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Water Resources Data North Carolina Water Year 1990

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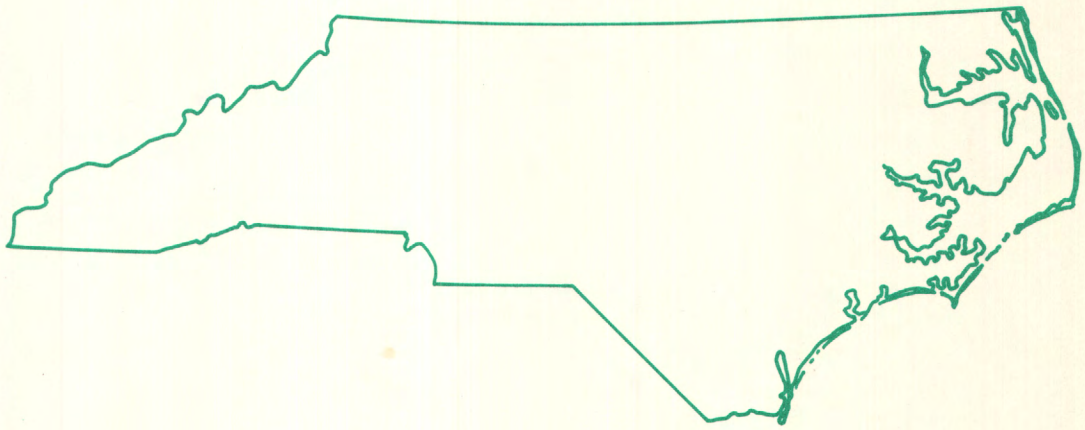

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NC-90-1
Prepared in cooperation with the North Carolina Department of Environment, Health, and Natural Resources, and with other State, municipal, and Federal agencies

CALENDAR FOR WATER YEAR 1990

1989

OCTOBER

S	M	T	W	T	F	S
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1990

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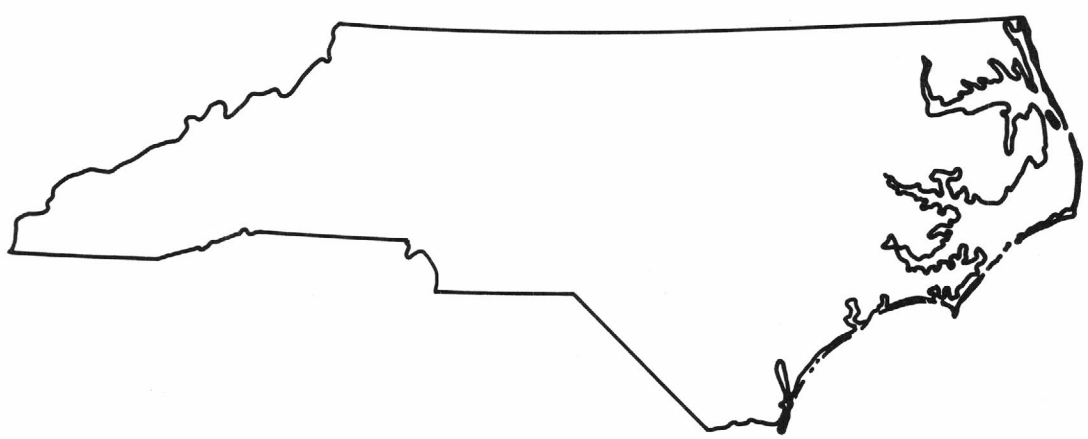
Water Resources Data North Carolina Water Year 1990

by B.C. Ragland, R.G. Barker, W.H. Eddins, and J.F. Rinehardt



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NC-90-1
Prepared in cooperation with the North Carolina Department of Environment, Health, and Natural Resources, and with other State, municipal, and Federal agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

MANUEL LUJAN, JR., SECRETARY

GEOLOGICAL SURVEY

Dallas L. Peck, Director

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District Chief, Water Resources Division
U. S. Geological Survey
3916 Sunset Ridge Road
Raleigh, NC 27607

1991

PREFACE

This volume of the annual hydrologic-data report of North Carolina is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for North Carolina are contained in the volume.

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

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This report was prepared in cooperation with the State of North Carolina, other agencies, and under the general supervision of James F. Turner, District Chief; and James L. Cook, Regional Hydrologist, Southeastern Region.

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16. Abstract (Limit: 200 words)

Water resources data for the 1990 water year for North Carolina consists 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 167 gaging stations and stage and contents for 26 lakes and reservoirs; water quality for 30 gaging stations and 3 miscellaneous sites; continuous daily tide stage for 10 sites; and water levels for 46 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 part of the National Water-Data System operated by the U.S. Geological Survey in cooperation with State, municipal, and Federal agencies.

17. Document Analysis a. Descriptors

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

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WATER RESOURCES DATA FOR NORTH CAROLINA, 1990

INTRODUCTION

Water-resources data for the 1990 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 167 gaging stations and stage and contents for 26 lakes and reservoirs; water quality for 30 gaging stations and 3 miscellaneous sites; continuous daily tide stage at 10 sites; and water levels for 46 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 1970 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 Books and Open-file Reports, Federal Center, Bldg 810, Box 25425, Denver, Colorado 80225.

Streamflow data since the 1961 water year and water-quality data since the 1964 water year have been released by the Geological Survey in annual reports on a State-boundary basis. These reports provided rapid release of water data in each State shortly after the end of the water year. Through 1970 the data were also released in the water-supply paper series mentioned above.

Streamflow and water-quality data beginning with the 1971 water year, and the ground-water data beginning with the 1975 water year are published only in reports on a State-boundary basis. Beginning with the 1975 water year, 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-90-1". 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) 571-4000.

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 8 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 Environment, Health, and Natural Resources
State Board of Transportation, Division of Highways
City of Asheville
City of Brevard
City of Charlotte
City of Durham
City of Lexinton
City of Greensboro
City of Raleigh
City of Rocky Mount
Town of Bethel
Town of Chapel Hill
Guilford Soil and Water Conservation District,
Forsyth County
Orange County
Orange Water and Sewer Authority

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
Environmental Protection Agency

The following organizations aided in collecting records:

City of Danville, Virginia; E. I. du Pont de Nemours and Co.; Carolina Power and Light Co.; Champion International Corp.; Piedmont Triad Regional Water Authority; Duke Power Co.; Fiber Industries, Inc.; Olin Corp.; P. P. G. Industries; North Carolina Power Co.; and Yadkin, Inc.

SUMMARY OF WATER-RESOURCES CONDITIONS

Above- or near-average rains in the opening months of the 1990 water year sustained flow in North Carolina streams at normal to excessive levels and continued to replenish the State's aquifers and lakes. Precipitation was at near- or above-average levels at most key weather stations across the State for the first half of the 1990 water year (fig. 1, fig. 2). Rainfall amounts were well below-average at weather stations across the Piedmont for the summer months, however, and total rainfall for the 1990 water year was as much as 6.15 inches and 4.10 inches below average at Greensboro and Raleigh, respectively. In contrast, near- to above-average rains fell in the Blue Ridge and Coastal Plain in the summer months and total rainfall for the 1990 water year at stations in those regions was near- or above-average (fig. 2).

The effects of the changing rainfall patterns on flow conditions in North Carolina are depicted in two sets of figures. The maps in figures 3 and 4 show regions of normal, deficient (below normal), and excessive (above normal) streamflow. For the purposes of figures 3 and 4, monthly streamflow statistics covering the 30-year base period 1959-88 for 51 gaging stations were used. The descriptor "deficient" refers to flow in the lower quartile; "excessive" to the upper quartile, and "normal" to the middle quartiles.

Daily discharge hydrographs for the 1990 water year and the median discharge hydrographs for four long-term index gaging stations across the State are shown in figures 5-8. The gaging stations are locatred in figure 1. Median discharge was computed using the base period 1938-86.

The effects of above-average rainfall in the 1989 water year continued to be evident in October, as streamflow everywhere in North Carolina was excessive (fig. 3a). Monthly mean flows of Cataloochee Creek near Cataloochee, Little River near Star, Ocunaluftee River at Birdtown, Tar River at Louisburg, Yadkin River at Patterson, and Valley River at Tomotla were the highest for the period of record. October mean flows in several other streams were at the second- or third-highest levels for the period of record.

Decreased flow was recorded in most North Carolina streams in November and flow conditions returned to normal in large areas of the Piedmont, and in the Northeast Cape Fear River and Trent River basins in the Coastal Plain (fig. 3b). Despite decreases in streamflow, excessive flow conditions continued across large parts of the State, including most of the Coastal Plain and all of the Blue Ridge. Flow continued to decrease in most western North Carolina streams in December and after several consecutive months in the excessive range, flow conditions returned to the normal range everywhere in the Blue Ridge (fig. 3c), except for the Valley River basin in the western tip of the State, where flow was excessive for the fourth consecutive month. Streamflow increased in eastern North Carolina in December and flow conditions were in the excessive range across the entire Coastal Plain and eastern Piedmont.

By January, the effects of the previous year's plentiful rainfall on streamflow were diminishing across eastern North Carolina. Streamflow at Deep River at Moncure, Contentnea Creek at Hookerton and Lumber River at Boardman decreased to normal after three months in the excessive range. The region of normal flow conditions extended from the Broad River basin in the southeast Blue Ridge across the southern Piedmont and over the entire eastern half of the State (fig. 3d). In the Blue Ridge and northwestern Piedmont, however, streamflow returned to the excessive range.

Above-average amounts of rain fell in the Blue Ridge and Piedmont in February (fig. 2) and resulting increases in streamflow sustained excessive flow conditions in the Blue Ridge and raised flow conditions into the excessive range in the Broad River and lower Pee Dee River basins. February mean flows reached new record highs at Cataloochee Creek near Cataloochee, French Broad River at Asheville, Ocunaluftee River at Birdtown, and Twelve Mile Creek near Waxhaw, and the February mean flows at several other Blue Ridge and Piedmont streams were at the second- or third-highest levels for the period of record. Heavy rains fell February 16 in the mountain counties of Clay, Jackson, Macon, and Transylvania resulting in moderate flooding in those areas, with recurrence intervals of up to 10 years in areas of heaviest rainfall. The flooding was responsible for one death and extensive property damage. In eastern North Carolina, increased streamflow resulted in a region of excessive flow conditions in the northwestern Coastal Plain and northeastern Piedmont, while reduced streamflow in the Black River, Northeast Cape Fear River, and Trent River basins brought about the first occurence of deficient flow conditions in the State in the water year. Normal flow conditions prevailed across the rest of the State in February (fig. 3e).

In March locally heavy rains again fell in the western mountains, causing flooding in the Cartoogehaye River and upper Little Tennessee River basins, with recurrence intervals in the 5-10 year range. Blue Ridge and western Piedmont streams continued to flow at excessive levels (fig. 3f). In the rest of the State, the region of normal flow conditions expanded westward to include the Rocky River and Yadkin-Pee Dee River basins and eastward to include all of the northern Coastal Plain. Streamflow in the Lumber River basin declined into the deficient range, increasing the area of below-normal flow conditions in the southern Coastal Plain.

Streamflow decreased in western North Carolina in April and increased in eastern North Carolina. Flow conditions declined into the deficient range in the western Blue Ridge and decreased to normal in the eastern Blue Ridge and western Piedmont, expanding the region of normal flow conditions (fig. 4a). The region of normal flow conditions expanded in the east as well, as streamflow returned to normal in the Black River, Lumber River, Northeast Cape Fear River, and Trent River basins. Flow conditions rose into the excessive range in a large area extending from the northeast Piedmont to the lower Neuse River and lower Tar River basins in the Coastal Plain.

Deficient flow conditions were short-lived in the mountains, as streamflow in May returned to the normal range in western Blue Ridge basins (fig. 4b). Streamflow in the Deep River, Haw River, and Pee Dee River basins increased into the excessive range, expanding the region of excessive flow conditions to include much of central North Carolina. The region of excessive flow conditions also expanded along the Virginia border to include the northern Coastal Plain and Piedmont. Flow conditions returned to normal in the Contentnea Creek and Neuse River basins and normal streamflows prevailed across the eastern Piedmont and southern Coastal Plain.

June rainfall was well below average across the State (fig. 2), and flow in North Carolina streams decreased accordingly. In western North Carolina, flow conditions declined into the deficient range in the central Blue Ridge and southwestern Piedmont (fig. 4c), specifically in the upper Pigeon River and upper Little Tennessee River basins. In eastern North Carolina, streamflow decreased to normal everywhere except in the Lumber River basin, where flow conditions declined below normal. Streamflow continued to decline seasonally in July and flow conditions dropped below normal in most Coastal Plain and eastern Piedmont streams, although a region of normal flow conditions persisted in the northeast (fig. 4d). Normal flow conditions prevailed in western North Carolina, as flow in Blue Ridge and western Piedmont streams returned to normal.

SUMMARY OF WATER-RESOURCES CONDITIONS--Continued

Rainfall was widely varied across the State in August, as the mountains and coastal regions received above-average amounts while central regions received below-average amounts (fig. 2). Streamflow in North Carolina reflected this variation, as flow conditions in much of the Coastal Plain and northeastern Piedmont returned to normal (fig. 4e) and increased into the excessive range in upper Catawba River and upper Yadkin River basins, while the area of deficient flow conditions in the central Piedmont expanded to include the Pee Dee River basin.

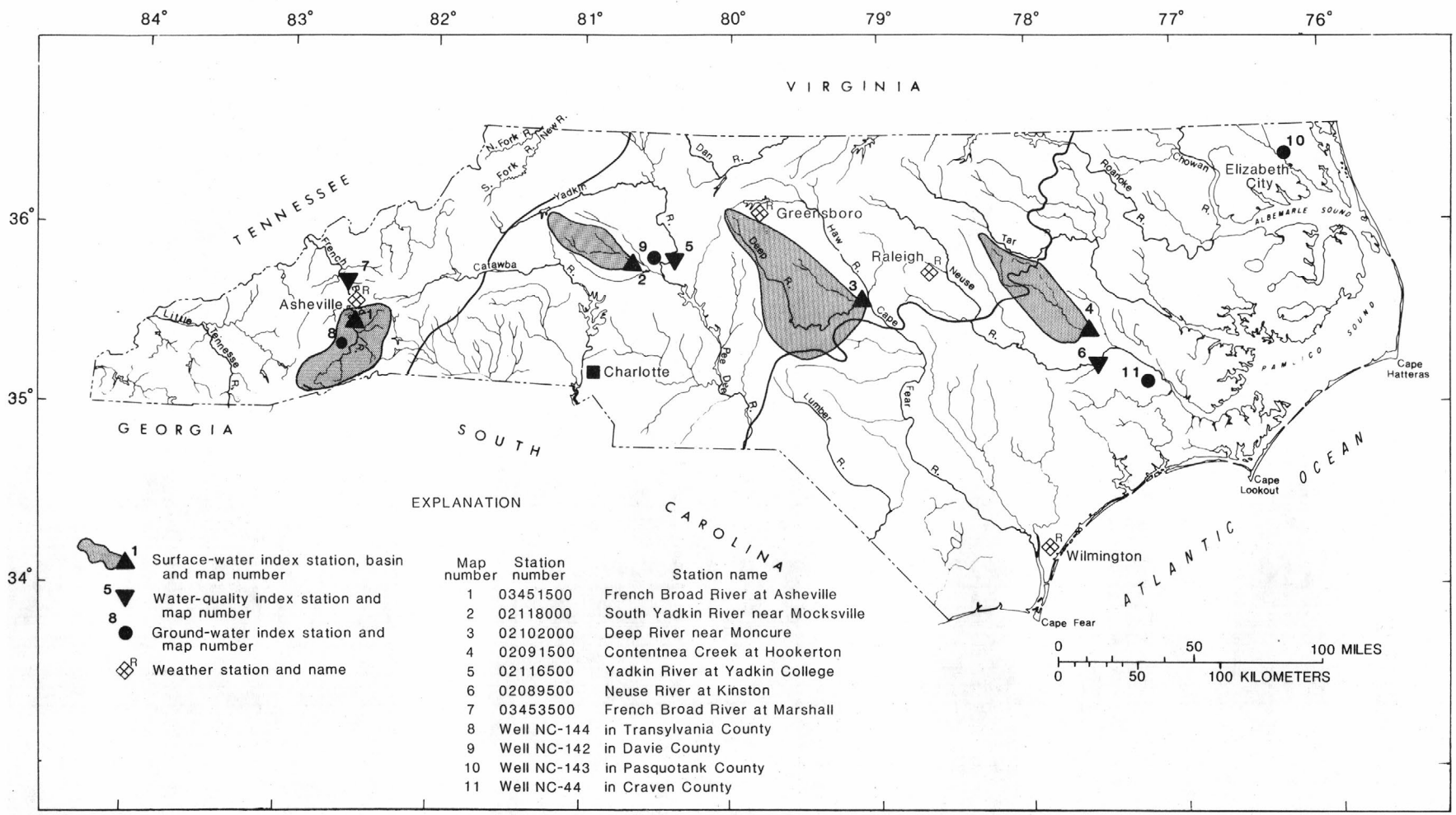
Rainfall across the State was below average in September and was below average for the fourth consecutive month at Charlotte, Greensboro, and Raleigh (fig. 2), raising concern about reemergence of drought conditions in those areas. Streamflow was deficient across the central Piedmont and southern Coastal Plain (fig. 4f), and flow in most streams in this area was being sustained by baseflow by month's end. Flow conditions remained in the normal range in the northern Coastal Plain and in the western part of the State.

