42	23.55	23.17	24.87	22.80	20.81	22.53	22.08
10	22.36	23.80	22.94	23.86	23.30	23.78	23.02	24.12	23.29	21.51	22.34	21.77
15	23.35	23.38	23.40	23.77	23.21	23.48	23.04	23.46	22.72	20.50	22.25	21.63
20	22.82	23.19	23.39	24.30	23.33	23.23	23.58	23.18	22.44	22.47	22.04	21.51
25	22.72	23.20	23.53	23.63	23.25	23.15	23.24	23.02	22.50	22.25	21.87	21.55
EOM	23.49	23.11	23.89	23.07	23.18	23.37	23.73	22.84	20.39	22.21	21.90	21.42

WTR YR 1978 MEAN 22.89 MAX 24.87 MAY 5 MIN 20.28 JUL 6

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 (10.961 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).
REMARKS.--During most summers, water levels affected for short periods by nearby pumping used for irrigation of row crops.
PERIOD OF RECORD.--December 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 31.82 ft (9.70 m) NGVD, Nov. 6-7, 1977; lowest, 25.91 ft (7.90 m) NGVD, Aug.15-17, 1977.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.95	28.62			---	---			---	26.94	27.66	27.03
10	27.01	29.41			28.37	---			---	27.08	27.55	26.92
15	28.34	28.56			---	---			28.02	26.69	27.40	26.87
20	27.77	28.19			---	---			27.83	27.50	27.22	26.76
25	27.69	28.16			---	28.29			27.82	27.62	27.10	26.73
EOM	28.63	---			---	---			27.32	27.48	27.07	26.66

WTR YR 1978 MEAN 27.59 MAX 31.25 NOV 7 MIN 22.95 OCT 5

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 (15.219 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).
PERIOD OF RECORD.--December 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 47.57 ft (14.50 m) NGVD, Jan. 26, 1978; lowest, 42.12 ft (12.84 m) NGVD, Aug. 17, 1977.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	43.90	46.60	45.97	46.53	46.62	46.64	46.17	47.28	45.52	44.86	44.79	43.09
10	44.10	46.98	45.69	46.82	45.42	46.97	45.94	47.30	45.53	44.15	44.37	42.85
15	45.70	46.45	46.21	46.95	46.20	46.69	46.06	46.85	45.91	44.02	44.05	42.66
20	45.57	46.11	46.52	47.45	46.57	46.21	46.83	46.39	45.48	44.84	43.85	42.48
25	45.30	46.14	46.83	47.21	46.45	46.03	46.37	46.10	45.44	44.55	43.51	42.31
EOM	46.55	46.00	46.82	46.70	46.25	46.48	47.02	45.85	45.18	44.24	43.27	42.10

WTR YR 1978 MEAN 45.63 MAX 47.45 JAN 20 MIN 42.10 SEP 30

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 (15.581 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).
PERIOD OF RECORD.--December 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 50.75 ft (15.47 m) NGVD, Mar. 24, 1977; lowest measured, 43.80 ft (13.35 m) NGVD, July 29, 1977.

WATER LEVEL, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 5	44.91	Dec. 20	50.48	Mar. 23	50.05	June 13	48.87	July 26	44.78	Aug. 24	44.42
Nov. 21	50.01	Feb. 7	50.57	May 2	50.59						

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 (17.583 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservations Service).
PERIOD OF RECORD.--December 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 55.87 ft (17.03 m) NGVD, May 2, 1978; lowest measured, 49.93 ft (15.22 m) NGVD, Feb. 7, 1977.

WATER LEVEL, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 5	52.30	Dec. 20	54.80	Mar. 23	55.76	June 19	55.09	July 27	53.48	Aug. 24	52.37
Nov. 21	54.12	Feb. 7	55.82	May 2	55.87						

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 (17.468 m) National Geodetic Vertical Datum of 1929, (levels by Soil Conservation Service).
PERIOD OF RECORD.--December 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 55.11 ft (16.80 m) NGVD, May 4, 1978; lowest, 47.76 ft (14.56 m) NGVD, Sept. 30, 1978.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	50.17	53.77	52.83	53.44	---	53.68	52.77	54.35	51.57	50.35	51.14	48.71
10	50.56	53.80	52.49	53.80	53.22	54.30	52.40	53.92	52.41	49.91	50.56	48.42
15	53.49	53.29	53.55	---	53.08	53.50	52.49	53.25	51.85	49.82	50.05	48.22
20	52.87	53.05	53.69	---	53.50	53.06	---	52.82	51.32	---	49.79	48.04
25	52.49	52.97	53.82	---	53.33	52.73	---	52.31	51.18	---	49.38	47.92
EOM	53.68	52.86	54.28	53.44	53.14	52.89	---	51.85	50.79	50.38	48.96	47.76

WTR YR 1978 MEAN 52.00 MAX 54.52 NOV 6 MIN 47.76 SEP 30

PITT OUNTY--Continued

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 (16.340 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).
PERIOD OF RECORD.--December 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 51.96 ft (15.84 m) NGVD, Nov. 6, 1977; lowest, 46.36 ft (14.13 m) NGVD, Sept. 30, 1978.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	48.08	50.87	49.67	50.43	50.38	50.54	49.71	51.50	49.03	48.29	48.69	47.15
10	48.38	51.00	49.43	50.92	50.02	51.28	49.45	51.12	49.99	47.83	48.24	46.93
15	51.00	50.32	50.40	50.97	49.82	50.44	49.51	50.35	49.26	47.68	47.87	46.77
20	50.11	49.96	50.67	51.71	50.21	49.92	50.66	49.85	48.88	49.06	48.21	46.63
25	49.61	49.88	50.87	51.36	50.06	49.67	50.15	49.51	48.77	48.59	47.68	46.50
EOM	50.87	49.75	50.32	50.51	49.86	50.17	50.85	49.21	48.48	48.10	47.31	46.38

WTR YR 1978 MEAN 49.51 MAX 51.71 JAN 20 MIN 46.38 SEP 30

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 (10.366 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).
PERIOD OF RECORD.--January 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 33.65 ft (10.26 m) NGVD, Jan. 20, 1978; lowest, 28.34 ft (8.64 m) NGVD, July 31, 1977.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	29.25	---	31.73	31.78	31.93	32.00	30.55		---	29.14	29.89	29.84
10	29.38	---	31.05	32.10	31.41	32.40	30.24		---	28.92	29.47	29.38
15	32.07	---	32.27	32.25	31.30	31.82	31.05		---	28.83	29.36	29.09
20	30.88	---	32.21	33.47	32.11	30.79	32.13		29.60	30.23	29.86	28.85
25	---	31.57	32.29	32.48	31.70	30.62	31.18		29.59	29.71	30.00	28.65
EOM	---	31.62	32.38	31.70	31.35	31.10	31.83		29.36	29.45	29.94	28.49

WTR YR 1978 MEAN 30.79 MAX 33.70 APR 26 MIN 28.49 SEP 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 ft (48.01 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.40 ft (0.12 m) above land-surface datum.
PERIOD OF RECORD.--May 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.83 ft (5.43 m) below land-surface datum, Oct. 13, 1964; lowest, 28.69 ft (8.74 m) below land-surface datum, Oct. 15, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	26.18	26.09	25.88	25.25	23.44	23.08	22.29	21.45	22.46	23.39	24.44	25.41
10	25.98	25.73	25.89	25.10	23.42	22.72	22.37	21.33	22.47	23.62	24.44	25.68
15	25.77	25.78	25.75	24.89	23.39	22.71	22.41	21.34	22.89	23.74	24.57	25.84
20	25.94	25.88	25.69	24.50	23.30	22.61	21.94	21.55	23.09	23.78	24.80	26.16
25	26.03	25.88	25.46	24.18	23.28	22.57	22.02	21.81	23.05	24.09	25.23	26.01
EOM	26.05	25.89	25.30	23.71	23.29	22.29	21.61	22.08	23.33	24.46	25.41	26.13

WTR YR 1978 MEAN 24.10 HIGH 21.32 MAY 14 LOW 26.28 SEP 27

TRANSYLVANIA COUNTY

351808082374301. Local number, NC-127.
LOCATION.--Lat 35°18'08", long 82°37'43", Hydrologic Unit 06010105, Blantyre. Owner: Neal Hawkins.
AQUIFER.--Granite of Paleozoic age.
WELL CHARACTERISTICS.--Dug observation water-table well, diameter 5 ft (1.5 m), depth 48 ft (14.6 m), lined with rock.
DATUM.--Land-surface datum is 2,146.39 ft (654.220 m) National Geodetic Vertical Datum of 1929. Measuring point: Nail in 4" x 4" stringer, 1.00 ft (0.30 m) above land-surface datum.
PERIOD OF RECORD.--July 1932 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 3	33.10	Dec. 5	31.65	Feb. 6	29.05	Apr. 10	27.97	June 12	27.82	Aug. 7	29.87
10	32.83	11	31.38	13	28.79	17	27.55	19	27.96	14	29.40
13	32.76	13	31.29	20	28.29	24	27.51	23	28.06	21	30.21
17	32.68	19	31.05	21	28.48	May 1	27.51	26	28.10	28	30.18
24	32.67	26	30.75	27	28.47	8	27.45	July 3	28.31	Sept. 4	29.95
31	32.43	Jan. 2	30.45	Mar. 6	28.34	15	27.47	10	28.51	6	29.93
Nov. 7	30.78	9	30.30	13	28.01	18	27.63	17	28.90	11	29.83
14	32.20	16	29.39	20	28.12	22	27.60	24	29.20	18	29.78
17	32.17	23	29.40	27	27.73	29	27.51	31	29.40	21	29.85
21	32.18	30	28.91	Apr. 1	27.86	June 5	27.62	Aug. 2	29.70	25	29.92
29	31.89										

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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 13	2.49	Dec. 28	2.45	Mar. 21	2.36	June 20	2.12	July 26	2.11	Sept. 6	2.45
Nov. 17	2.22	Feb. 8	2.35	May 3	2.16						

354341076313501. Local number, WS-85.
LOCATION.--Lat 35°43'41", long 76°31'35", Hydrologic Unit, 03020104, near Wenona. Owner: U.S. Geological Survey.
AQUIFER.--Marine sands and clays of post-miocene age.
WELL CHARACTERISTICS.--Driven observation water-table well, diameter 3 in (0.08 m), depth 21.0 ft (6.40 m), cased to 18 ft (5.49 m), screen from 18 ft (5.49 m) to 21 ft (6.40 m).
DATUM.--Altitude of gage is 8 ft (2.4 m), from topographic map. Measuring point: Mark at top of casing, 15.93 ft (4.85 m). Top of casing is 1.8 ft (0.55 m) above land surface.
PERIOD OF RECORD.--April 1976 to September 1978 (discontinued).
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.92 ft (3.63 m) approximate NGVD, May 25, 1977; lowest, 8.30 ft (2.53 m) approximate NGVD, Oct. 7-9, 1977.

ELEVATION, IN FEET APPROXIMATE NGVD, WATER YEAR APRIL 1976 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5							---	9.63	10.57	10.59	9.91	9.17
10							---	9.60	10.39	10.50	9.91	9.06
15							---	9.58	10.26	10.34	9.83	8.99
20							---	9.58	10.14	10.22	9.68	9.38
25							9.77	9.53	10.42	10.10	9.55	9.32
EOM							9.68	9.86	10.27	10.00	9.32	9.17

WTR YR 1976 MEAN 9.83 MAX 10.61 JUL 4 MIN 8.99 SEP 14 AND OTHERS

ELEVATION, IN FEET APPROXIMATE NGVD, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.11	9.08	9.69	10.22	10.26	10.28	10.29	10.43	10.58	9.91	8.91	9.26
10	9.04	9.00	9.82	10.53	10.19	10.48	10.17	10.81	10.42	9.75	8.66	9.40
15	8.90	9.03	10.06	10.64	10.17	10.55	10.11	10.47	10.31	9.62	8.45	9.26
20	8.82	9.49	10.30	10.50	10.14	10.44	10.03	10.29	10.19	9.42	9.54	9.09
25	9.17	9.47	10.18	10.41	10.23	10.50	10.01	11.84	10.12	9.19	9.57	8.85
EOM	9.16	9.64	10.27	10.31	10.26	10.37	9.93	10.87	10.01	9.09	9.41	8.56

WTR YR 1977 MEAN 9.85 MAX 11.84 MAY 25 MIN 8.44 AUG 17

ELEVATION, IN FEET APPROXIMATE NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.40	10.26	10.24	10.47	10.49	10.55	10.31	10.68	10.31	9.92	9.65	9.64
10	8.34	10.88	10.18	10.62	10.39	10.63	10.21	10.95	10.69	9.80	9.54	9.46
15	8.97	10.52	10.25	10.73	10.29	10.52	10.15	10.75	10.44	9.84	10.24	9.29
20	9.09	10.33	10.54	11.50	10.42	10.36	10.31	10.49	10.24	9.85	10.08	9.10
25	9.01	10.31	10.53	10.82	10.38	10.26	10.25	10.31	10.15	9.75	9.93	8.90
EOM	10.58	10.27	10.56	10.64	10.35	10.43	10.66	10.18	10.03	9.68	9.77	8.67