For the period 1973 to current water years, six major dissolved constituents were compared with discharge for selected sites, French Broad River at Marshall (Blue Ridge), Yadkin River at Yadkin College (Piedmont), and Neuse River at Kinston (Coastal Plain) (see fig. 1 for locations). Concentrations of most major constituents vary inversely with stream discharge; therefore, maximum concentrations occur during low flows and minimum concentrations occur during high flows. For these dissolved constituents, concentrations, in general, were lower at the Blue Ridge station and higher at the Piedmont and Coastal Plain stations than the long-term means. For example, mean specific conductance, a measure of dissolved ions, at the French Broad River at Marshall, Yadkin River at Yadkin College, and Neuse River at Kinston in 1990 water year were 64, 81, and 125 microsiemens per centimeter, respectively. Long-term mean specific conductance values at these stations were 82, 75, and 104 microsiemens per centimeter, respectively. Total phosphorus concentrations at all sites were lower than the long-term means.

Daily concentrations of suspended sediment at the long-term sediment station on the Yadkin River at Yadkin College, are used to define trends in the Piedmont. As shown in figure 9, the sediment transport load for the 1990 water year (1,199,219 tons) was approximately 134 percent of the long-term average annual load for the reference period 1951-90 (898,165 tons). This was 17 percent higher than the annual load for the 1989 water year, and was a result of the increase in streamflow at the site during the 1990 water year. The annual mean discharge for the 1990 water year was 1.56 times greater than the annual mean for the 1989 water year.

Ground-water levels in unconfined (water-table) aquifers fluctuated during the water year as a result of continual discharge from the ground-water reservoir to streams, and periodic recharge to the ground-water reservoir from rainfall. Abundant rainfall in the early months of the 1990 water year fully recharged water-table aquifers across the State. Water levels in the Piedmont index well were at record or near-record highs for the entire year (fig. 10). In the Blue Ridge index well, water levels were at record highs until May and were still above-average at the close of the water year. In the Coastal Plain index well, water levels remained above-average until early summer, when they declined to below-average levels. Declining water levels were recorded across the State in the latter months of the water year, due to decreased ground water recharge resulting from seasonal evapotranspiration losses and continual discharge to streams.

Ground-water withdrawals in the Coastal Plain province have resulted in declining water levels in some of the confined aquifers for a number of years. This declining trend indicates that some of the water pumped from those aquifers is coming from ground-water storage, and that withdrawals are not being completely replenished by increased recharge and (or) by decreased natural discharge. An example of this trend is illustrated by the hydrograph of well NC-44 at the City of New Bern well field at Cove City (fig. 11) where water has been withdrawn from the Black Creek and Upper Cape Fear aquifers since 1968.



Map number	Station number	Station name
1	03451500	French Broad River at Asheville
2	02118000	South Yadkin River near Mocksville
3	02102000	Deep River near Moncure
4	02091500	Contentnea Creek at Hookerton
5	02116500	Yadkin River at Yadkin College
6	02089500	Neuse River at Kinston
7	03453500	French Broad River at Marshall
8	Well NC-144	in Transylvania County
9	Well NC-142	in Davie County
10	Well NC-143	in Pasquotank County
11	Well NC-44	in Craven County

Figure 1.--Location of index stations.

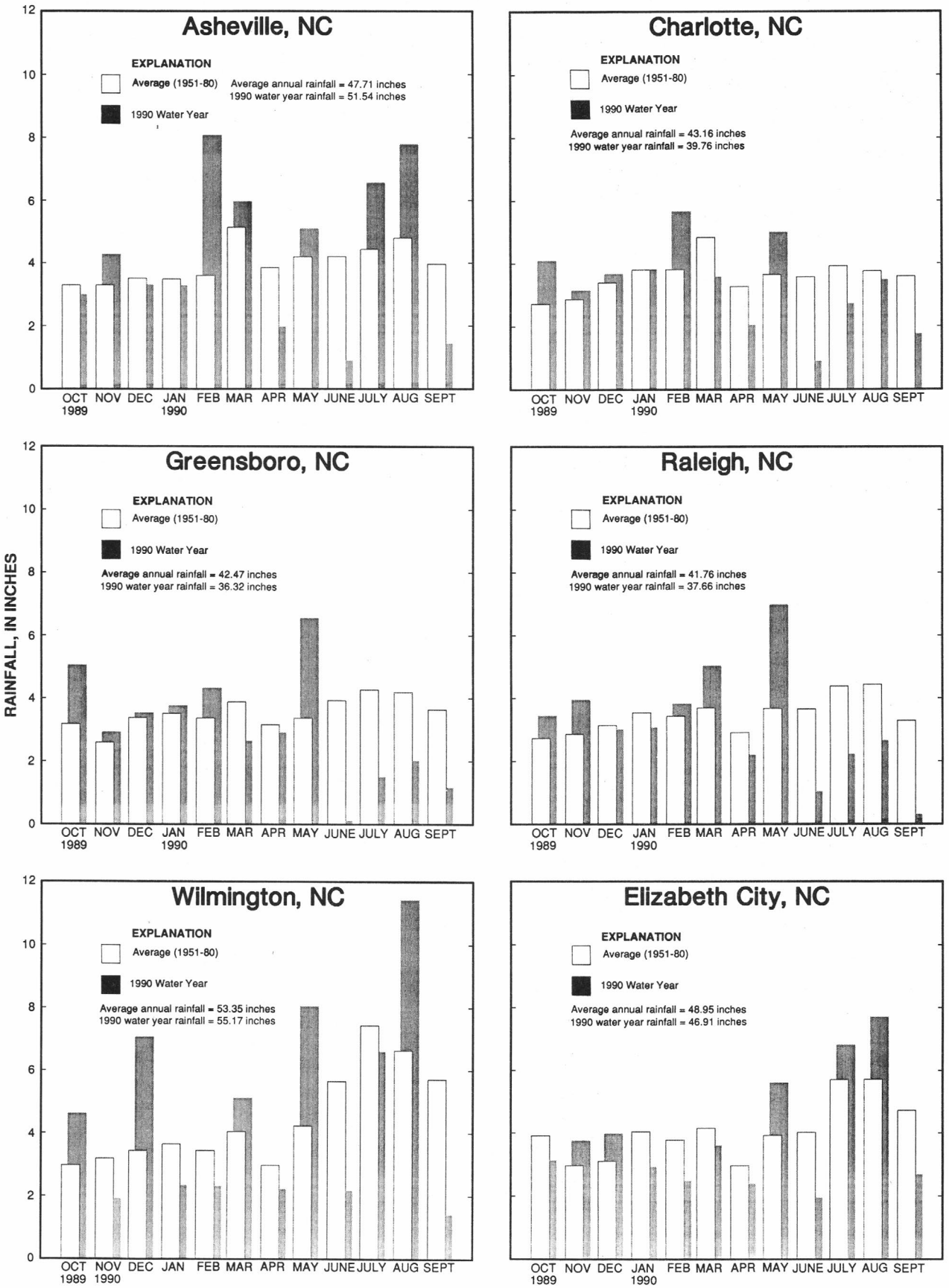


Figure 2.--Monthly rainfall for 1990 water year and average monthly rainfall for period 1951-80 (NOAA climatalogical reports).

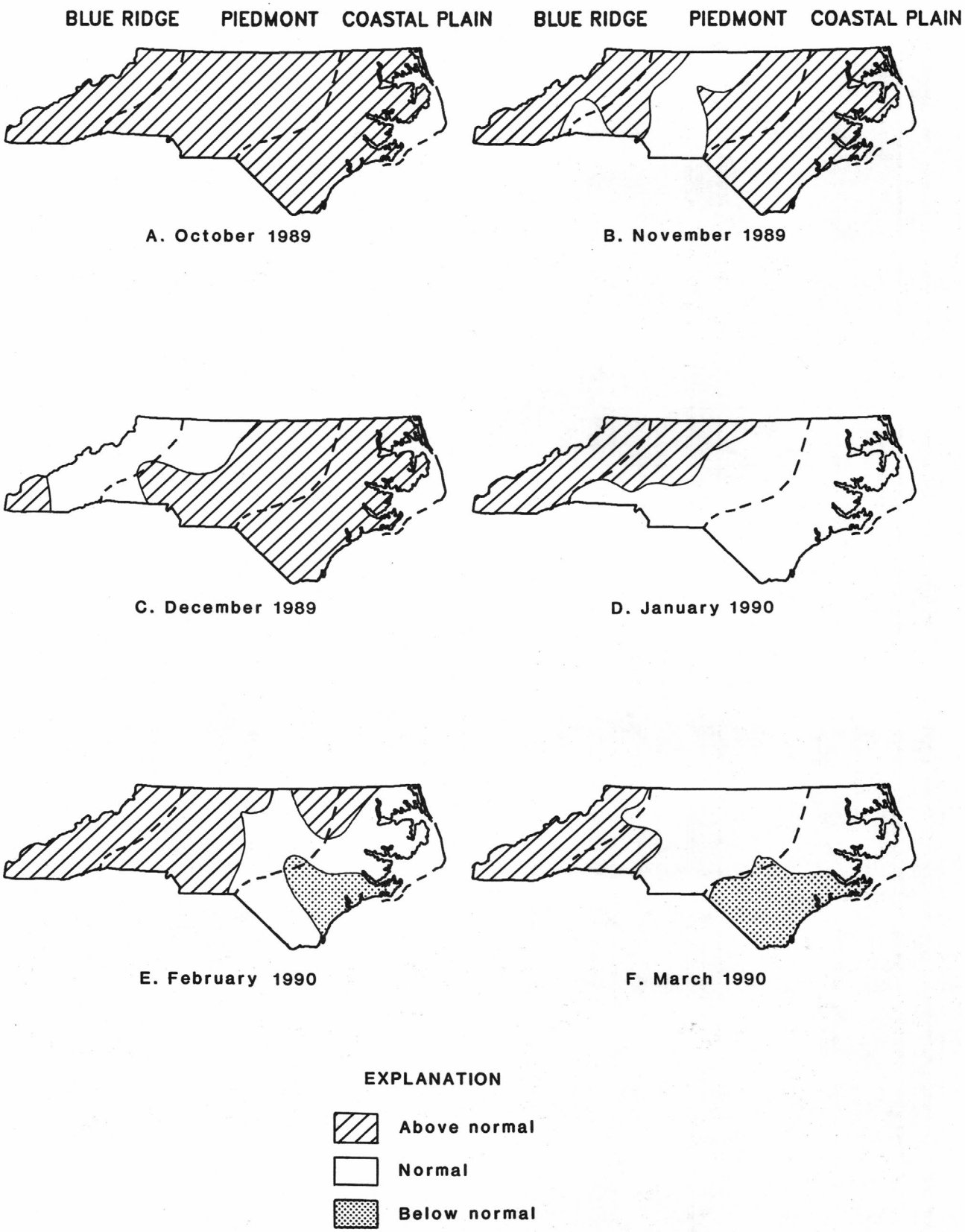


Figure 3.--Montly streamflow, October-March, during 1990 water year.

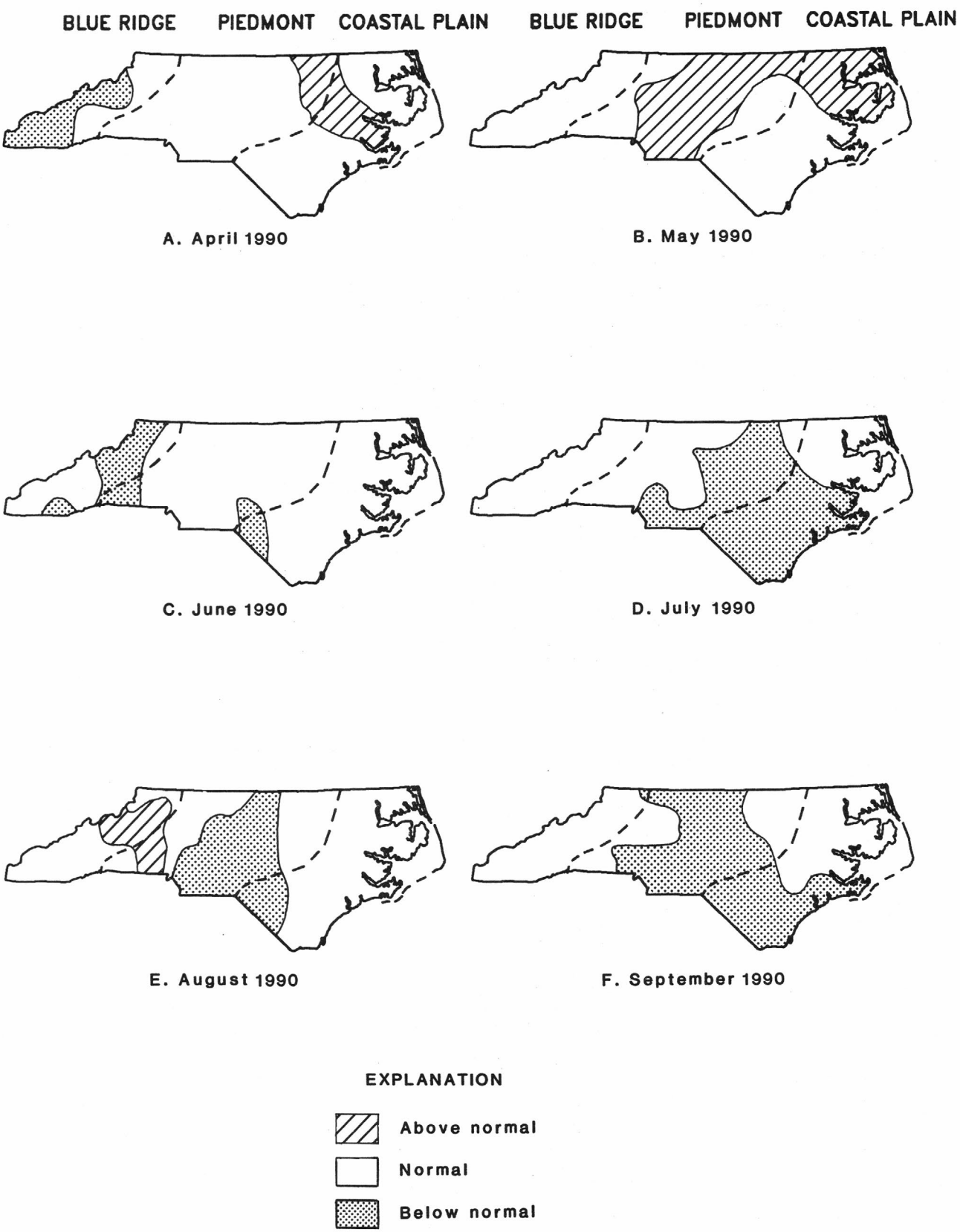


Figure 4.--Montly streamflow, April-September, during 1990 water year.

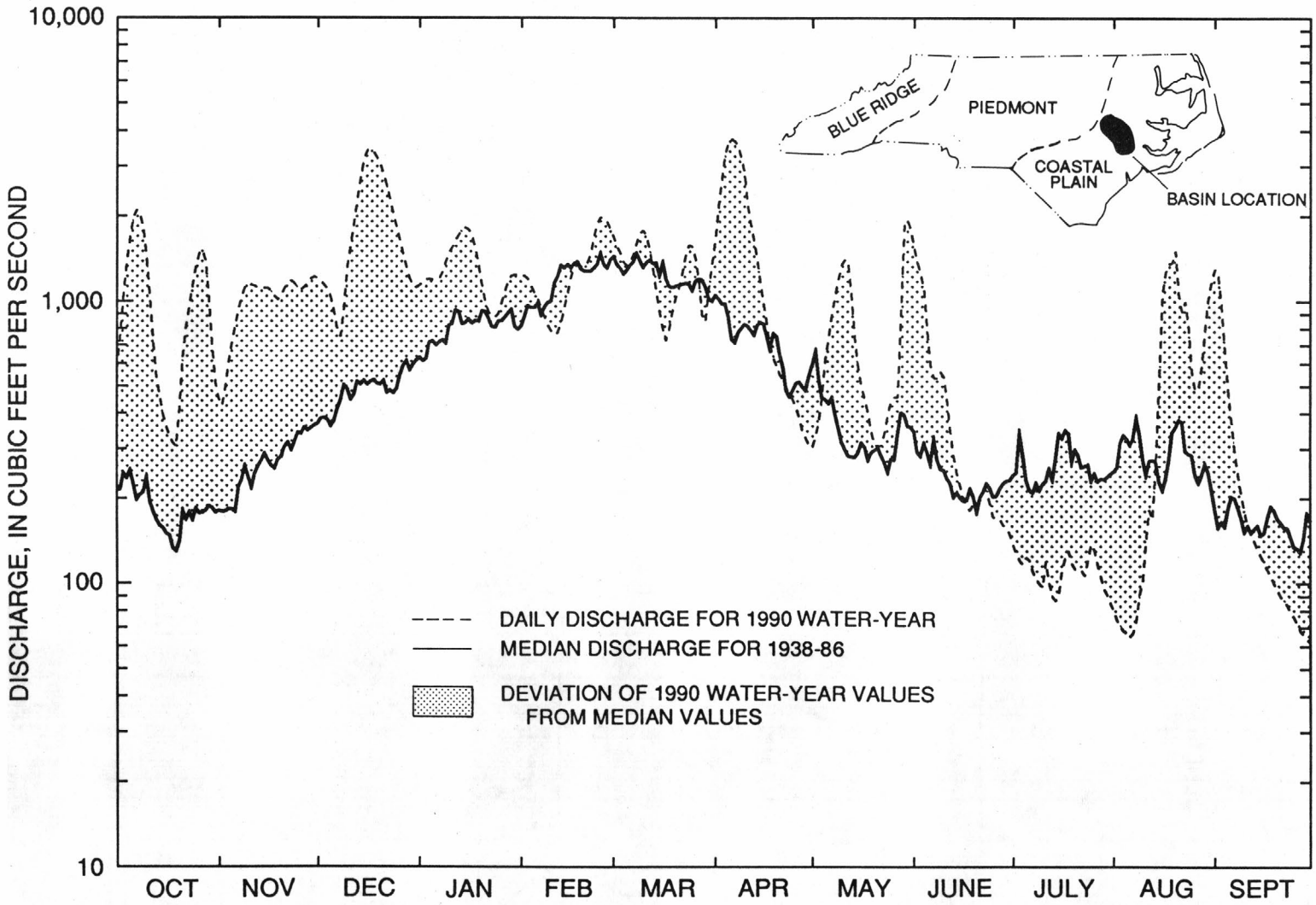


Figure 5.--Daily discharge for 1990 water year and median flow statistics for Contentnea Creek at Hookerton.