WTR YR 1978 MEAN 10.13 MAX 11.54 NOV 7 MIN 8.30 OCT 8

354342076313401. Local number, WS-86.
LOCATION.--Lat 35°43'42", long 76°31'34", Hydrologic Unit 03020104, near Wenona. Owner: U.S. Geological Survey.
AQUIFER.--Marine sands and clays of post-miocene age.
WELL CHARACTERISTICS.--Driven observation water-table well, diameter 3 in (0.08 m), depth 21.0 ft (6.40 m), cased to 18.0 ft (5.49 m), screen from 18.0 ft (5.49 m) to 21.0 ft (6.40 m).
DATUM.--Altitude of gage is 8 ft (2.4 m), from topographic map. Measuring point: Mark at top of casing, 16.13 ft (4.92 m). Top of casing is 1.85 ft (0.56 m) above land surface.
PERIOD OF RECORD.--April 1976 to September 1978 (discontinued).
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.02 ft (3.66 m) approximate NGVD, May 25-26, 1977; lowest, 8.43 ft (2.57 m) approximate NGVD, Oct. 8-9, 1977.

ELEVATION, IN FEET APPROXIMATE NGVD, WATER YEAR APRIL 1976 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5							---	9.83	10.90	10.93	10.17	9.38
10							---	9.78	10.71	10.83	10.15	9.16
15							10.04	9.77	10.55	10.64	10.08	9.10
20							10.06	9.77	10.42	10.50	9.92	9.63
25							9.99	9.71	10.73	10.37	9.79	9.49
EOM							9.88	10.10	10.56	10.25	9.55	9.36

WTR YR 1976 MEAN 10.07 MAX 10.95 JUL 4 MIN 9.06 SEP 14

ELEVATION, IN FEET APPROXIMATE NGVD, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.29	9.21	9.96	10.55	10.57	10.60	10.62	10.75	10.98	10.17	9.00	9.49
10	9.23	9.11	10.09	10.87	10.49	10.81	10.48	11.17	10.77	9.99	8.76	9.60
15	9.08	9.18	10.39	10.96	10.48	10.90	10.41	10.83	10.63	9.84	8.56	9.48
20	9.02	9.72	10.63	10.83	10.44	10.78	10.30	10.63	10.50	9.61	9.75	9.29
25	9.34	9.68	10.51	10.74	10.53	10.85	10.28	11.88	10.42	9.36	9.81	9.00
EOM	9.32	9.88	10.61	10.61	10.59	10.71	10.19	11.24	10.28	9.22	9.64	8.71

WTR YR 1977 MEAN 10.11 MAX 11.96 MAY 26 MIN 8.56 AUG 15 AND OTHERS

ELEVATION, IN FEET APPROXIMATE NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.55	10.62	10.59	10.83	10.84	10.88	10.66	11.02	10.65	10.21	9.87	9.86
10	8.48	11.27	10.51	10.96	10.74	10.98	10.54	11.29	11.08	10.06	9.76	9.66
15	9.14	10.88	10.58	11.07	10.63	10.74	10.50	11.12	10.83	10.10	10.57	9.47
20	9.29	10.69	10.87	11.69	10.75	---	10.65	10.87	10.61	10.10	10.40	9.24
25	9.19	10.66	10.89	11.19	10.72	10.60	10.59	10.68	10.50	10.00	10.21	9.02
EOM	10.90	10.62	10.90	11.00	10.69	10.78	11.02	10.53	10.35	9.91	10.01	8.79

WTR YR 1978 MEAN 10.43 MAX 11.72 JAN 21 MIN 8.43 OCT 8

WASHINGTON COUNTY--Continued

354347076313301. Local number WS-87.
LOCATION.--Lat 35°43'47", long 76°31'33", Hydrologic Unit 03020104, near Wenona. Owner: U.S. Geological Survey.
AQUIFER.--Marine sands and clays of post-miocene age.
WELL CHARACTERISTICS.--Driven observation water-table well, diameter 3 in (0.08 m), depth 22 ft (6.71 m), cased to 18 ft (5.49 m), screen from 18 ft (5.49 m) to 22 ft (6.71 m).
DATUM.--Altitude of gage is 8 ft (2.4 m), from topographic map. Measuring point: Mark at top of casing, 16.49 ft (5.03 m). Top of casing is 1.9 ft (0.58 m) above land surface.
PERIOD OF RECORD.--April 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.28 ft (3.74 m) approximate NGVD, May 26, 1977; lowest, 8.75 ft (2.67 m) approximate NGVD, Oct. 12, 1977.

ELEVATION, IN FEET APPROXIMATE NGVD, WATER YEAR APRIL 1976 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5							---	10.14	11.36	11.45	10.50	9.62
10							---	10.08	11.13	11.29	10.50	9.41
15							10.46	10.06	10.94	11.05	10.42	9.34
20							10.41	10.09	10.80	10.89	10.22	9.90
25							10.33	10.03	11.16	10.74	10.05	9.77
EOM							10.21	10.49	10.97	10.59	9.78	9.62

WTR YR 1976 MEAN 10.41 MAX 11.46 JUL 4 MIN 9.31 SEP 14

ELEVATION, IN FEET APPROXIMATE NGVD, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.55	9.49	10.35	10.94	10.98	10.98	11.02	11.16	11.40	10.53	9.23	9.78
10	9.49	9.39	10.51	11.29	10.88	11.21	10.87	11.65	11.23	10.31	8.98	9.89
15	9.34	9.44	10.82	11.40	10.84	11.31	10.78	11.27	11.06	10.11	8.81	9.79
20	9.28	10.06	11.08	11.28	10.81	11.19	10.65	11.07	10.91	9.84	10.10	9.62
25	9.62	10.03	10.94	11.14	10.89	11.28	10.62	12.10	10.81	9.59	10.18	9.36
EOM	9.60	10.26	11.03	11.03	10.96	11.12	10.55	11.67	10.67	9.46	9.96	9.04

WTR YR 1977 MEAN 10.46 MAX 12.27 MAY 26 MIN 8.81 AUG 15 AND OTHERS

ELEVATION, IN FEET APPROXIMATE NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.89	11.08	11.01	11.26	11.28	11.32	11.10	11.45	11.02	10.57	10.25	---
10	8.82	11.76	10.93	11.41	11.18	11.39	10.95	11.69	11.38	10.41	10.11	9.98
15	9.48	11.34	11.00	11.51	11.06	11.32	10.88	11.56	11.25	---	11.01	9.76
20	9.65	11.13	11.30	11.98	11.18	11.14	11.07	11.29	11.02	---	---	9.53
25	9.55	11.11	11.33	11.63	11.16	11.03	11.03	11.10	10.99	10.40	---	9.30
EOM	11.34	11.06	11.32	11.45	11.13	11.22	11.46	10.92	10.73	10.30	---	9.04

WTR YR 1978 MEAN 10.86 MAX 12.08 JAN 21 MIN 8.79 OCT 8

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, 0.24 ft (0.07 m) above land-surface datum, Jan. 29, 1978; lowest measured, 22.57 ft (6.88 m) below land-surface datum, Nov. 21, 1973.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.56	10.12	8.27	8.94	4.02	8.32	7.75	18.24	11.22	12.01	12.76	10.13
10	10.24	8.29	8.82	8.73	6.01	7.92	9.26	8.89	11.19	13.11	12.81	10.28
15	10.19	7.17	8.59	8.73	7.45	7.06	12.81	6.30	12.22	13.16	12.48	10.37
20	10.35	7.91	8.31	6.94	7.75	5.69	12.89	7.86	12.40	12.77	12.87	10.59
25	10.12	8.12	7.50	4.25	8.20	7.13	12.87	9.85	12.18	12.92	11.10	10.28
EOM	9.96	8.38	7.44	3.61	8.32	7.00	9.77	10.82	12.25	12.86	10.47	10.50

WTR YR 1978 MEAN 9.85 HIGH 3.47 JAN 30 LOW 19.11 JAN 28

354342076311601 PUNGO NATIONAL WILDLIFE REFUGE SHALLOW WELL #4

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)
OCT 12...	1300	120	3.4	17.0	5000	--	--	--	--	11
NOV 15...	1300	172	3.8	18.0	1500	430	K8	<2	<2	3
JAN 03...	1335	180	2.9	14.5	5500	78	<1	<1	<1	4
FEB 13...	1350	146	2.4	14.0	1000	490	K1	<2	<2	5
MAR 28...	1200	130	3.2	15.5	800	--	<1	<1	<1	2
MAY 16...	1120	150	3.7	16.0	750	330	K13	<1	<1	2
JUN 20...	1140	120	4.1	23.5	600	380	K8	<1	<1	2
JUL 25...	1000	91	3.9	20.5	1400	370	<1	<1	<1	4

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	ACIDITY (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)
OCT 12...	11	.4	20	2.8	1.0	8.0	57	1.0	1.8	0
NOV 15...	3	.2	10	.4	.6	5.1	73	1.2	.5	0
JAN 03...	4	1.5	74	.7	.6	4.5	69	1.0	.2	0
FEB 13...	5	1.5	74	1.1	.5	4.0	63	.8	.2	0
MAR 28...	2	1.1	55	.2	.3	3.7	81	1.2	.1	0
MAY 16...	2	1.3	65	.3	.4	3.1	73	.9	.1	0
JUN 20...	2	.5	25	.3	.3	3.3	74	1.0	.4	0
JUL 25...	4	1.3	65	.7	.5	4.5	69	1.0	.5	0

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

354342076311601 PUNGO NATIONAL WILDLIFE REFUGE SHALLOW WELL #4.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
OCT 12...	0	0	.0	19	10	.0	21	148	65	.20
NOV 15...	0	0	.0	25	8.1	.0	5.2	162	46	.22
JAN 03...	0	0	.0	25	8.7	.0	4.8	172	47	.23
FEB 13...	0	0	.0	23	8.8	.0	4.4	145	44	.20
MAR 28...	0	0	.0	22	7.5	.0	3.9	119	39	.16
MAY 16...	0	0	.0	23	7.9	.0	3.7	148	41	.20
JUN 20...	0	0	.0	21	8.4	.0	3.5	147	38	.20
JUL 25...	0	0	.0	25	10	.0	6.3	156	51	.21

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)
OCT 12...	.03	.06	.09	.11	8.8	5.8	3.0	8.9	39	.42
NOV 15...	.03	.00	.03	.02	3.7	1.8	1.9	3.7	17	.08
JAN 03...	.00	.00	.00	.00	1.0	.02	.98	1.0	4.4	.12
FEB 13...	.03	.01	.04	.02	4.1	2.9	1.2	4.1	18	.02
MAR 28...	.00	.06	.05	.05	3.2	2.2	1.0	3.3	14	.05
MAY 16...	.02	.04	.06	.03	2.9	1.8	1.1	3.0	13	.03
JUN 20...	.00	.08	.02	.06	3.0	1.0	2.0	3.0	13	.03
JUL 25...	.00	.10	.03	.05	3.2	1.5	1.7	3.2	14	.04

DATE	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
OCT 12...	--	.24	9	650	35	720	12	6.1	--
NOV 15...	--	.01	0	370	0	70	--	65	3.4
JAN 03...	.37	.10	18	520	35	60	--	--	--
FEB 13...	.06	.02	1	400	24	20	--	160	1.7
MAR 28...	.15	.01	15	330	2	10	--	60	6.5
MAY 16...	.09	.01	5	600	6	20	--	100	5.3
JUN 20...	.09	.03	6	590	12	30	--	68	1.7
JUL 25...	.12	.04	2	2000	42	30	--	--	--

354347076313301 PUNGO NATIONAL WILDLIFE REFUGE DEEP WELL #3

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
JUN											
01...	1605	100	6.4	17.0	190	75	<1	<1	<1	26	2
14...	1355	102	5.8	--	--	--	--	--	--	--	--
JUL											
07...	1045	121	6.1	19.0	500	86	<1	<1	<1	28	0
AUG											
17...	1657	87	5.8	18.0	150	80	1	<1	<1	25	0

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)
JUN										
01...	8.1	1.3	5.7	32	.5	.7	29	0	24	18
14...	--	--	--	--	--	--	41	0	34	104
JUL										
07...	9.0	1.3	5.5	29	.5	.7	34	0	28	43
AUG										
17...	8.4	.9	5.5	32	.5	.8	31	0	25	79

DATE	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)
JUN										
01...	9.0	6.3	.5	78	192	133	.26	--	--	.00
14...	--	--	--	--	--	--	--	--	--	--
JUL										
07...	13	7.0	.4	79	196	143	.27	.00	.01	.01
AUG										
17...	12	6.6	.4	81	189	141	.26	.00	.00	.00