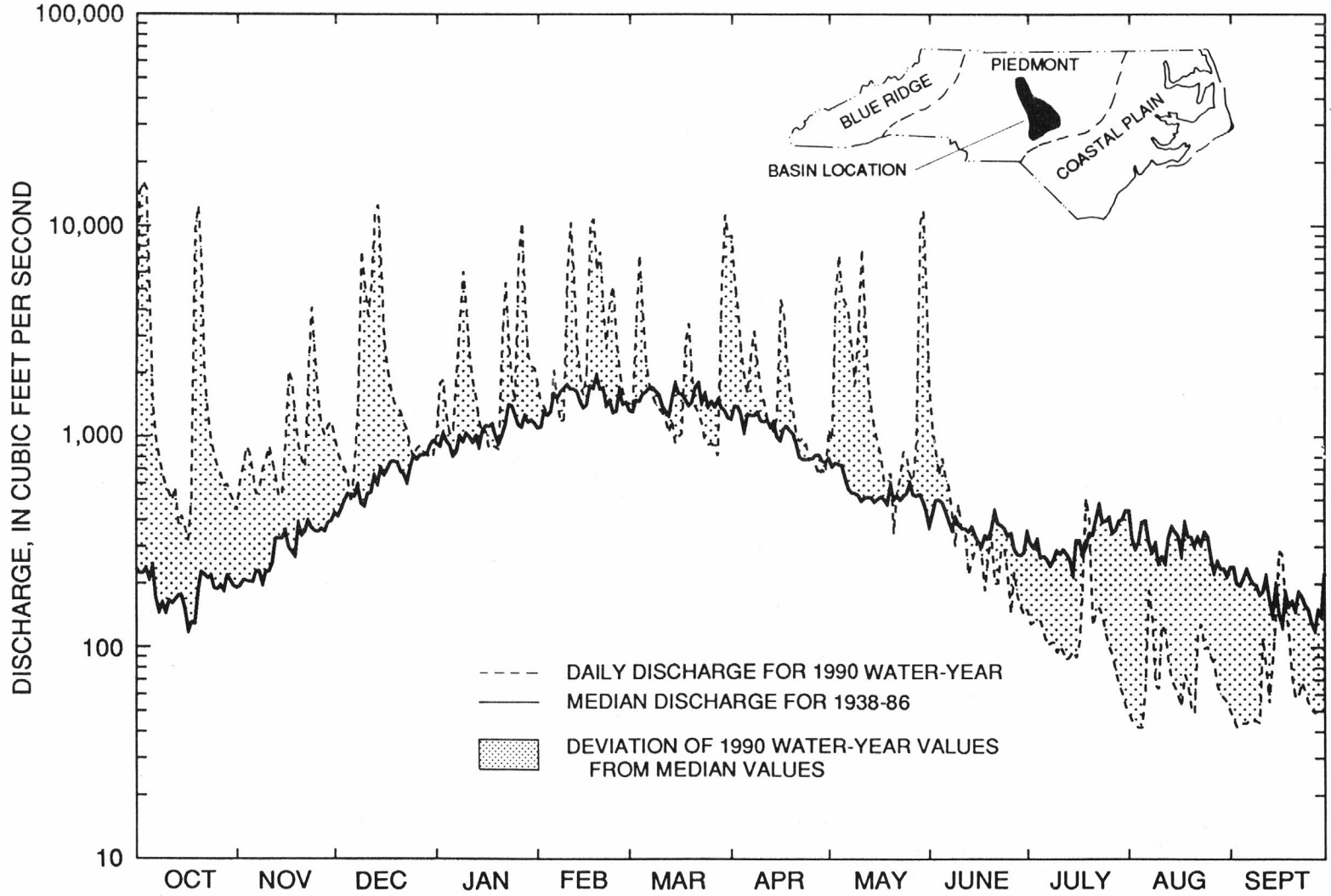


Figure 6.--Daily discharge for 1990 water year and median flow statistics for Deep River at Moncure.

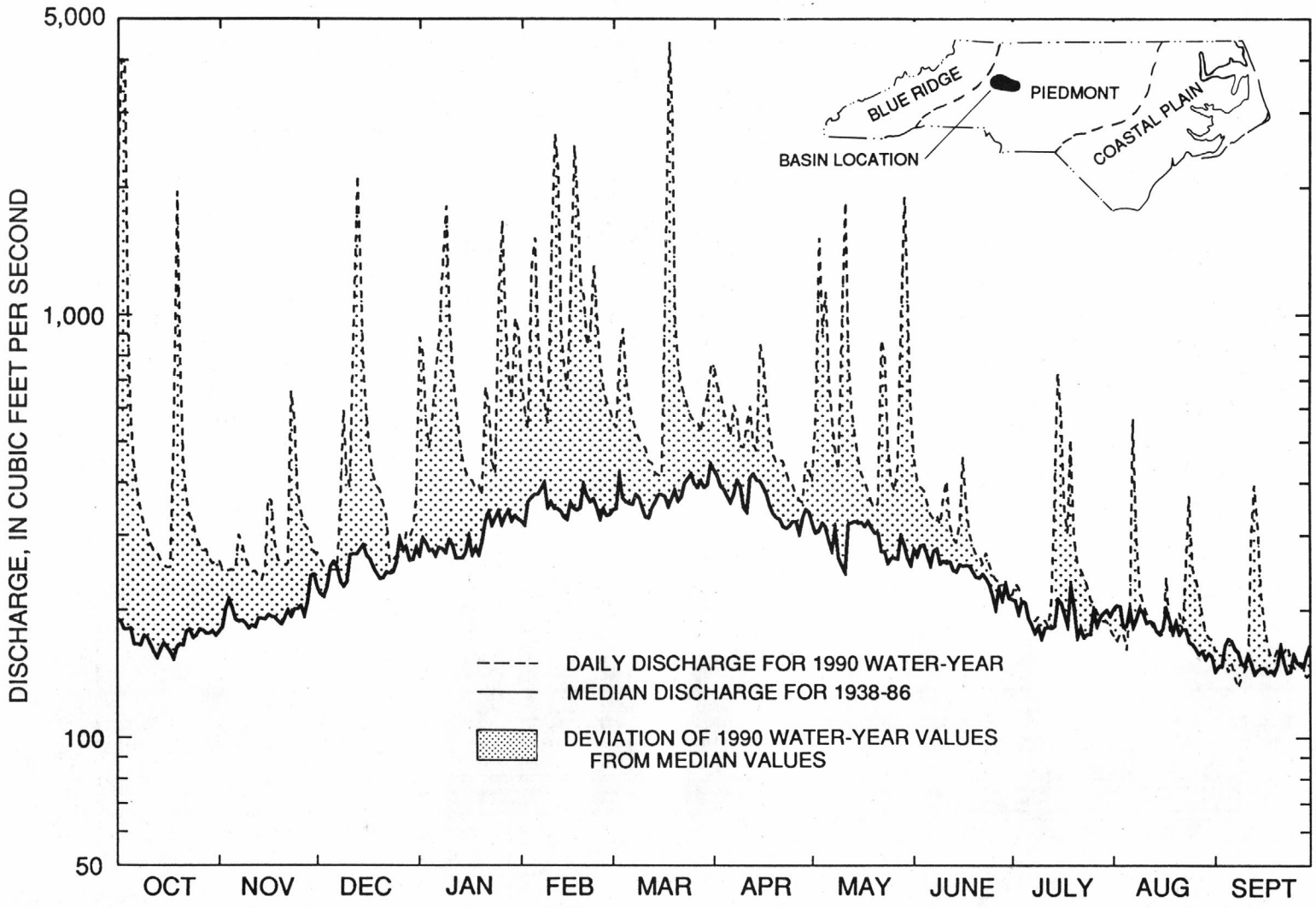


Figure 7.--Daily discharge for 1990 water year and median flow statistics for South Yadkin River at Mocksville.

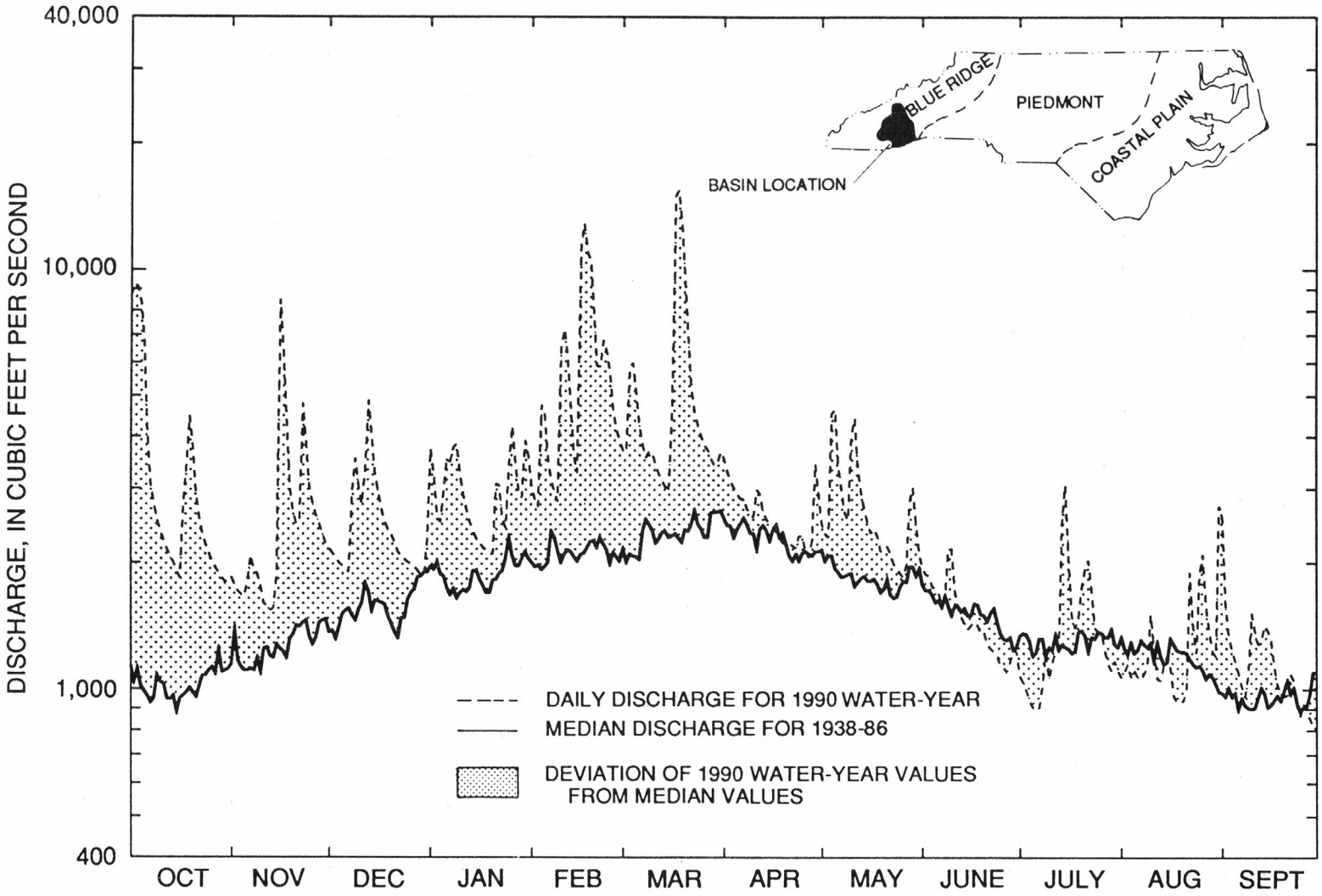


Figure 8.--Daily discharge for 1990 water year and median flow statistics for French Broad River at Asheville.

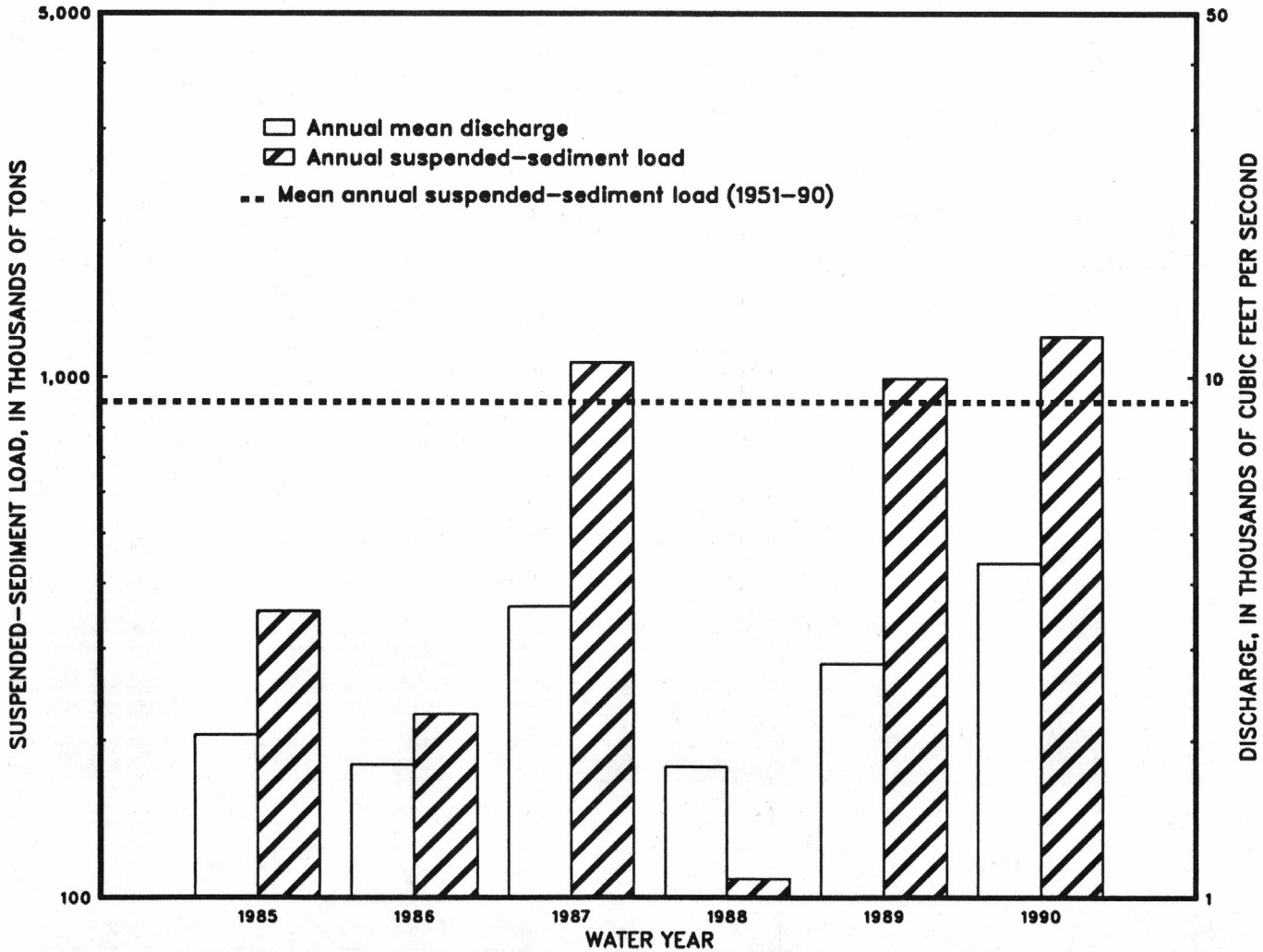


Figure 9.--Annual total suspended-sediment loads and mean annual discharge at Yadkin River at Yadkin College, North Carolina (02116500), 1985-1990.