354347076313301 PUNGO NATIONAL WILDLIFE REFUGE DEEP WELL #3.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)
JUN 01...	.00	1.1	.00	1.1	1.1	4.9	.13	.12	7.7	6.1
14...	--	--	--	--	--	--	--	--	--	--
JUL 07...	.01	1.1	.10	1.0	1.1	4.9	.11	.11	30	21
AUG 17...	.00	1.3	.20	1.1	1.3	5.8	.11	.11	7.5	7.4

DATE	PCB, TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)
JUN 14...	.0	.00	.00	.0	.00	.00	.00	.00	.00

DATE	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)
JUN 14...	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL TRITHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN 14...	.00	.00	0	.00	.02	.02	.00

354347076313301 PUNGO NATIONAL WILDLIFE REFUGE DEEP WELL #3.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
OCT 05...	1330	100	--	--	--	--	--	--	--	--	--
NOV 11...	1130	94	6.0	16.0	200	71	<1	<1	<1	28	0
JAN 04...	1200	98	6.2	11.0	150	78	<1	<1	<1	29	0
MAR 03...	1530	95	5.4	--	180	86	--	--	--	24	0
22...	1700	93	5.7	15.5	40	73	<1	<1	<1	29	0
MAY 03...	1245	109	5.4	16.0	300	74	<1	<1	<1	27	6
JUN 14...	1445	105	5.8	16.0	250	77	<1	<1	<1	19	0
JUL 27...	1145	94	5.8	15.5	200	70	<1	<1	<1	27	1
AUG 30...	1300	110	6.2	16.0	200	65	B4	<1	B4	28	5

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)
OCT 05...	--	--	--	--	--	--	--	--	--	--
NOV 11...	9.1	1.3	5.9	31	.5	.8	38	0	31	61
JAN 04...	8.8	1.6	5.8	30	.5	.9	39	0	32	39
MAR 03...	7.0	1.7	5.9	33	.5	.9	38	0	31	242
22...	8.5	1.8	6.0	30	.5	.9	39	0	32	125
MAY 03...	8.3	1.5	5.7	31	.5	.9	26	0	21	166
JUN 14...	5.2	1.5	5.8	38	.6	.8	30	0	25	76
JUL 27...	8.2	1.5	5.7	31	.5	.8	31	0	25	79
AUG 30...	8.5	1.6	5.8	30	.5	.9	28	0	23	28

DATE	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)
OCT 05...	--	--	--	--	--	--	--	--	--	--
NOV 11...	12	6.6	.5	75	190	139	.26	.00	.00	.00
JAN 04...	14	6.6	.4	73	194	145	.26	.00	.00	.00
MAR 03...	11	6.6	.2	80	192	144	.26	.00	.00	.00
22...	11	7.0	.2	80	201	146	.27	.01	.00	.01
MAY 03...	11	7.0	.2	77	204	136	.28	.00	.00	.00
JUN 14...	9.5	6.8	.2	78	192	134	.26	.00	.01	.01
JUL 27...	12	6.7	.1	76	165	140	.22	.00	.01	.01
AUG 30...	13	7.2	.2	78	182	139	.25	.01	.00	.01

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

354347076313301 PUNGO NATIONAL WILDLIFE REFUGE DEEP WELL #3.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
OCT										
05...	--	--	--	--	--	--	--	--	--	--
NOV										
11...	.01	1.4	.30	1.1	1.4	6.2	.10	.10	27	26
JAN										
04...	.01	1.6	.50	1.1	1.6	7.1	.12	.09	37	24
MAR										
03...	.01	1.1	.00	1.1	1.1	4.9	.13	.12	29	29
22...	.01	1.1	.00	1.3	1.1	4.9	.12	.12	7.9	3.4
MAY										
03...	.00	1.0	.00	1.1	1.0	4.4	.12	.11	6.5	3.5
JUN										
14...	.00	1.2	.10	1.1	1.2	5.4	.12	.12	7.0	3.6
JUL										
27...	.01	1.0	.00	1.1	1.0	4.5	.13	.11	7.9	4.9
AUG										
30...	.00	1.2	.00	1.2	1.2	5.4	.12	.10	32	30

DATE	PCB, TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)
OCT									
05...	.0	.00	.00	.0	.00	.00	.00	.00	.00
JUN									
14...	.0	.00	.00	.0	.00	.00	.00	.00	.00

DATE	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)
OCT									
05...	--	.00	.00	.00	.00	.00	.00	.00	.00
JUN									
14...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL TRITHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
OCT							
05...	.00	.00	0	.00	.00	.00	.00
JUN							
14...	.00	.00	0	.00	.00	.00	.00

354347076313301 PUNGO NATIONAL WILDLIFE REFUGE DEEP WELL #3.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	ACIDITY (MG/L AS H)
OCT 12...	1115	100	4.7	16.0	440	70	--	--	--	28	0	--
NOV 15...	1415	110	6.1	17.0	180	85	<1	<1	<1	27	0	--
JAN 03...	1435	112	5.0	16.5	250	600	<1	<1	<1	31	0	--
FEB 13...	1420	96	4.2	15.5	350	75	<1	<1	<1	28	0	.0
MAR 28...	1315	120	5.4	17.5	300	--	<1	<1	K5	26	0	.0
MAY 16...	1245	120	6.0	16.5	220	75	<1	<1	<1	27	0	--

DATE	ACIDITY (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)
OCT 12...	--	8.8	1.5	6.0	31	.5	.9	44	0	36	1400
NOV 15...	--	8.3	1.5	6.0	32	.5	.9	44	0	36	56
JAN 03...	--	9.5	1.7	6.1	29	.5	.9	37	0	30	592
FEB 13...	.0	8.7	1.6	6.0	31	.5	.8	37	0	30	3740
MAR 28...	.0	8.1	1.5	5.8	32	.5	.8	42	0	34	268
MAY 16...	--	8.0	1.6	5.8	32	.5	.7	41	0	34	66

DATE	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)
OCT 12...	13	6.5	.2	77	197	148	.27	.01	.00	.01	.01
NOV 15...	13	5.9	.3	77	185	150	.25	.01	.00	.01	.01
JAN 03...	9.3	6.6	.2	77	195	142	.27	.03	.03	.06	.02
FEB 13...	14	6.6	.7	77	191	147	.26	.00	.00	.00	.04
MAR 28...	12	6.0	.2	78	176	147	.24	.00	.01	.01	.01
MAY 16...	13	7.6	.2	75	201	146	.27	.01	.00	.01	.01