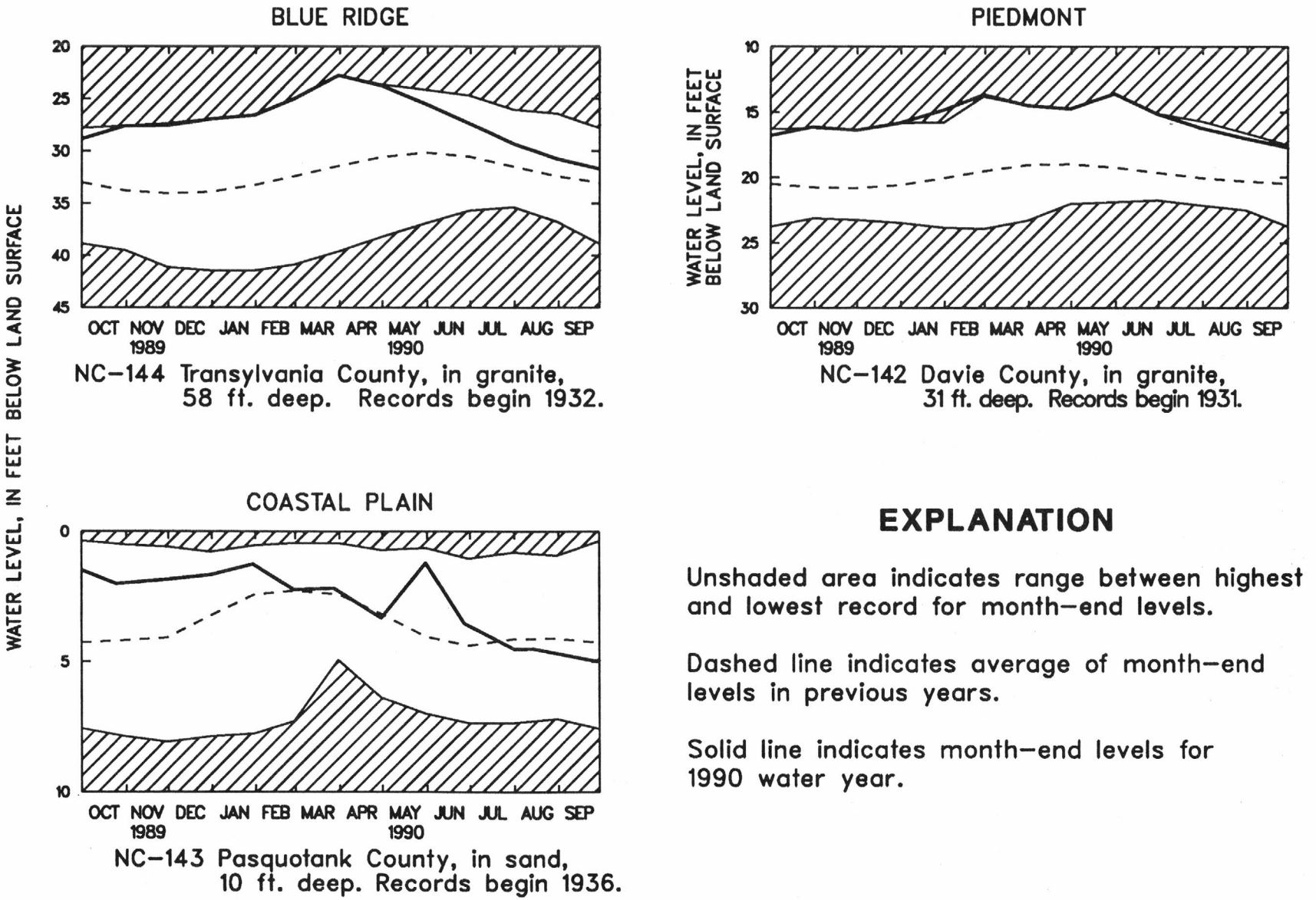


Figure 10.--Water levels in selected wells in the Blue Ridge, Piedmont, and Coastal Plain provinces of North Carolina.

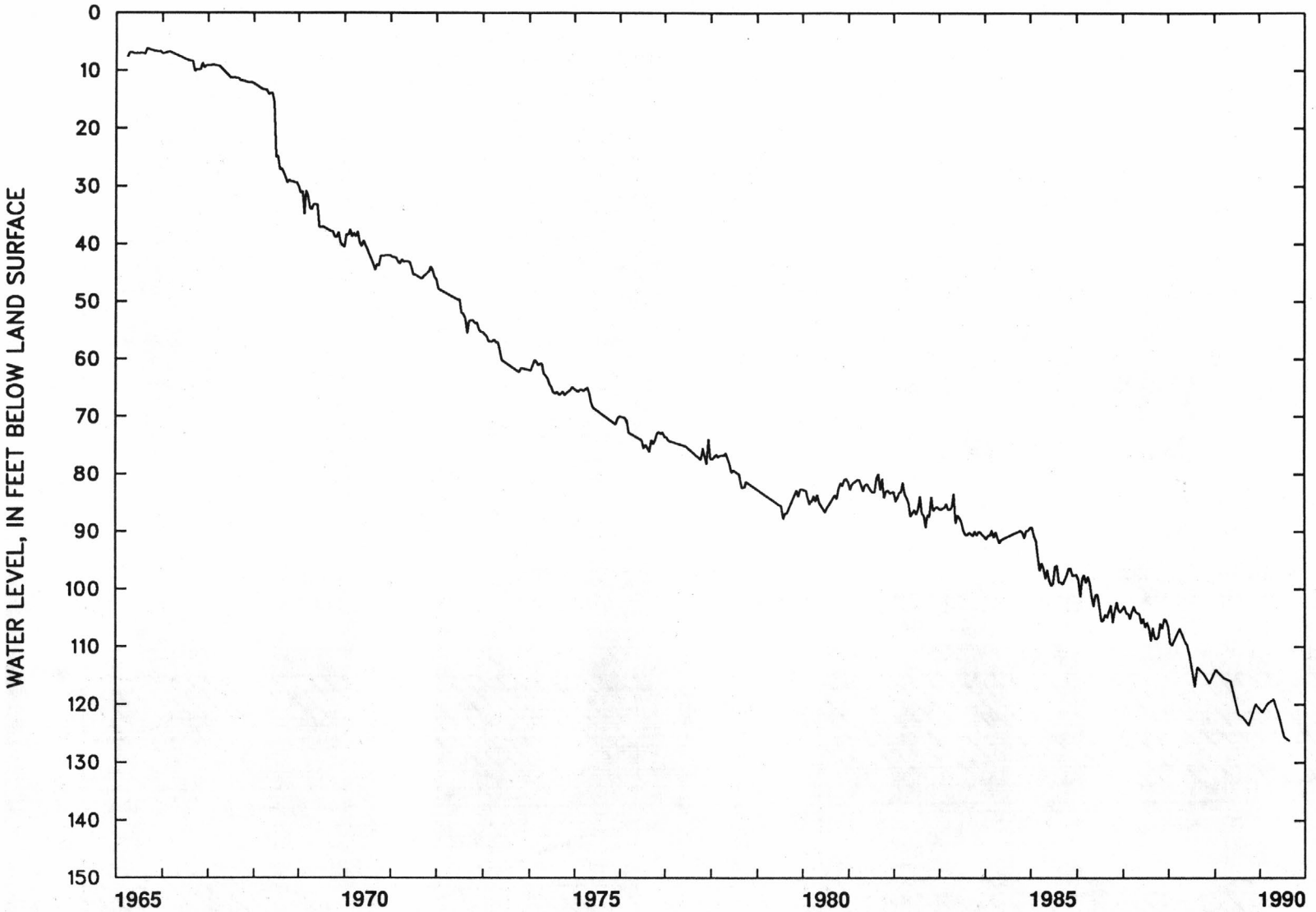


Figure 11.--Water level in observation well NC-44, Craven County, 1965-90.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U. S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

The National Trends Network (NTN) is a 150-station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP).

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 THE RECORDS

The surface-water and ground-water records published in this report are for the 1990 water year that began October 1, 1989, and ended September 30, 1990. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface and ground water, and ground-water-level data. The locations of the stations and wells where the data were collected are shown in figures 12, 13, 14, & 15. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station, whether streamsite or well, in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells and, in North Carolina, for surface-water stations where only miscellaneous measurements are made.

Downstream Order System

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 mainstream station are listed before that station. A station on a tributary that enters between two mainstream 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 with respect to the stream to which it is immediately tributary is indicated by an indention in the "List of Stations" in the front of this 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.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 02053200, which appears just to the left of the station name, includes the two-digit Part number "02" plus the six-digit downstream-order number "053200." The Part number designates the major river basin; for example, part "02" is the South Atlantic Slope Basin.

Latitude-Longitude System

The identification numbers for wells and miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. This site-identification number, once assigned, is a pure number, and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See fig. 12.)

Latitude-Longitude System--Continued

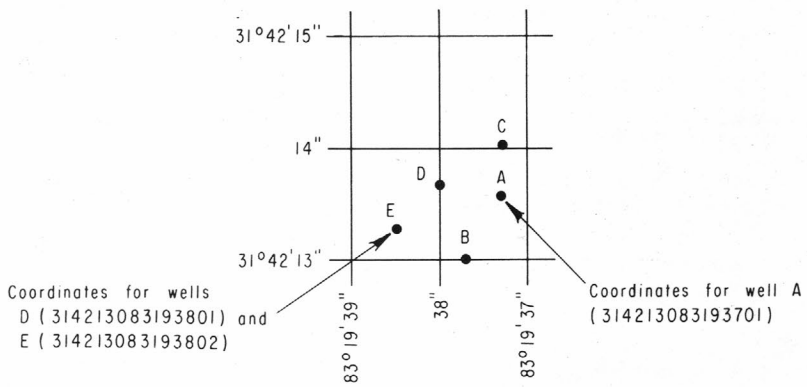


Figure 12.--System for numbering wells (latitude and longitude).

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationships between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relationship between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage of with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow-over-dams or weirs; or (4) step-back-water techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. 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 determined by the shifting-control method, in which correction factors based on the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and records for other stations in the same or nearby basins for comparable periods.

Data Collection and Computation--Continued

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.

In computing records of lake or reservoir contents, it is necessary to have available from surveys, curves, or tables defining the relationship of stage and content. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relationship changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relationship. Even when this is done, the contents computed may become increasingly in error as time since the last survey increases. Discharges over lake or reservoir spillways are computed from stage-discharge relationships much as other stream discharges are computed.

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 from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

The records published for each gaging station consist of two parts, the manuscript or station description and the data table for the current water year. The manuscript provides, under various headings, descriptive information, such as station location; period of record; average discharge; historical extremes; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not, and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted 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 most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see glossary), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a remarks statement is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station, information regarding extremes for period of record and current year data and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Data Presentation--Continued

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, of these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District office to determine if the published records were ever revised after the station was discontinued. Of course, if the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, 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 is usually expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed ("IN."), or in acre-feet (line headed "AC-FT"). 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 shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing a table footnote, "e Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of the Records

The accuracy of streamflow records 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 measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of the true; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned, are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft^3/s; to the nearest tenth between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures for more than 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

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 artificial 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 Records Available

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables are on file in the North Carolina District office. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records 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 1981 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, Virginia 22092, maintains an index of such sites. Information on records available at specific sites can be obtained upon request.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A **continuing-record station** is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A **partial-record station** is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A **miscellaneous sampling site** is a location other than a continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figures 14 & 15.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

On-Site Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these references are listed on pages 34 and 35 of this report. Also, detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey District office.

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. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals, depends on flow conditions and other factors which must be evaluated by the collector.

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 U.S. Geological Survey District office whose address is given on the back of the title page of this report.

NOTICE: Values of dissolved and total selenium exceeding 5 ug/L in samples collected prior to 1975 are probably incorrect and should only be used with caution. Values of dissolved selenium greater than 1 ug/L collected prior to 1975 should also be considered questionable, although a fair percentage of them may, in fact, be correct.

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge 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. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the District office.

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 discharges 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 time of observations, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, samples for turbidity, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the Geological Survey laboratories in Arvada, Colorado unless otherwise noted. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratories are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

In March 1990 the National Water-Quality Laboratory discovered a bias in the turbidimetric method for sulfate analysis, indicating that values below 75 mg/l have a median positive bias of 2 mg/l above the true value for the period between 1982 and 1990. Sulfate values in this report have not been corrected for this bias.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge"; same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge"; same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor temperature record, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Remark Codes

The following remark codes may appear with the water-quality data in this report:

PRINTED OUTPUT	REMARK
E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range (non-ideal colony count)
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
&	Biological organism estimated as dominant

NOTE: In March 1989 the National Water-Quality Laboratory discovered a bias in the turbidimetric method for sulfate analysis, indicating that values below 75 mg/L have a median positive bias of 2 mg/L above the true value for the period between 1982 and 1989. Sulfate values in this report have not been corrected for this bias.

Records of Ground-water Levels

Data Collection and Computation

The ground-water level data from observation wells in the basic statewide program and special preoject wells are published herein. This statewide program contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers. Wells in the statewide program are included in one of four networks based on meeting separate objectives. Two networks, climatic-effects and terrane-effects networks, have the objectives of measuring effects on the ground-water system caused by natural stresses. Two other networks, local-effects and areal-effects networks measure effects of man-made stresses on the system. Climatic-effects wells show the effects of climate, such as rainfall and the beginning and end of the growing season on ground-water storage in unconfined aquifers. Terrane-effects wells are used to define the effects of different depths of the water table, and topography and geology on ground-water storage in response to climatic stresses. The major man-made stress imposed upon the ground-water system is withdrawal of ground water by pumping; the local-effects wells are near large-capacity pumping wells or well fields and measure daily or weekly water-level fluctuations. Areal-effects wells are used to determine the status of ground-water storage in an aquifer over a large area and to aid in determining the areal extent of major 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 and which are used to identify the wells on figures 14 and 15. Local numbers for wells in the statewide network have a prefix of NC followed by a sequential number; example, NC-139. Local numbers for special project wells have a county abbreviation prefix followed by a sequential number; examples, Du-122, ME-252, On-10, and PA-3 for wells in Duplin, Mecklenburg, Onslow, and Pamlico Counties, respectively.

Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is the 15-digit number that appears in the upper left corner of the table. The secondary identification number is the local well number.

Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are of consistent accuracy and reliability.

Water-level records are obtained from direct measurements with a steel tape or an electric tape, or from the graph or punched tape of a water-stage recorder. 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 elevation (NGVD) of the land-surface datum 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 the mean water level reported either for every day or for every fifth day and the day at the end of each month (eom).

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

Data Presentation

Each well record consists of two parts, the station description and the data table of water levels observed during the water year. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments to follow clarify information presented under the various headings.

LOCATION.--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); the hydrologic-unit number; a geographic point of reference; and the owner's name.

Data Presentation--Continued

AQUIFER.--This entry designates by name and geologic age the aquifer open to the well. Names of aquifers in the Coastal Plain province are those used in the recently completed North Carolina Coastal Plain aquifer study which was part of the Geological Survey's North Atlantic Coastal Plain Regional Aquifer System Analysis (RASA). Aquifers in the Piedmont and Blue Ridge provinces are listed as the rock type of the crystalline igneous or metamorphic rock or the weathered material derived from the rock that the well taps.

WELL CHARACTERISTICS.--This entry describes the well in terms of depth, diameter, casing depth and (or) screened interval, method of construction, use and other changes since construction.

INSTRUMENTATION.--This paragraph provides information on both the frequency of measurement and the collection method used, allowing the user to better evaluate the reported water-level extremes by knowing whether they are based on continuous, monthly, or some other frequency of measurement.

DATUM.--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of casing, top of instrument shelf, and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above National Geodetic Vertical Datum of 1929 (NGVD of 1929); it is reported with a precision depending on the method of determination.

REMARKS.--This entry describes factors that may influence the water level in a well or the measurement of the water level. It may describe when various methods of measurement were begun, and the network (climatic, terrane, local, or areal effects) to which the well belongs, is noted here also.

PERIOD OF RECORD.--This entry indicates the period for which there are published records for the well. It reports the month and year of the start of publication of water-level records by the U.S. Geological Survey and the words "to current year" it the records are to be continued into the following year. Periods for which water-level records are available, but are not published by the Geological Survey, may be noted.

EXTREMES FOR PERIOD OF RECORD.--This entry contains the highest and lowest water levels of the period of published record, with respect to land-surface datum, or National Geodetic Vertical Datum, and the dates of their occurrence.

A table of water levels follows the station description for each well. Water-level measurements in this report are given in feet with reference to either National Geodetic Vertical Datum (NGVD) or land-surface datum (lsd). For some wells equipped with recorders, abbreviated tables are published with mean water-levels for only every fifth day and at the end of the month (eom); generally, tables of daily values are published for wells in the climatic-effects network, and abbreviated tables are published for those in the terrane-, local- and areal-effects networks. The highest and lowest water levels of the water year and their dates of occurrence are shown on a line below the abbreviated table. Because all values are not published for some wells with recorders, the extremes may be values that are not listed in the table. Missing records are indicated by dashes in place of the water level.