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
OCT 12...	1.1	.32	.78	1.1	4.9	.10	--	.10	8.5	4.3	--
NOV 15...	1.1	.00	1.1	1.1	4.9	.12	--	.11	--	24	1.0
JAN 03...	3.3	1.9	1.4	3.4	15	.03	.09	.03	--	--	--
FEB 13...	.82	.00	.85	.82	3.6	.10	.31	.10	--	58	--
MAR 28...	1.2	.20	1.0	1.2	5.4	.17	.52	.10	--	23	.4
MAY 16...	1.2	.10	1.1	1.2	5.4	.11	.34	.09	--	23	1.1

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

APPENDIX

PARAMETER CODE	FIRST LINE - NEW TERMINOLOGY SECOND LINE - OLD TERMINOLOGY
39332	ALDRIN, SUSPENDED TOTAL (UG/L)
39332	ALDRIN, SUSPENDED (UG/L)
01505	ALPHA, SUSPENDED TOTAL (PCI/L)
01505	ALPHA, SUSPENDED (PCI/L)
01506	ALPHA, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
01506	ALPHA, SUSPENDED, COUNTING ERROR (PCI/L)
01105	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)
01105	ALUMINUM, TOTAL (UG/L AS AL)
01107	ALUMINUM, SUSPENDED RECOVERABLE (UG/L AS AL)
01107	ALUMINUM, SUSPENDED (UG/L AS AL)
01108	ALUMINUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS AL)
01108	ALUMINUM, TOTAL IN BOTTOM MATERIAL (UG/G AS AL)
01096	ANTIMONY, SUSPENDED TOTAL (UG/L AS SB)
01096	ANTIMONY, SUSPENDED (UG/L AS SB)
39502	AROCLOR, SUSPENDED TOTAL, 1248 PCB SERIES (UG/L)
39502	AROCLOR, SUSPENDED, 1248 PCB SERIES (UG/L)
39506	AROCLOR, SUSPENDED TOTAL, 1254 PCB SERIES (UG/L)
39506	AROCLOR, SUSPENDED, 1254 PCB SERIES (UG/L)
39510	AROCLOR, SUSPENDED TOTAL, 1260 PCB SERIES (UG/L)
39510	AROCLOR, SUSPENDED, 1260 PCB SERIES (UG/L)
01001	ARSENIC, SUSPENDED TOTAL (UG/L AS AS)
01001	ARSENIC, SUSPENDED (UG/L AS AS)
01006	BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA)
01006	BARIUM, SUSPENDED (UG/L AS BA)
01007	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)
01007	BARIUM, TOTAL (UG/L AS BA)
01008	BARIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS BA)
01008	BARIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS BA)
01011	BERYLLIUM, SUSPENDED RECOVERABLE (UG/L AS BE)
01011	BERYLLIUM, SUSPENDED (UG/L AS BE)
01012	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)
01012	BERYLLIUM, TOTAL (UG/L AS BE)
01013	BERYLLIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS BE)
01013	BERYLLIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS BE)
03505	BETA, SUSPENDED TOTAL (PCI/L)
03505	BETA, SUSPENDED (PCI/L)
03506	BETA, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
03506	BETA, SUSPENDED, COUNTING ERROR (PCI/L)
01016	BISMUTH, SUSPENDED TOTAL (UG/L AS BI)
01016	BISMUTH, SUSPENDED (UG/L AS BI)
01021	BORON, SUSPENDED RECOVERABLE (UG/L AS B)
01021	BORON, SUSPENDED (UG/L AS B)
01022	BORON, TOTAL RECOVERABLE (UG/L AS B)
01022	BORON, TOTAL (UG/L AS B)
01023	BORON, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS B)
01023	BORON, TOTAL IN BOTTOM MATERIAL (UG/G AS B)
01026	CADMIUM, SUSPENDED RECOVERABLE (UG/L AS CD)
01026	CADMIUM, SUSPENDED (UG/L AS CD)
01027	CADMIUM, TOTAL RECOVERABLE (UG/L AS CD)
01027	CADMIUM, TOTAL (UG/L AS CD)
01028	CADMIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CD)
01028	CADMIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS CD)
00916	CALCIUM, TOTAL RECOVERABLE (MG/L AS CA)
00916	CALCIUM, TOTAL (MG/L AS CA)
07052	CALCIUM 45, SUSPENDED TOTAL (PCI/L)
07052	CALCIUM 45, SUSPENDED (PCI/L)

PARAMETER CODE	FIRST LINE - NEW TERMINOLOGY SECOND LINE - OLD TERMINOLOGY
07053	CALCIUM 45, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07053	CALCIUM 45, SUSPENDED, COUNTING ERROR (PCI/L)
00683	CARBON, ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00683	CARBON, ORGANIC, SUSPENDED (MG/L AS C)
00688	CARBON, INORGANIC, SUSPENDED TOTAL (MG/L AS C)
00688	CARBON, INORGANIC, SUSPENDED (MG/L AS C)
00689	CARBON, ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00689	CARBON, ORGANIC, SUSPENDED (MG/L AS C)
00694	CARBON, INORGANIC PLUS ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00694	CARBON, INORGANIC PLUS ORGANIC, SUSPENDED (MG/L AS C)
01116	CESIUM, SUSPENDED TOTAL (UG/L AS CS)
01116	CESIUM, SUSPENDED (UG/L AS CS)
28404	CESIUM 137, SUSPENDED TOTAL (PCI/L)
28404	CESIUM 137, SUSPENDED (PCI/L)
28405	CESIUM 137,SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
28405	CESIUM 137,SUSPENDED, COUNTING ERROR (PCI/L)
28412	CESIUM 134, SUSPENDED TOTAL (PCI/L)
28412	CESIUM 134, SUSPENDED (PCI/L)
28413	CESIUM 134, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
28413	CESIUM 134, SUSPENDED, COUNTING ERROR (PCI/L)
39353	CHLORDANE, SUSPENDED TOTAL (UG/L)
39353	CHLORDANE, SUSPENDED (UG/L)
01029	CHROMIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CR)
01029	CHROMIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS CR)
01031	CHROMIUM, SUSPENDED RECOVERABLE (UG/L AS CR)
01031	CHROMIUM, SUSPENDED (UG/L AS CR)
01034	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)
01034	CHROMIUM, TOTAL (UG/L AS CR)
01036	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)
01036	COBALT, SUSPENDED (UG/L AS CO)
01037	COBALT, TOTAL RECOVERABLE (UG/L AS CO)
01037	COBALT, TOTAL (UG/L AS CO)
01038	COBALT, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CO)
01038	COBALT, TOTAL IN BOTTOM MATERIAL (UG/G AS CO)
01041	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)
01041	COPPER, SUSPENDED (UG/L AS CU)
01042	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
01042	COPPER, TOTAL (UG/L AS CU)
01043	COPPER, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CU)
01043	COPPER, TOTAL IN BOTTOM MATERIAL (UG/G AS CU)
39362	DDD, SUSPENDED TOTAL (UG/L)
39362	DDD, SUSPENDED (UG/L)
39367	DDE, SUSPENDED TOTAL (UG/L)
39367	DDE, SUSPENDED (UG/L)
39372	DDT, SUSPENDED TOTAL (UG/L)
39372	DDT, SUSPENDED (UG/L)
39573	DIAZINON, SUSPENDED TOTAL (UG/L)
39573	DIAZINON, SUSPENDED (UG/L)
39382	DIELDRIN, SUSPENDED TOTAL (UG/L)
39382	DIELDRIN, SUSPENDED (UG/L)
39392	ENDRIN, SUSPENDED TOTAL (UG/L)
39392	ENDRIN, SUSPENDED (UG/L)
01121	GALLIUM, SUSPENDED TOTAL (UG/L AS GA)
01121	GALLIUM, SUSPENDED (UG/L AS GA)
01126	GERMANIUM, SUSPENDED TOTAL (UG/L AS GE)
01126	GERMANIUM, SUSPENDED (UG/L AS GE)