ACCESS TO WATSTORE DATA

The National Water Data Storage and Retrieval System (WATSTORE) was established in 1972 to provide an effective and efficient means for the processing and maintenance of water data collected through the activities of the U.S. Geological Survey. A variety of useful products ranging from data tables to complex statistical analyses such as Log Pearson Type III statistics can be produced using WATSTORE. The system resides on the central computer facilities of the U.S. Geological Survey at its National Center in Reston, Virginia and consists of related files and data bases.

- Station Header File - Contains descriptive information on over 440,000 sites throughout the United States and it's territories where the U.S. Geological Survey collects or has collected data.

- Daily Values File - Contains over 220 million daily values of srream flows, stages, reservoir contents, water temperatures, specific conductances, sediment concentrations, sediment discharges, and ground-water levels.

- Peak Flow File - Contains approximately 500,000 maximum (peak) streamflow and gage height values at surface-water sites.

- Water Quality File - Contains approximately 2million analyses of water samples that describe the chemical, physical, biological, and radiochemical characteristics of both surface and ground water.

- Ground-Water Site Inventory Data Base - Contains inventory data for over 900,000 wells, springs, and other sources of ground water. The data includes site location, geohydrologic characteristics, well-construction history, and one-time field measurements such as water temperature.

Data Presentation--Continued

In 1976, the U.S. Geological Survey opened WATSTORE to the public for direct access. The signing of a Memorandum of Agreement with the Survey is required to obtain direct access to WATSTORE. The system can be accessed either synchronously or asynchronously. The requestor will be expected to pay all computer costs he/she incurs. Direct access may be obtained by contacting:

U.S. Geological Survey
National Water Data Exchange
421 USGS National Center
Reston, Virginia 22092

In addition to providing direct access to WATSTORE, the National Water Data Exchange (NAWDEX) services include data-search assistance, data dissemination, and data referrals. Data can be provided in various machine-readable formats on magnetic tape or 5-1/4 in floppy disk. The request for water-data should be forwarded to the local Geological Survey district office:

District Chief
U.S. Geological Survey
3916 Sunset Ridge Road
Raleigh, North Carolina 27607

If the district office does not have the facility to fulfill the request, it will be referred to the National Water Data Exchange (NAWDEX) office in Reston, Virginia.

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.

Confined aquifer is one which is completely filled with water and is overlain by a confining bed. Water in confined aquifers occurs at pressures greater than atmospheric pressure.

Unconfined aquifer is one which is only partially filled with water and the upper surface of the saturated zone (the water table) is free to rise and fall.

Average discharge is the arithmetic mean of the water-year mean discharges. It is computed only for stations having at least five water years of complete record, and only water years of complete record are included in the computation. It is not computed for station where diversions, storage, or other water-use practices cause the value to me meaningless. If water developments that significantly altering the flow at a station are put into use after the station has been in opperation for a period of years, a new average is computed as soon as five water years of record have been accumulated following the development.

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 + 0.5°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 + 0.5°C on KF Streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

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

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

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

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

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

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

Bottom material: See Bed material.

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

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

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

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

DEFINITION OF TERMS--Continued

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.

Confining bed is a layer of rock having very low hydraulic conductivity that hampers the movement of water into and out of the aquifers which lie above and below the confining bed.

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

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

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

Flow-duration curve percentiles refer to interpolated values taken from a cumulative frequency curve that shows the percent of the time specified discharges were equaled or exceeded during a given period.

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.

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

Measuring point (MP) is an arbitrary permanent reference point from which the distance to the water surface in a well is measured to obtain the water level.

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

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

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

DEFINITION OF TERMS--Continued

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.

Parameter Code is a 5-digit number used in the U. S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U. S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

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

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

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

The classification is as follows:

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

The particle-size distribution given in this report is 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 micro-organisms attached to and growing upon solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton is a useful indicator of water quality.

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

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

Plankton is the community of suspended, floating, or weakly-swimming organisms that live 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 currents, and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

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

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

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

DEFINITION OF TERMS--Continued

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 microsiemens 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 microsiemens). This relation is not constant from stream to stream, and it may vary in the same stream with changes in the composition of the water.

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

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

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

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

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

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

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

DEFINITION OF TERMS--Continued

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

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

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

Water table is the level in the saturated zone in an unconfined aquifer at which the pressure is equal to atmospheric pressure, usually considered to be the top of the saturated zone.

Water year in the Geological Survey reports is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ended September 30, 1990, is called the "1990 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.

DISCONTINUED GAGING STATIONS

The following continuous-record streamflow stations in North Carolina have been discontinued or converted to partial-record stations. Daily streamflow or stage records were collected and published for the period of record shown for each station.

Station number	Station name	Drainage area (mi^2)	Period of record
	Chowan River Basin		
02053400	Ahoskie Creek near Rich Square, NC	3.70	1964-73
02053450	Ahoskie Creek at Mintons Store, NC	24.0	1964-73
02053510	Ahoskie Creek Tributary at Poortown, NC	2.60	1963-73
	Roanoke River Basin		
02068000	Dan River near Asbury, NC	71.4	1924-26
02068500	Dan River near Francisco, NC	129	1924-87
02070500	Mayo River near Price, NC	260	1929-71
02071500	Dan River at Leaksville, NC	1,150	1929-49
02074218	Dan River near Mayfield, NC	1,778	1976-84
02077230	South Hyco Creek near Hesters Store, NC	29.9	1964-67
02077240	Double Creek near Roseville, NC	7.47	1964-75 1977-82
02077250	South Hyco Creek near Roseville, NC	56.5	1966-78
02077300	Hyco River at McGhees Mill, NC	191	1964-73
02075160	Moon Creek near Yanceyville, NC	32.8	1961-74 1988-89
02077660	Mayo Creek near Woodsdale, NC	52.7	1975-77
02081000	Roanoke River near Scotland Neck, NC	8,671	1940-56 1974-76
	Pamlico River Basin		
02081800	Cedar Creek near Louisburg, NC	47.8	1956-75
02082000	Tar River near Nashville, NC	701	1928-71
02082500	Sapony Creek near Nashville, NC	64.8	1950-70
0208273070	Devils Cradle Creek at NC 39 near Kearney, NC	2.9	1984-85
02084070	Green Mill Run at Arlington Blvd at Greenville, NC	9.10	1980-85
02084160	Chicod Creek at Secondary Road 1760 near Simpson, NC	45	1975-87
02084164	Juniper Branch near Simpson, NC	7.5	1975-86
0208423100	Flat Swamp near Robersonville, NC	21.3	1986-88
02084317	Black Swamp near Batts Crossroads, NC	1.02	1982
02084500	Herring Run near Washington, NC	9.59	1950-80
02084556	North Lake Canal above Pungo Lake near Wenona, NC	.29	1976-80
02084558	Albemarle Canal near Swindell, NC	68.0	1977-81
	Neuse River Basin		
02084903	Sevenmile Creek Trib at SR 1120 near Buckhorn, NC	1.34	1981-82
02084904	Sevenmile Creek Trib at I-85 near Miles, NC	.004	1981-82
02084905	Sevenmile Creek Trib at SR 1144 near Miles, NC	1.57	1981-82
02084908	Sevenmile Creek Trib at I-85 near Efland, NC	.29	1981-82
02085220	Little River near Orange Factory, NC	80.4	1962-87
02086849	Ellerbe Creek near Gorman, NC	21.9	1982-89
02087000	Neuse River near Northside, NC	535	1927-80
0208705200	Smith Creek at Grissom, NC	6.2	1984-85
0208721055	Perry Creek at Secondary Road 2012 near Millbrook, NC	2.43	1986-89
0208732810	Marsh Creek at Secondary Road 2030 at Millbrook, NC	1.44	1986-89
02088315	Beaverdam Creek near Grantham, NC	5.01	1978-82
02088470	Little River near Kenly, NC	191	1964-89
02088682	Big Ditch at Retha St at Goldsboro, NC	2.17	1980-84
02089216	Daileys Creek near Liddell, NC	3.80	1978-81
02089222	Bear Creek near Parkstown, NC	4.27	1978-82
02090500	Contentnea Creek near Wilson, NC	236	1930-54
02090512	Hominy Swamp at Phillips Street at Wilson, NC	7.90	1978-85
02090625	Turner Swamp near Eureka, NC	2.1	1968-87
02091700	Little Contentnea Creek near Farmville, NC	93.3	1956-87
02091960	Creeping Swamp near Calico, NC	9.80	1971-77
02091970	Creeping Swamp near Vanceboro, NC	27.0	1971-85
02092000	Swift Creek near Vanceboro, NC	182	1950-89
02092020	Palmetto Swamp near Vanceboro, NC	24.0	1971-76
	Cape Fear River Basin		
02093500	Haw River near Benaja, NC	168	1928-71
02094000	Horsepen Creek at Battle Ground, NC	15.9	1925-31 1934-59
02095000	S Buffalo Creek near Greensboro, NC	33.6	1928-58
0209509100	S Buffalo Creek at SR 2821 at McLeansville, NC	43.5	1986-88
0209555450	Buffalo Creek at Secondary Road 2719 near Osceola, NC	97.4	1986-87
0209560800	Reedy Fork Creek at NC 61 near Osceola, NC	243	1986-88
02096000	Stony Creek near Burlington, NC	44.2	1952-59
02096700	Big Alamance Creek near Elon College, NC	116	1957-80
02096842	Cane Creek 0.1 mile upstream SR 1126 near Buckhorn, NC	.64	1979-81
02096850	Cane Creek near Teer, NC	33.7	1959-73

DISCONTINUED GAGING STATIONS--Continued

Station number	Station name	Drainage area (mi^2)	Period of record
	Cape Fear River Basin--Continued		
02097000	Haw River near Pittsboro, NC	1,310	1928-73
02097243	Third Fork Creek at Durham, NC	16.7	1968-73
02097500	Morgan Creek near Chapel Hill, NC	30.1	1923-32
0209782150	New Hope River Trib at SR 1716 near Farrington, NC	2.05	1986-88
02098000	New Hope River near Pittsboro, NC	285	1949-73
02098500	West Fork Deep River near High Point, NC	32.1	1923-26
			1928-58
02100000	Muddy Creek near Archdale, NC	16.7	1934-41
02101000	Bear Creek at Robbins, NC	134	1939-71
0210108450	Suck Creek Trib near Zion Grove, NC	.67	1986-88
02101800	Tick Creek near Mount Vernon Springs, NC	15.5	1958-81
02103000	Little River at Manchester, NC	348	1938-50
02103500	Little River at Linden, NC	460	1928-71
02104000	Cape Fear River at Fayetteville, NC	4,395	1889-1903
			1928-40
02104387	Buckhead Creek near Owens, NC	2.62	1976-80
02104500	Rockfish Creek near Hope Mills, NC	284	1929-31
			1939-54
02105524	Ellis Creek Trib at SR 1325 near White Oak, NC	1.81	1979-81
02105900	Hood Creek near Leland, NC	21.6	1956-73
02106681	Black River near Dunn, NC	48.3	1976-77
02107000	South River near Parkersburg, NC	379	1951-86
02107500	Colly Creek near Kelly, NC	103	1950-71
02107600	Northeast Cape Fear River near Seven Springs, NC	47.5	1958-75
0210797940	Limestone Creek at NC 24 near Hadley, NC	1.61	1986-88
02108500	Rockfish Creek near Wallace, NC	69.3	1955-81
	Pee Dee River Basin		
02112500	Fisher River near Dobson, NC	109	1920-32
02113500	Yadkin River at Siloam, NC	1,226	1976-87
02115500	Forbush Creek near Yadkinville, NC	21.7	1940-71
02115750	Muddy Creek near Lewisville, NC	82.8	1964-70
02115800	Silas Creek near Clemmons, NC	11.8	1964-70
02115841	Tar Br Trib at First St at Winston-Salem, NC	.05	1979-82
02115850	Salem Creek at Winston-Salem, NC	51.3	1964-70
02115854	Salem Creek Trib at Hawthorne Rd, Winston-Salem, NC	.50	1979-82
02115856	Salem Creek near Atwood, NC	65.6	1971-82
02117030	Humpy Creek near Fork, NC	1.05	1968-83
02117500	Rocky Creek at Turnersburg, NC	102	1940-71
02119000	South Yadkin River at Cooleemee, NC	569	1928-65
02119400	Third Creek near Stony Point, NC	4.84	1956-69
02120500	Third Creek at Cleveland, NC	87.4	1940-71
02121000	Yadkin River near Salisbury, NC	3,470	1895-1927
02121493	Leonard Creek near Bethesda, NC	5.16	1978-81
02122500	Yadkin River at High Rock, NC	4,000	1919-27
02123000	Uwharrie River near Trinity, NC	11.3	1934-41
02123500	Uwharrie River near Eldorado, NC	347	1938-71
02124471	Dutch Buffalo Creek at NC 49 near Mount Pleasant, NC	45.1	1985-87
02125500	Richardson Creek near Marshville, NC	170	1940-44
02125557	Gourdvine Creek at SR 1715 near Olive Branch, NC	8.75	1978-82
02125696	Lane Creek at SR 2115 near Trinity, NC	3.98	1969-79
02125699	Wicker Branch at SR 1940 near Trinity, NC	5.83	1978-82
02125816	Lane's Creek near Marshville, NC	87.8	1985-87
02126500	Little Brown Creek near Polkton, NC	13.5	1935-41
02127000	Brown Creek near Polkton, NC	110	1937-71
02127500	Pee Dee River near Ansonville, NC	6,330	1938-42
02129500	N Fork Jones Creek near Wadesboro, NC	9.43	1935-41
	Santee River Basin		
02137000	Mill Creek at Old Fort, NC	20.7	1960-75
02138000	Catawba River near Marion, NC	172	1941-81
0213875850	High Shoals Creek near Dysartsville, NC	2.38	1986-88
02139200	Bailey Fork near Morganton, NC	7.86	1966-70
02139650	East Prong near Morganton, NC	8.94	1966-74
0214042720	North Harper Creek mear Kawana, NC	1.25	1986-88
02141150	Lower Creek at Mulberry St at Lenoir, NC	31.8	1966-78
02142500	Catawba River at Catawba, NC	1,535	1896-99
			1935-62
02142600	Mountain Creek near Terrell, NC	42.4	1957-62
02142950	Paw C Tri No 2 at Allenbrook Drive, Charlotte, NC	.62	1966-70
02146450	Briar Creek at Sharon Road, Charlotte, NC	18.5	1962-73
02146500	Little Sugar Creek near Charlotte, NC	41.0	1924-78
02148500	Broad River near Chimney Rock, NC	97.0	1927-58
02149702	Green River near Saluda, NC	104	1972-75
02150000	Green River near Mill Spring, NC	174	1940-54
02152000	Sandy Run Creek near Boiling Springs, NC	67.0	1925-28
02152500	First Broad River near Lawndale, NC	200	1940-71
02152610	Sugar Branch near Boiling Springs, NC	1.42	1968-87

DISCONTINUED GAGING STATIONS--Continued

Station number	Station name	Drainage area (mi^2)	Period of record
	Savannah River Basin		
02184240	Horsepasture River near Sapphire, NC	21.0	1963-69
	Kanawha River Basin		
03161500	South Fork New River near Crumpler, NC	325	1908-16
03162500	North Fork New River at Crumpler, NC	277	1908-16
			1928-58
	Tennessee River Basin		
03439500	French Broad at Calvert, NC	103	1924-55
03440500	Davidson River near Davidson River, NC	31.0	1904-09
03441500	Little River near Penrose, NC	41.4	1942-55
03442000	Crab Creek near Penrose, NC	10.9	1942-55
03444000	Boylston Creek near Horseshoe, NC	14.8	1942-55
03444500	South Fork Mills River at the Pink Beds, NC	9.99	1926-49
			1965-73
03445000	South Fork Mills River near Sitton, NC	40.0	1904-09
			1925-26
03445500	North Fork Mills River at Pinkbed, NC	23.1	1904-09
03446500	Clear Creek near Hendersonville, NC	42.2	1945-55
03447000	Mud Creek at Naples, NC	109	1938-55
03447500	Cane Creek at Fletcher, NC	63.1	1942-58
03448000	French Broad River at Bent Creek, NC	676	1933-86
03448500	Hominy Creek at Candler, NC	79.8	1942-77
03448960	N Fk Swannanoa River bl Burnett Res nr Black Mtn, NC	22.1	1976-77
03449000	North Fork Swannanoa River near Black Mountain, NC	23.8	1926-58
03449500	Swannanoa River at Swannanoa, NC	58.8	1907-09
			1926-31
0345092550	Ross Creek at Beaucatcher Rd at Asheville, NC	2.46	1986-89
0345112600	Nasty Branch at Asheville, NC	1.19	1986-89
03451510	Reed Creek above Barnard Ave at Asheville, NC	2.13	1986-89
03452000	Sandymush Creek near Alexander, NC	79.5	1942-55
03452001	Sandymush Creek 1.1 mile above mouth near Alexander, NC	79.5	1975-77
03453000	Ivy River near Marshall, NC	158	1934-73
03454000	Big Laurel Creek near Stackhouse, NC	126	1934-71
03454500	French Broad River at Hot Springs, NC	1,567	1934-49
03456000	West Fork Pigeon Rv bl Lake Logan nr Waynesville, NC	55.3	1954-80
03457000	Pigeon River at Canton, NC	133	1907-09
			1928-83
03457500	Allen Creek near Hazelwood, NC	14.4	1949-72
03458500	Pigeon River near Crabtree, NC	243	1920-29
03459000	Jonathan Creek near Cove Creek, NC	65.3	1930-72
03460500	Pigeon River near Mount Sterling, NC	460	1924-30
03462000	North Toe River at Altapass, NC	104	1938-57
03462500	North Toe River above Spruce Pine, NC	111	1934-38
03463500	South Toe River at Newdale, NC	60.8	1934-52
03464000	Cane River near Sioux, NC	157	1934-71
03464500	Nolichucky River at Poplar, NC	608	1925-55
03480500	Elk River near Banner Elk, NC	17.8	1934-40
03481000	Elk River near Elk Park, NC	42.0	1934-55
03500500	Cullasaja River at Highlands, NC	14.9	1931-71
03501000	Cullasaja River at Cullasaja, NC	86.5	1907-09
			1921-71
03501500	Little Tennessee River at Franklin, NC	295	1909-10
			1921-25
03502000	Little Tennessee River at Iotla, NC	323	1929-45
03502500	Little Tennessee River at Etna, NC	374	1926-29
03503500	Little Tennessee River at Almond, NC	451	1912-17
03505500	Nantahala River at Nantahala, NC	144	1942-81
03506500	Nantahala River at Almond, NC	174	1912-17
			1920-43
03507000	Little Tennessee River at Judson, NC	664	1912-44
03508000	Tuckasegee River at Tuckasegee, NC	143	1934-76
03508136	Caney Fork near Cowarts, NC	32.0	1975-76
03509000	Scott Creek above Sylva, NC	50.7	1941-75
03509500	Scott Creek at Sylva, NC	55.0	1928-41
03510500	Tuckasegee River at Dillsboro, NC	347	1933-81
03511000	Oconaluftee River at Cherokee, NC	131	1921-49
03513500	Noland Creek near Bryson City, NC	13.8	1935-71
03514000	Hazel Creek at Proctor, NC	44.4	1942-52
03515000	Little Tennessee River at Fontana Dam, NC	1,571	1938-55
03016000	Snowbird Creek near Robbinsville, NC	42.0	1942-52
03517000	Cheoah River at Johnson, NC	177	1912-18
			1920-26

DISCONTINUED GAGING STATIONS--Continued

Station number	Station name	Drainage area (mi^2)	Period of record
	Tennessee River Basin--Continued		
03517500	Cheoah River at Tapoco, NC	215	1924-27
03546000	Shooting Creek near Hayesville, NC	37.6	1922-24
			1942-45
			1946-55
03547000	Hiwassee River below Chatuge Dam near Hayesville, NC	190	1942-74
03548000	Hiwassee River below Hayesville, NC	252	1934-45
03549000	Hiwassee River at Murphy, NC	410	1896-1940
03554000	Nottely River near Ranger, NC	272	1901-05
			1914-17
			1919-29
			1932-45
03555000	Hiwassee River at Hiwassee Dam, NC	968	1934-43

PUBLICATION OF TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to 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.

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1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.

1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.

2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.

2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F. P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 pages.

2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.

2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and Warren E. Teasdale: USGS--TWRI Book 2, Chapter F1. 1989. 97 pages.

3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.

3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.

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

3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.

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

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

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

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

3-A9. *Measurement of time of travel in streams by dye tracing*, by F. A. Kilpatrick and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1989. 27 pages.

3-A10. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.

3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.

3-A12. *Fluorometric procedures for dye tracing*, by J. F. Wilson, Jr., E. D. Cobb, and F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 41 pages.

3-A13. *Computation of continuous records of streamflow*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.

3-A14. *Use of flumes in measuring discharge*, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.

3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.

3-A16. *Measurement of discharge using tracers*, by F. A. Kilpatrick and E. D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.

3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.

3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F. A. Kilpatrick, R. E. Rathbun, N. Yotsukura, G. W. Parker, and L. L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.

3-A19. *Levels of streamflow gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 27 pages.

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

3-B2. *Introduction to ground-water hydraulics, a programmed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.

3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.

3-B4. *Regression modeling of ground-water flow*, by Richard L. Cooley and Richard L. Naff: USGS--TWRI Book 3, Chapter B4. 1990. 232 pages.

3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems--An introduction*, by O. L. Franke, T. E. Reilly, and G. D. Bennett: USGS--TWRI Book 3, Chapter B5. 1987. 15 pages.

3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T. E. Reilly, O. L. Franke, and G. D. Bennett: USGS--TWRI Book 3, Chapter B6. 1987. 28 pages.

3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.

3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.

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

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

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

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4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS-TWRI Book 4, Chapter D1. 1970. 17 pages.

5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M. J. Fishman and L. C. Friedman: USGS--TWRI Book 5, Chapter A1. 1989. 545 pages.

5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.

5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R. L. Wershaw, M. J. Fishman, R. R. Grabbe, and L. E. Lowe: USGS--TWRI Book 5, Chapter A3. 1987. 80 pages.

5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L. J. Britton and P. E. Greeson, editors: USGS--TWRI Book 5, Chapter A4. 1989. 363 pages.

5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.

5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.

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

6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M. G. McDonald and A. W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 pages.

7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.

7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.

7-C3. *A model for simulation of flow in singular and interconnected channels*, by R. W. Schaffrannek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.

8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.

8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.

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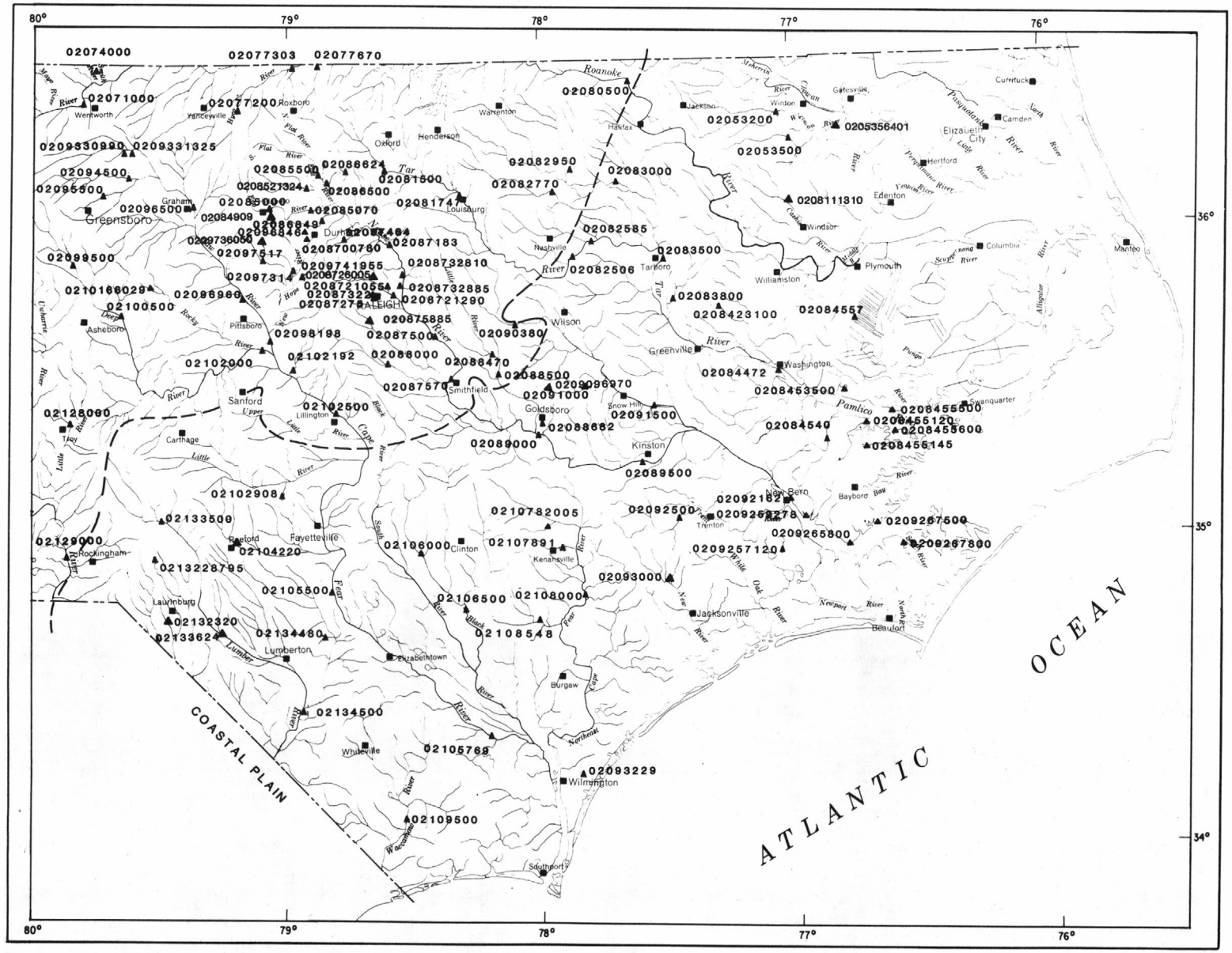


Figure 13.--Map of eastern part of North Carolina showing locations of gaging stations.

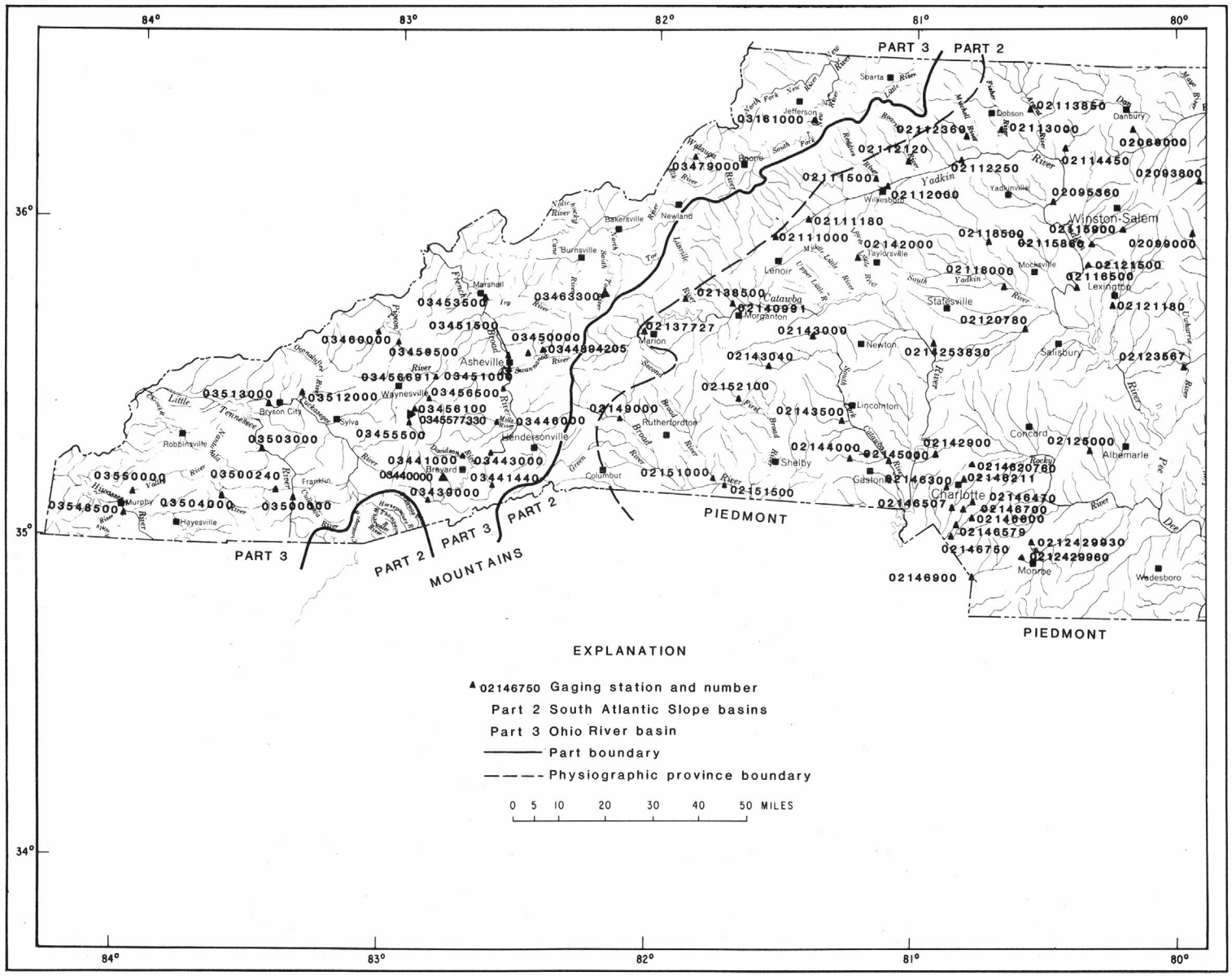
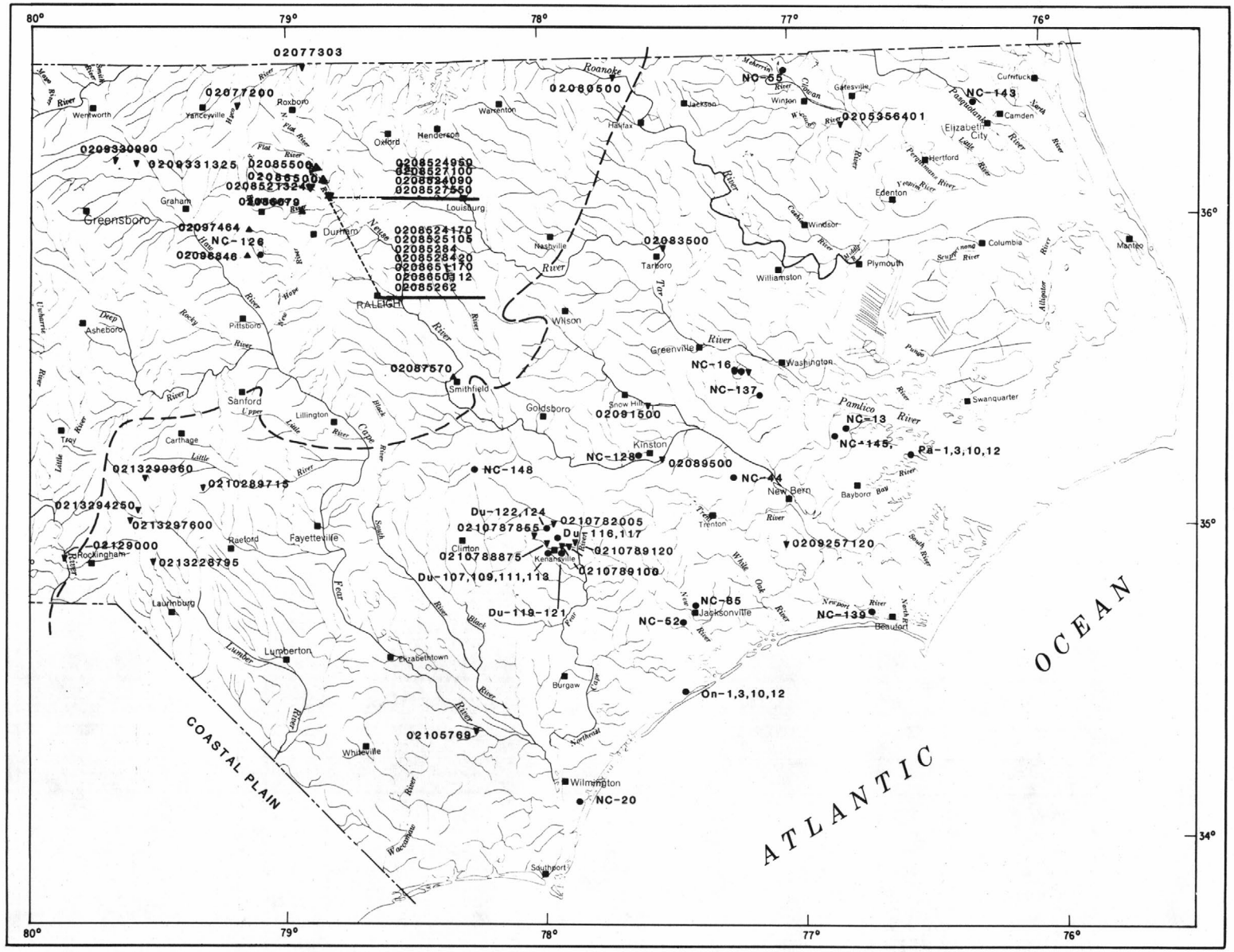


Figure 14.--Map of western part of North Carolina showing locations of gaging stations