APPENDIX

PARAMETER CODE	FIRST LINE - NEW TERMINOLOGY SECOND LINE - OLD TERMINOLOGY
01516	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS U NATURAL)
01516	GROSS ALPHA RADIOACTIVITY, SUSPENDED (PCI/L AS U NATURAL)
01517	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS U NATURAL)
01517	GROSS ALPHA RADIOACTIVITY, SUSPENDED (PCI/G AS U NATURAL)
01518	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (UG/G AS U NATURAL)
01518	GROSS ALPHA RADIOACTIVITY, SUSPENDED (UG/G AS U NATURAL)
80040	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (UG/L AS U NATURAL)
80040	GROSS ALPHA RADIOACTIVITY, SUSPENDED (UG/L AS U NATURAL)
80060	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS SR/YT-90)
80060	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/L AS SR/YT-90)
03516	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS CS-137)
03516	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/L AS CS-137)
03517	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS SR/YT-90)
03517	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/G AS SR/YT-90)
03518	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS CS-137)
03518	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/G AS CS-137)
39412	HEPTACHLOR, SUSPENDED TOTAL (UG/L)
39412	HEPTACHLOR, SUSPENDED (UG/L)
39422	HEPTACHLOR EPOXIDE, SUSPENDED TOTAL (UG/L)
39422	HEPTACHLOR EPOXIDE, SUSPENDED (UG/L)
01044	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)
01044	IRON, SUSPENDED (UG/L AS FE)
01045	IRON, TOTAL RECOVERABLE (UG/L AS FE)
01045	IRON, TOTAL (UG/L AS FE)
01170	IRON, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS FE)
01170	IRON, TOTAL IN BOTTOM MATERIAL (UG/G AS FE)
07062	IRON 59, SUSPENDED TOTAL (PCI/L)
07062	IRON 59, SUSPENDED (PCI/L)
07063	IRON 59, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07063	IRON 59, SUSPENDED, COUNTING ERROR (PCI/L)
39432	ISODRIN, SUSPENDED TOTAL (UG/L)
39432	ISODRIN, SUSPENDED (UG/L)
01050	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)
01050	LEAD, SUSPENDED (UG/L AS PB)
01051	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
01051	LEAD, TOTAL (UG/L AS PB)
01052	LEAD, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS PB)
01052	LEAD, TOTAL IN BOTTOM MATERIAL (UG/G AS PB)
39342	LINDANE, SUSPENDED TOTAL (UG/L)
39342	LINDANE, SUSPENDED (UG/L)
01131	LITHIUM, SUSPENDED RECOVERABLE (UG/L AS LI)
01131	LITHIUM, SUSPENDED (UG/L AS LI)
01132	LITHIUM, TOTAL RECOVERABLE (UG/L AS LI)
01132	LITHIUM, TOTAL (UG/L AS LI)
00926	MAGNESIUM, SUSPENDED RECOVERABLE (MG/L AS MG)
00926	MAGNESIUM, SUSPENDED (MG/L AS MG)