80°
79°
78°
77°
76°
36°
35°
34°
02077303
02077200
02080500
02085500
02085000
02085279
02097464
02096846
NC-126
02087570
02091500
02089500
02083500
NC-16
NC-137
NC-13
NC-145
Pa-1,3,10,12
NC-148
NC-128
NC-44
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02210289715
02213294250
02213297600
02129000
02213228795
Du-122,124
02210782005
02210787855
Du-116,117
02210789120
02210788875
02210789100
Du-107,109,111,113
Du-119-121
NC-52
NC-85
NC-139
02209257120
On-1,3,10,12
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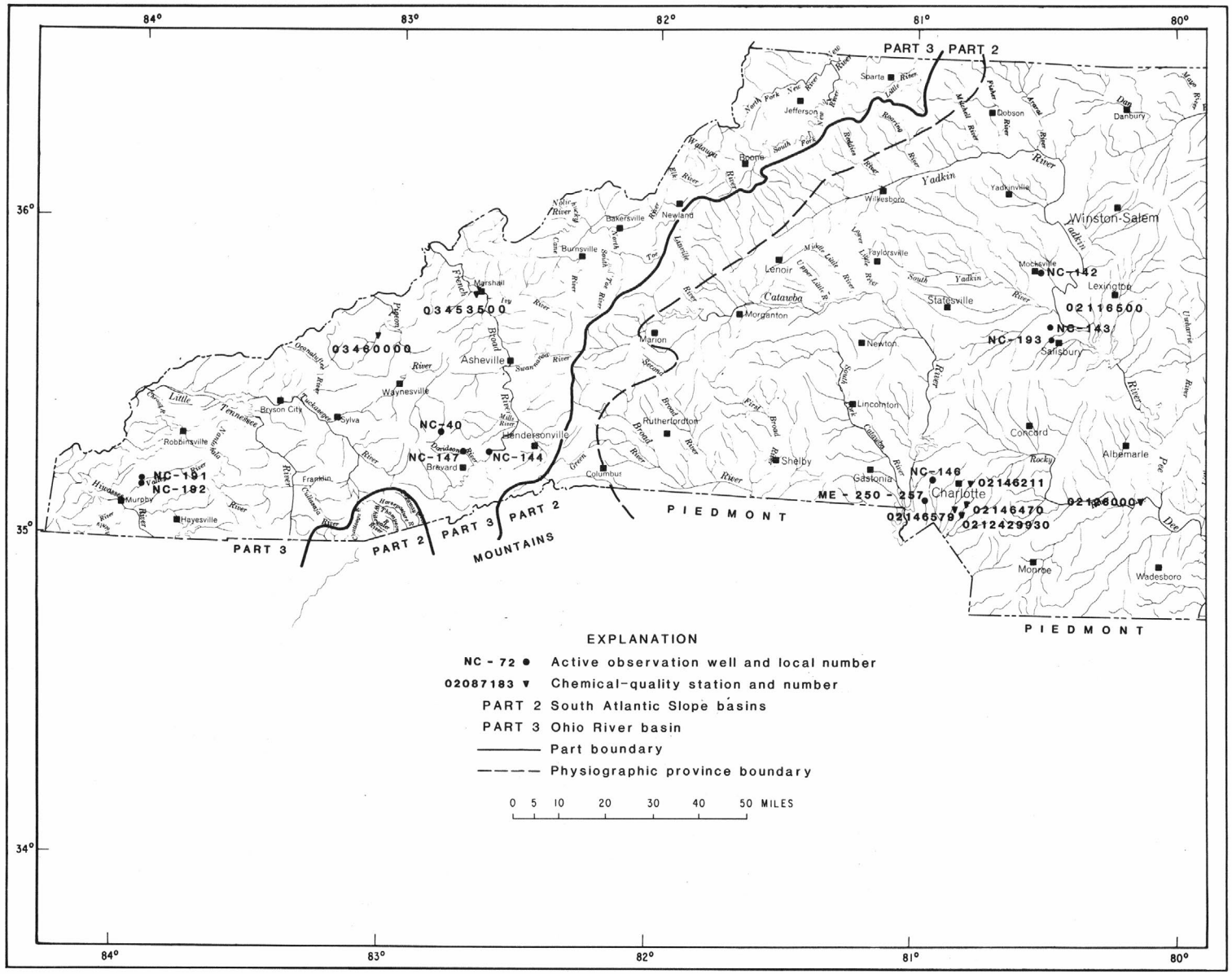

Figure 16.--Map of western part of North Carolina showing locations of water-quality stations and observation well sites.

SOUTH ATLANTIC SLOPE BASINS

CHOWAN RIVER BASIN

02053200 POTECASI CREEK NEAR UNION, NC

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 north of Union, 3 mi downstream from Cutawhiskie Swamp, and 3.5 mi upstream from Bells Branch.

DRAINAGE AREA.--225 mi^2.

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

REVISED RECORDS.--WDR NC-81-1: Drainage area.

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

REMARKS.--Records fair except those for estimated daily discharges and those below 10 ft^3/s, which are poor. Minimum discharge for current water year also occurred on Sept. 30.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1929 reached a stage of 19.1 ft, discharge, 4,050 ft^3/s, and flood of August 1940 reached a stage of 24.1 ft, discharge, 7,000 ft^3/s from rating curve extended above 4,000 ft^3/s, from information furnished by North Carolina State Highway Commission.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	24	e200	199	335	622	724	56	1070	4.9	8.4	54
2	354	23	e175	258	299	481	883	55	996	5.5	7.6	31
3	521	42	155	289	263	402	1140	44	833	5.3	7.1	22
4	246	78	124	e250	232	453	1420	41	646	5.4	6.7	17
5	94	59	103	e200	224	487	1420	53	421	5.2	6.6	14
6	e70	52	89	e250	230	433	1310	79	242	5.4	6.9	11
7	e58	67	80	e300	221	406	1180	108	142	130	7.4	8.6
8	e45	79	91	380	233	370	1010	85	84	364	8.6	11
9	e40	96	385	621	260	322	814	65	48	126	16	10
10	33	214	800	761	376	271	628	72	33	22	204	11
11	26	284	1030	778	764	224	445	135	24	16	265	8.8
12	21	e250	1190	787	871	186	330	183	19	19	95	7.5
13	17	e180	1360	756	924	156	254	115	15	16	34	6.9
14	15	e120	1570	684	923	134	195	86	13	21	42	6.9
15	15	e100	1650	561	867	115	153	102	11	63	60	6.6
16	14	e180	1650	430	771	99	126	88	9.1	51	74	6.2
17	14	267	1550	333	721	90	106	61	7.7	31	211	5.9
18	15	228	1350	268	728	198	96	51	6.9	70	140	5.4
19	33	167	1120	222	739	495	117	48	8.3	74	68	5.2
20	76	135	912	188	1030	474	112	42	7.1	27	47	5.2
21	78	121	733	188	1180	410	67	36	6.4	24	39	4.9
22	63	115	617	264	1200	390	72	38	7.0	33	31	4.8
23	85	346	e475	305	1190	347	82	214	9.1	30	103	5.1
24	169	805	e375	e250	1190	287	76	347	9.0	22	272	4.9
25	185	732	e265	e175	1140	221	74	242	8.4	16	177	4.7
26	133	e600	e225	e250	1000	172	68	222	7.4	13	91	4.3
27	83	e500	e205	315	859	141	57	247	6.7	11	50	4.0
28	53	e400	e195	326	745	117	48	360	6.1	9.8	35	3.8
29	39	e350	e194	320	---	108	41	453	5.6	9.2	70	3.5
30	31	e250	151	333	---	247	44	827	5.2	9.2	132	3.5
31	27	---	170	348	---	583	---	1030	---	9.0	104	---
MEAN	86.4	229	619	374	697	305	436	180	157	40.3	78.0	9.92
MAX	521	805	1650	787	1200	622	1420	1030	1070	364	272	54
MIN	14	23	80	175	221	90	41	36	5.2	4.9	6.6	3.5
IN.	.44	1.13	3.17	1.92	3.23	1.56	2.16	.92	.78	.21	.40	.05

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	128.0	109.6	220.0	421.2	520.9	473.0	331.6	193.5	119.1	101.9	143.3	92.8
MAX	1108	618.6	619.0	957.5	1135	1439	994.4	1010	699.6	531.1	618.0	809.2
(WY)	1960	1986	1990	1987	1960	1989	1983	1958	1979	1975	1969	1960
MIN	2.15	5.64	19.6	51.3	99.8	46.7	34.7	10.1	4.71	2.32	2.50	2.24
(WY)	1962	1982	1966	1981	1968	1988	1985	1985	1986	1983	1987	1961

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	264.7		234.3	
HIGHEST ANNUAL MEAN			457.7	1979
LOWEST ANNUAL MEAN			73.0	1981
HIGHEST DAILY MEAN	1650	Dec 15	4210	Sep 8 1979
LOWEST DAILY MEAN	3.5	Sep 29	.30	Jun 30 1959
INSTANTANEOUS PEAK FLOW	1670	Dec 15	4280	Sep 8 1979
INSTANTANEOUS PEAK STAGE	12.58	Dec 15	19.77	Sep 8 1979
INSTANTANEOUS LOW FLOW	3.4*	Sep 29	.2	Jul 1 1959
ANNUAL RUNOFF (INCHES)	16.0		14.1	
10 PERCENTILE	815		682	
50 PERCENTILE	116		83	
95 PERCENTILE	5.8		4.1	

* See REMARKS.

CHOWAN RIVER BASIN

02053500 AHOSKIE CREEK AT AHOSKIE, NC

LOCATION.--Lat 36°16'48", long 77°00'00", Hertford County, Hydrologic Unit 03010203, on right bank 10 ft downstream from bridge on State Highways 11 and 42, 0.5 mi upstream from Seaboard Coast Line Railroad bridge, and 0.8 mi southwest of Ahoskie.

DRAINAGE AREA.--63.3 mi^2.

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

REVISED RECORDS.--WDR NC-81-1: Drainage area.

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

REMARKS.--Records fair except those for estimated daily discharges and below 10 ft^3/s, which are poor. Entire basin above station canalized since July 1964. Excavation began downstream in July 1962 and reached the station in December 1962. Stretch was recanalized beginning in September 1984 and completed October 1984. Minimum discharge since canalization also occurred on Oct. 9, 1988. Prior to canalization, no flow occurred periodically.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e50	58	42	96	38	70	287	19	48	5.8	3.1	17
2	697	43	35	127	33	61	312	15	30	6.0	2.8	12
3	639	108	29	94	30	99	507	13	23	6.1	2.7	9.3
4	313	71	25	77	27	181	422	23	62	5.5	2.5	8.0
5	157	45	23	67	26	134	214	33	38	5.2	2.8	7.0
6	91	32	22	76	24	96	131	25	21	4.9	2.8	6.6
7	69	25	19	123	22	74	95	20	15	55	2.9	6.5
8	58	21	94	297	23	59	81	15	13	27	3.8	15
9	52	71	508	506	23	51	61	13	11	8.7	67	7.9
10	48	136	740	314	306	48	48	14	10	6.2	194	7.0
11	44	69	674	209	375	43	42	21	9.1	28	40	6.2
12	42	46	539	154	201	38	37	17	8.4	8.7	14	5.8
13	39	33	587	111	121	32	30	15	7.8	6.3	8.0	5.7
14	39	26	569	81	84	28	26	41	7.2	39	6.2	5.9
15	38	25	355	65	63	25	24	24	7.0	27	20	5.7
16	38	141	241	58	56	22	34	15	7.0	13	15	5.6
17	39	148	173	49	216	23	42	13	6.1	7.6	14	5.4
18	72	86	129	44	163	289	40	11	5.9	30	23	5.1
19	290	58	e80	40	298	289	26	9.4	8.7	18	8.2	5.0
20	247	44	e70	35	416	164	20	13	7.0	7.7	5.7	4.8
21	173	37	e60	94	227	106	19	17	5.9	5.5	5.2	4.6
22	102	33	e50	171	153	73	21	151	6.0	4.6	4.9	4.5
23	72	447	48	118	251	55	20	370	7.7	4.2	313	4.7
24	60	322	46	83	340	42	17	148	9.8	4.0	384	4.3
25	53	181	46	65	254	34	15	75	8.1	3.8	141	4.2
26	47	126	48	77	152	30	15	46	6.8	3.6	75	4.1
27	44	93	48	94	107	26	13	37	6.5	3.5	43	4.0
28	41	74	46	71	86	23	12	37	5.8	3.0	27	3.9
29	43	61	46	56	---	32	12	167	4.6	3.1	40	4.0
30	46	51	47	51	---	315	16	198	4.7	3.3	102	4.0
31	49	---	54	45	---	297	---	86	---	3.9	31	---
MEAN	122	90.4	177	114	147	92.2	88.0	54.9	13.7	11.6	51.8	6.46
MAX	697	447	740	506	416	315	507	370	62	55	384	17
MIN	38	21	19	35	22	22	12	9.4	4.6	3.0	2.5	3.9
IN.	2.23	1.59	3.23	2.09	2.42	1.68	1.55	1.00	.24	.21	.94	.11

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	41.1	25.0	53.6	109.0	134.2	131.6	79.4	54.4	36.3	36.3	41.6	23.9
MAX	296.5	119.6	177.2	259.9	261.5	303.5	243.2	237.9	111.7	125.7	151.0	132.3
(WY)	1972	1986	1990	1979	1971	1989	1983	1979	1979	1975	1967	1964
MIN	3.01	3.21	5.18	7.66	18.9	17.3	8.73	4.21	5.43	3.55	3.59	3.41
(WY)	1977	1982	1989	1981	1968	1988	1985	1986	1986	1987	1983	1980

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	80.6		63.6	
HIGHEST ANNUAL MEAN			109.3	1979
LOWEST ANNUAL MEAN			14.7	1981
HIGHEST DAILY MEAN	740	Dec 10	2490	Oct 6 1964
LOWEST DAILY MEAN	2.5	Aug 4	.61	Oct 8 1988
INSTANTANEOUS PEAK FLOW	766	Oct 3	2580	Oct 5 1964
INSTANTANEOUS PEAK STAGE	7.37	Oct 3	12.49	Jun 1 1984
INSTANTANEOUS LOW FLOW	2.4	Aug 4	.45*	Oct 8 1988
ANNUAL RUNOFF (INCHES)	17.3		13.6	
10 PERCENTILE	230		151	
50 PERCENTILE	39		18	
95 PERCENTILE	3.5		3.4	

* Canalized period only (1964-1990) See REMARKS.

ROANOKE RIVER BASIN

02069000 DAN RIVER AT PINE HALL, NC

LOCATION.--Lat 36°19'09", long 80°03'01", Stokes County, Hydrologic Unit 03010103, on left bank at upstream side of bridge on Secondary Road 2023, at Pine Hall, 1.5 mi upstream from Belews Creek and 2.5 mi downstream from Town Fork Creek.

DRAINAGE AREA.--501 mi^2.

PERIOD OF RECORD.--October 1923 to March 1926, April 1986 to current year.

REVISED RECORDS.--WSP 1303: 1924.