PARA-METER CODE	FIRST LINE - NEW TERMINOLOGY SECOND LINE - OLD TERMINOLOGY
00927	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)
00927	MAGNESIUM, TOTAL (MG/L AS MG)
39533	MALATHION, SUSPENDED TOTAL (UG/L)
39533	MALATHION, SUSPENDED (UG/L)
01053	MANGANESE, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS MN)
01053	MANGANESE, TOTAL IN BOTTOM MATERIAL (UG/G AS MN)
01054	MANGANESE, SUSPENDED RECOVERABLE (UG/L AS MN)
01054	MANGANESE, SUSPENDED (UG/L AS MN)
01055	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)
01055	MANGANESE, TOTAL (UG/L AS MN)
71895	MERCURY, SUSPENDED RECOVERABLE (UG/L AS HG)
71895	MERCURY, SUSPENDED (UG/L AS HG)
71900	MERCURY, TOTAL RECOVERABLE (UG/L AS HG)
71900	MERCURY, TOTAL (UG/L AS HG)
71921	MERCURY, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS HG)
71921	MERCURY, TOTAL IN BOTTOM MATERIAL (UG/G AS HG)
39603	METHYL PARATHION, SUSPENDED TOTAL (UG/L)
39603	METHYL PARATHION, SUSPENDED (UG/L)
39757	MIREX, SUSPENDED TOTAL (UG/L)
39757	MIREX, SUSPENDED (UG/L)
01061	MOLYBDENUM, SUSPENDED RECOVERABLE (UG/L AS MO)
01061	MOLYBDENUM, SUSPENDED (UG/L AS MO)
01062	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)
01062	MOLYBDENUM, TOTAL (UG/L AS MO)
01063	MOLYBDENUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS MO)
01063	MOLYBDENUM, TOTAL IN BOTTOM MATERIAL (UG/G AS MO)
01066	NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI)
01066	NICKEL, SUSPENDED (UG/L AS NI)
01067	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)
01067	NICKEL, TOTAL (UG/L AS NI)
01068	NICKEL, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS NI)
01068	NICKEL, TOTAL IN BOTTOM MATERIAL (UG/G AS NI)
00623	NITROGEN, AMMONIA PLUS ORGANIC, DISSOLVED (MG/L AS N)
00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)
00624	NITROGEN, AMMONIA PLUS ORGANIC, SUSPENDED TOTAL (MG/L AS N)
00624	NITROGEN, KJELDAHL, SUSPENDED (MG/L AS N)
00625	NITROGEN, AMMONIA PLUS ORGANIC, TOTAL (MG/L AS N)
00625	NITROGEN, KJELDAHL, TOTAL (MG/L AS N)
00626	NITROGEN, AMMONIA PLUS ORGANIC, TOTAL IN BOTTOM MATERIAL, DRY WT (MG/KG AS N)
00626	NITROGEN, KJELDAHL, TOTAL IN BOTTOM MATERIAL, DRY WT (MG/KG AS N)
39543	PARATHION, SUSPENDED TOTAL (UG/L)
39543	PARATHION, SUSPENDED (UG/L)
39518	PCB, SUSPENDED TOTAL (UG/L)
39518	PCB, SUSPENDED (UG/L)
09505	RADIUM 226, SUSPENDED TOTAL (PCI/L)
09505	RADIUM 226, SUSPENDED (PCI/L)
07082	RHODAMINE WT, SUSPENDED TOTAL (UG/L)
07082	RHODAMINE WT, SUSPENDED (UG/L)
01136	RUBIDIUM, SUSPENDED TOTAL (UG/L AS RB)
01136	RUBIDIUM, SUSPENDED (UG/L AS RB)
29633	SCANDIUM 46, SUSPENDED TOTAL (PCI/L)
29633	SCANDIUM 46, SUSPENDED (PCI/L)
29634	SCANDIUM 46, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
29634	SCANDIUM 46, SUSPENDED, COUNTING ERROR (PCI/L)
01146	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)
01146	SELENIUM, SUSPENDED (UG/L AS SE)
07102	SELENIUM 75, SUSPENDED TOTAL (PCI/L)
07102	SELENIUM 75, SUSPENDED (PCI/L)

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07103	SELENIUM 75, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07103	SELENIUM 75, SUSPENDED, COUNTING ERROR (PCI/L)
01076	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)
01076	SILVER, SUSPENDED (UG/L AS AG)
01077	SILVER, TOTAL RECOVERABLE (UG/L AS AG)
01077	SILVER, TOTAL (UG/L AS AG)
01078	SILVER, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS AG)
01078	SILVER, TOTAL IN BOTTOM MATERIAL (UG/G AS AG)
07122	SILVER 110, SUSPENDED TOTAL (PCI/L)
07122	SILVER 110, SUSPENDED (PCI/L)
07123	SILVER 110, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07123	SILVER 110, SUSPENDED, COUNTING ERROR (PCI/L)
39763	SILVEX, SUSPENDED TOTAL (UG/L)
39763	SILVEX, SUSPENDED (UG/L)
70299	SOLIDS, RESIDUE AT 110 DEG. C, SUSPENDED TOTAL (MG/L)
70299	SOLIDS, RESIDUE AT 110 DEG. C, SUSPENDED (MG/L)
01081	STRONTIUM, SUSPENDED RECOVERABLE (UG/L AS SR)
01081	STRONTIUM, SUSPENDED (UG/L AS SR)
01082	STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR)
01082	STRONTIUM, TOTAL (UG/L AS SR)
01083	STRONTIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS SR)
01083	STRONTIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS SR)
13505	STRONTIUM 90, SUSPENDED TOTAL (PCI/L)
13505	STRONTIUM 90, SUSPENDED (PCI/L)
13506	STRONTIUM 90, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
13506	STRONTIUM 90, SUSPENDED, COUNTING ERROR (PCI/L)
07142	SULFUR 35, SUSPENDED TOTAL (PCI/L)
07142	SULFUR 35, SUSPENDED (PCI/L)
07143	SULFUR 35, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07143	SULFUR 35, SUSPENDED, COUNTING ERROR (PCI/L)

PARA-METER CODE	FIRST LINE - NEW TERMINOLOGY SECOND LINE - OLD TERMINOLOGY
01101	TIN, SUSPENDED RECOVERABLE (UG/L AS SN)
01101	TIN, SUSPENDED (UG/L AS SN)
01102	TIN, TOTAL RECOVERABLE (UG/L AS SN)
01102	TIN, TOTAL (UG/L AS SN)
01151	TITANIUM, SUSPENDED TOTAL (UG/L AS TI)
01151	TITANIUM, SUSPENDED (UG/L AS TI)
39402	TOXAPHENE, SUSPENDED TOTAL (UG/L)
39402	TOXAPHENE, SUSPENDED (UG/L)
07010	TRITIUM, SUSPENDED TOTAL (PCI/L)
07010	TRITIUM, SUSPENDED (PCI/L)
07011	TRITIUM, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07011	TRITIUM, SUSPENDED, COUNTING ERROR (PCI/L)
07014	TRITIUM, SUSPENDED TOTAL, COUNTING ERROR (TRITIUM UNITS)
07014	TRITIUM, SUSPENDED, COUNTING ERROR (TRITIUM UNITS)
07016	TRITIUM, SUSPENDED TOTAL (TRITIUM UNITS)
07016	TRITIUM, SUSPENDED (TRITIUM UNITS)
22705	URANIUM, NATURAL, SUSPENDED TOTAL (UG/L AS U NATURAL)
22705	URANIUM, NATURAL, SUSPENDED (UG/L AS U NATURAL)
01086	VANADIUM, SUSPENDED TOTAL (UG/L AS V)
01086	VANADIUM, SUSPENDED (UG/L AS V)
01091	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)
01091	ZINC, SUSPENDED (UG/L AS ZN)
01092	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
01092	ZINC, TOTAL (UG/L AS ZN)
01093	ZINC, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS ZN)
01093	ZINC, TOTAL IN BOTTOM MATERIAL (UG/G AS ZN)
01161	ZIRCONIUM, SUSPENDED TOTAL (UG/L AS ZR)
01161	ZIRCONIUM, SUSPENDED (UG/L AS ZR)
39733	2,4-D, SUSPENDED TOTAL (UG/L)
39733	2,4-D, SUSPENDED (UG/L)
39743	2,4,5-T, SUSPENDED TOTAL (UG/L)
39743	2,4,5-T, SUSPENDED (UG/L)

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FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
cfs-days	2.447×10^{3}	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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