GAGE.--Water-stage recorder. Elevation of gage is 598 ft above National Geodetic Vertical Datum of 1929, from topographic map. October 1923 to March 1926, nonrecording gage at different elevation.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Some diurnal fluctuation and slight regulation at low flow caused by Talbott and Townes Reservoirs (stations 02067800, 02067820) and other upstream development. Minimum for period of record not determined, occurred during period of no gage-height record. Maximum discharge for current water year not determined, occurred during period of no gage-height record Oct. 1-3. Maximum discharge recorded for current water year, 17,300 ft^3/s, Mar. 17, gage height 22.09 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 17, 1985 reached a stage of 25 ft, present datum, from flood-marks, discharge not determined. Flood of Sept. 22, 1979 reached a stage of 27.5 ft, present datum, information supplied by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e4000	661	628	e3500	e900	1050	1440	864	1310	519	437	260
2	e10700	643	623	e2400	e830	1010	1360	1260	1170	499	416	294
3	e5000	652	620	e1250	e780	1330	1480	1010	1120	478	405	283
4	1790	627	597	e1000	e2000	1340	1260	1190	1040	472	396	276
5	1400	602	571	e1120	e1850	1140	1150	1590	993	468	413	256
6	1220	618	508	e1250	e1150	1070	1070	1690	967	493	432	264
7	1110	649	498	e1500	e1000	1010	1510	1060	935	452	472	298
8	1030	639	574	e2600	e930	957	1320	923	934	434	402	290
9	978	624	649	e3400	e900	964	1210	856	910	428	382	259
10	940	570	574	e1800	e3500	943	1210	3170	879	457	379	266
11	899	568	588	e1250	e6400	913	1620	2420	805	447	405	326
12	818	555	2000	e1000	e2700	884	1310	1450	759	463	423	283
13	847	553	2410	e850	e1700	854	1010	1240	732	480	364	291
14	818	551	1140	e760	e1300	834	969	1130	722	1720	365	398
15	777	554	899	e740	e1100	826	2760	1020	703	3960	375	346
16	729	778	790	e720	e2500	852	1670	971	708	1490	358	290
17	723	802	684	e700	e4200	6070	1230	996	702	985	423	264
18	764	656	665	e720	e2000	7430	1070	877	680	845	379	246
19	1170	595	642	e740	e2200	2180	969	828	706	886	373	235
20	961	577	e620	e700	e2050	1870	889	849	672	748	407	254
21	862	579	e590	e800	e1500	1640	907	870	621	666	394	256
22	802	569	e540	e780	e1800	1500	932	1090	653	654	355	250
23	722	1160	e480	e740	3270	1360	858	1200	624	587	347	266
24	701	877	e470	e700	1690	1280	817	949	577	530	464	244
25	693	766	e480	e1800	1350	1280	810	896	562	502	388	233
26	681	725	e470	e2900	1190	1250	781	911	551	480	385	224
27	671	698	e480	e1500	1140	1230	755	1000	542	466	374	221
28	654	679	e480	e1100	1090	1180	727	1700	571	459	357	220
29	645	659	e490	e880	---	1190	841	6470	574	490	335	219
30	636	637	e600	e1300	---	1180	844	2410	560	440	322	227
31	645	---	e780	e1000	---	1470	---	1660	---	467	282	---
MEAN	1432	661	714	1339	1894	1551	1159	1437	776	725	387	268
MAX	10700	1160	2410	3500	6400	7430	2760	6470	1310	3960	472	398
MIN	636	551	470	700	780	826	727	828	542	428	282	219
IN.	3.30	1.47	1.64	3.08	3.94	3.57	2.58	3.31	1.73	1.67	.89	.60

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	517.7	416.1	549.7	707.9	991.5	1097	1088	838.3	623.0	608.9	383.9	485.9
MAX	1432	660.8	714.2	1339	1894	1551	2901	1437	1435	1246	797.5	871.1
(WY)	1990	1990	1990	1990	1990	1990	1987	1990	1989	1989	1989	1989
MIN	188.3	314.1	262.6	327.5	502.0	412.9	349.5	272.6	167.6	135.5	205.1	221.2
(WY)	1987	1987	1989	1989	1988	1988	1986	1986	1986	1986	1988	1988

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD		
AVERAGE FLOW	1025		*****		
HIGHEST ANNUAL MEAN			1025		1990
LOWEST ANNUAL MEAN			377.9		1988
HIGHEST DAILY MEAN	10700	Oct 2	16100	Apr 16	1987
LOWEST DAILY MEAN	219	Sep 29	65	Jul 22	1986
INSTANTANEOUS PEAK FLOW	NOT DETERMINED*	Oct 2	20700	Mar 1	1987
INSTANTANEOUS PEAK STAGE	NOT DETERMINED*	Oct 2	24.53	Mar 1	1987
INSTANTANEOUS LOW FLOW	216	Sep 29	NOT DETERMINED*		
ANNUAL RUNOFF (INCHES)	27.8		*****		
10 PERCENTILE	1750		1350		
50 PERCENTILE	781		480		
95 PERCENTILE	269		188		

*****Indicates not enough data, therefore statistic is not computed

*See REMARKS.

ROANOKE RIVER BASIN

02071000 DAN RIVER NEAR WENTWORTH, NC

LOCATION.--Lat 36°24'45", long 79°49'35", Rockingham County, Hydrologic Unit 03010103, on right bank 600 ft downstream from Settles Bridge on Secondary Road 2150, 3.5 mi northwest of Wentworth, 7.5 mi downstream from Mayo River, and 103.7 mi upstream from mouth.

DRAINAGE AREA.--1,053 mi^2.

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

REVISED RECORDS.--WDR NC-72-1: 1945(M). WDR NC-81-1: Drainage area.

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

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Slight fluctuation and regution at low flow caused by Talbott and Townes Reservoirs (stations 02067800, 02067820). Maximum gage height 31.60 ft, from floodmark in well. Minimum discharge for current water year also occurred Sept. 30.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7680	903	1020	6820	1510	1610	2340	1500	1990	e780	e620	506
2	21400	887	1000	3560	1420	1550	1900	2350	1650	e720	e600	484
3	11200	897	999	1730	1390	2370	2140	1940	1530	e660	581	505
4	3400	872	969	1440	4120	2570	1780	2240	1420	e630	572	497
5	2390	846	959	1630	3390	1850	1700	2780	1310	e610	564	486
6	1940	851	883	1800	2080	1660	1530	3130	1260	e680	600	469
7	1690	897	861	1920	1800	1560	2600	1840	1220	e620	708	471
8	1440	897	978	5170	1630	1470	2010	1540	1200	e560	654	482
9	1330	908	1160	6440	1510	1510	1690	1420	1220	e540	585	488
10	1240	841	1010	2510	6370	1530	1540	3350	1600	e580	579	490
11	1200	825	1040	1810	11500	1390	2040	5550	1230	e580	579	508
12	1090	773	2860	1470	3310	1350	1920	2380	e1200	e660	646	535
13	1110	789	6080	1270	2480	1310	1640	1920	e1150	e1050	599	557
14	1080	779	2290	1170	2000	1270	1540	1720	e1120	e5000	545	607
15	1040	800	1610	1120	1690	1260	4460	1560	e1100	e8500	604	706
16	981	1130	1380	1080	4480	1410	3400	1450	e1070	e3500	600	606
17	960	1530	1100	1050	7390	5250	2300	1350	e1050	e1800	667	549
18	1060	1120	1110	1060	3040	15100	1960	1230	e1050	e1400	696	482
19	2220	1020	1060	1120	3480	3820	1750	1150	e1100	e1350	593	445
20	1730	971	1020	1080	3350	2920	1650	1150	e1040	e1200	612	449
21	1360	974	951	1250	2480	2460	1610	1200	e1000	e1000	621	469
22	1220	933	871	1240	2750	2060	1630	1440	e1030	e880	618	453
23	1120	2070	725	1120	5870	1840	1440	2060	e990	e800	613	459
24	1080	1790	e710	1090	3040	1690	1360	1460	e950	e770	694	470
25	1060	1400	e720	2700	2260	1630	1320	1320	e880	e720	743	456
26	1040	1290	e720	5340	1910	1580	1290	1290	e840	e700	661	443
27	1020	1240	e730	2440	1770	1570	1270	1480	e820	e650	636	433
28	929	1200	e720	1730	1680	1560	1290	5260	e850	e640	605	426
29	903	1170	e740	1420	---	1890	1400	12000	e880	e700	581	425
30	887	1110	899	2360	---	2070	1530	5810	e820	e630	566	422
31	892	---	1050	1870	---	2060	---	3300	---	e660	538	---
MEAN	2506	1057	1233	2187	3204	2360	1868	2522	1152	1276	615	493
MAX	21400	2070	6080	6820	11500	15100	4460	12000	1990	8500	743	706
MIN	887	773	710	1050	1390	1260	1270	1150	820	540	538	422
IN.	2.74	1.12	1.35	2.40	3.17	2.58	1.98	2.76	1.22	1.40	.67	.52

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	903.3	925.2	1152	1355	1660	1827	1700	1321	1090	928.0	850.3	865.3
MAX	3676	2963	2433	3274	4308	5345	4951	3149	4220	2345	3067	3667
(WY)	1960	1958	1974	1978	1960	1975	1987	1972	1972	1949	1940	1979
MIN	237.5	297.4	422.0	392.3	771.2	661.4	591.7	515.4	332.7	267.5	218.1	165.6
(WY)	1954	1954	1956	1956	1941	1985	1985	1981	1986	1986	1981	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	1700		1213	
HIGHEST ANNUAL MEAN			1985	1960
LOWEST ANNUAL MEAN			587.2	1981
HIGHEST DAILY MEAN	21400	Oct 2	47800	Jun 22 1972
LOWEST DAILY MEAN	422	Sep 30	107	Oct 2 1954
INSTANTANEOUS PEAK FLOW	23100	Oct 2	54200	Jun 22 1972
INSTANTANEOUS PEAK STAGE	22.77	Oct 2	31.60*	Jun 22 1972
INSTANTANEOUS LOW FLOW	420*	Sep 29	65	Oct 8 1954
ANNUAL RUNOFF (INCHES)	21.9		15.6	
10 PERCENTILE	3010		2056	
50 PERCENTILE	1200		835	
95 PERCENTILE	498		326	

*See REMARKS.

ROANOKE RIVER BASIN

02074000 SMITH RIVER AT EDEN, NC

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

DRAINAGE AREA.--538 mi^2.

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

REVISED RECORDS.--WSP 1433: 1946.

GAGE.--Water-stage recorder. Datum of gage is 539.56 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated since August 1950 by Philpott Lake 40 mi upstream (usable capacity, 6,325,000,000 ft^3). Additional regulation by hydroelectric plant at Martinsville, Virginia 18 mi upstream. Maximum discharge prior to regulation, 45,600 ft^3/s Aug. 15, 1940, gage height, 19.28 ft, from rating curve extended above 12,000 ft^3/s on the basis of computation of peak flow over dam 1.5 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4140	1070	827	2450	e980	1440	962	936	1650	376	585	593
2	6070	1060	655	1130	e900	1260	1200	948	1490	333	578	212
3	5310	1080	402	811	e500	1220	2190	905	723	667	574	266
4	4740	980	453	1170	e700	721	1540	1030	702	608	612	452
5	2330	369	877	1130	e900	684	1430	1020	1290	346	252	478
6	2020	499	841	1090	e880	1120	1420	653	1280	671	365	483
7	1250	839	683	611	e950	1110	1690	521	1280	705	643	474
8	504	842	730	1670	e940	1100	681	1030	1220	378	595	533
9	712	852	598	2070	e940	1100	815	1060	1230	269	572	267
10	1260	823	292	1490	e620	909	1130	2010	1720	628	583	238
11	1230	643	530	1330	e500	567	1360	1670	550	622	639	533
12	1210	284	1330	1250	e1600	579	1480	1360	729	695	320	511
13	1310	546	1270	1050	e1500	767	1430	1240	699	708	220	570
14	1020	1030	941	461	e1400	775	1250	687	716	1490	576	623
15	322	830	1000	593	e1450	764	1780	1370	699	3520	676	627
16	478	1110	798	1130	e1450	806	1350	1380	712	1110	675	268
17	1080	956	492	1120	e1100	4060	1190	1370	457	1860	799	212
18	1140	652	506	e1200	e700	3530	1600	1220	419	2070	665	459
19	1620	352	1020	e1150	e1400	1460	1490	1320	718	1020	290	456
20	1280	529	740	e550	e1450	2420	1380	481	661	691	356	470
21	1080	693	697	e500	1570	2330	1240	531	672	747	578	e500
22	440	701	946	e450	1750	1550	689	1170	671	795	607	e400
23	459	854	851	e1050	2340	1520	741	1220	670	456	721	e230
24	1200	676	405	e1070	1590	1300	1220	902	445	680	916	e520
25	1180	667	463	e1200	777	653	1210	853	347	646	709	e510
26	1180	397	669	e1150	792	704	1190	830	738	631	353	e520
27	1190	455	899	e500	1420	851	1180	1170	734	580	297	e530
28	1120	1000	622	e360	1460	828	996	4400	760	695	563	e540
29	376	850	596	e1100	---	933	592	4830	738	242	567	e350
30	449	831	440	e1200	---	926	592	2300	742	352	564	e230
31	1040	---	592	e1150	---	1090	---	1810	---	586	555	---
MEAN	1572	749	715	1071	1163	1261	1234	1362	849	812	549	435
MAX	6070	1110	1330	2450	2340	4060	2190	4830	1720	3520	916	627
MIN	322	284	292	360	500	567	592	481	347	242	220	212
(†)	-74	-28	-4	+14	+58	+62	-54	+37	-56	+12	-71	-69

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD *, BY WATER YEAR (WY)

MEAN	507.5	504.4	591.4	635.4	719.3	845.8	878.4	691.5	598.7	496.9	480.2	509.7
MAX	1572	1530	1025	1453	1521	2329	3016	1567	2026	1374	1454	1794
(WY)	1990	1986	1973	1979	1960	1975	1987	1978	1972	1989	1985	1979
MIN	200.8	211.0	273.5	290.5	324.9	330.5	294.5	266.4	212.6	214.2	193.5	248.5
(WY)	1952	1982	1981	1989	1968	1967	1967	1964	1964	1981	1953	1951

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD*	
AVERAGE FLOW	981.2 ‡	967	620.8 ‡	632
HIGHEST ANNUAL MEAN			1010	1987
LOWEST ANNUAL MEAN			308.7	1981
HIGHEST DAILY MEAN	6070	Oct 2	16700	Jun 21 1972
LOWEST DAILY MEAN	212	Sep 2	46	Aug 14 1967
INSTANTANEOUS PEAK FLOW	10400	Mar 17	24800	Jun 21 1972
INSTANTANEOUS PEAK STAGE	10.22	Mar 17	16.24	Jun 21 1972
INSTANTANEOUS LOW FLOW	126	Aug 13	38	Aug 7 1967
ANNUAL RUNOFF (INCHES)	24.8		15.7	
10 PERCENTILE	1560		1130	
50 PERCENTILE	792		449	
95 PERCENTILE	337		181	

(†) Change in contents, equivalent in cubic feet per second, in Philpott Lake; provided by the U.S. Army Corps of Engineers.
(‡) Adjusted for change in contents.
* For regulated period (1951-1990) only. See REMARKS.

ROANOKE RIVER BASIN

02077200 HYCO CREEK NEAR LEASBURG, NC

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

DRAINAGE AREA.--45.9 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 400.08 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good except those below 5 ft^3/s, which are fair. Maximum discharge for period of record, from rating curve extended above 1,200 ft^3/s. Minimum discharge for current water year also occurred Sept. 6-30. Periods of no flow occurs most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	172	15	21	370	55	43	150	63	39	5.1	.55	1.2
2	775	15	20	185	50	40	88	206	30	4.4	.39	.52
3	510	35	19	95	47	59	489	144	27	3.9	.27	.11
4	115	26	18	72	103	83	158	160	84	3.9	.15	.04
5	61	19	18	65	145	55	90	179	30	3.9	.11	0
6	43	17	18	108	82	46	63	304	24	3.6	.09	0
7	33	17	17	127	64	41	139	117	22	3.3	.19	0
8	26	17	23	296	55	37	100	66	20	2.8	2.3	0
9	21	22	42	363	49	36	64	49	51	2.8	1.6	0
10	18	21	31	146	179	35	54	119	333	2.8	1.0	0
11	17	17	32	96	306	32	50	161	76	17	.75	0
12	15	16	204	74	127	29	42	62	34	10	.59	0
13	14	15	610	57	84	28	37	47	25	8.1	.42	0
14	13	15	224	48	65	26	32	38	21	7.8	.35	0
15	13	14	126	44	55	24	179	32	21	7.0	.24	0
16	12	19	150	40	149	24	131	29	25	6.4	.19	0
17	11	21	94	37	329	27	70	25	19	5.6	.33	0
18	12	17	68	34	127	46	51	22	17	5.5	3.3	0
19	90	15	56	33	255	34	42	20	16	3.6	1.9	0
20	75	14	49	31	200	30	38	19	15	3.1	1.1	0
21	38	14	43	48	104	30	38	19	13	3.0	.54	0
22	28	15	40	52	91	27	44	22	12	2.6	.35	0
23	22	80	32	40	192	25	35	30	15	2.4	.59	0
24	20	75	30	36	120	23	31	23	11	1.9	3.0	0
25	19	49	27	159	77	23	28	21	9.3	1.5	3.9	0
26	17	40	31	567	59	23	26	21	8.2	1.2	8.4	0
27	16	34	27	265	53	22	24	25	7.4	1.1	8.3	0
28	16	29	27	120	48	21	23	184	6.7	.91	5.8	0
29	15	27	26	87	---	55	20	437	6.7	.72	5.0	0
30	15	23	29	86	---	115	88	237	5.7	.62	3.4	0
31	15	---	63	66	---	152	---	69	---	.61	2.1	---
MEAN	73.1	25.1	71.5	124	117	41.6	80.8	95.2	34.1	4.10	1.85	.062
MAX	775	80	610	567	329	152	489	437	333	17	8.4	1.2
MIN	11	14	17	31	47	21	20	19	5.7	.61	.09	0
IN.	1.84	.61	1.80	3.12	2.65	1.05	1.96	2.39	.83	.10	.05	0

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	23.1	28.6	49.7	80.7	97.1	87.1	56.1	39.0	22.1	27.1	17.9	20.4
MAX	113.2	137.0	143.6	278.5	243.5	265.5	171.5	184.3	109.2	274.4	96.5	132.3
(WY)	1965	1973	1973	1978	1979	1975	1978	1978	1982	1975	1985	1974
MIN	0	2.63	4.77	6.15	19.7	23.1	9.59	5.53	1.80	.113	.026	0
(WY)	1969	1968	1966	1981	1968	1976	1985	1981	1986	1966	1987	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR			FOR PERIOD OF RECORD		
AVERAGE FLOW	55.4			45.5		
HIGHEST ANNUAL MEAN				92.3		1975
LOWEST ANNUAL MEAN				15.2		1981
HIGHEST DAILY MEAN	775	Oct	2	2610	Jul 14	1975
LOWEST DAILY MEAN	0	Sep	5	0	Jul 9	1966
INSTANTANEOUS PEAK FLOW	1020	Oct	3	6720*	Jul 14	1975
INSTANTANEOUS PEAK STAGE	33.68	Oct	3	39.84	Jul 14	1975
INSTANTANEOUS LOW FLOW	0*	Sep	5	0*	Jul 8	1966
ANNUAL RUNOFF (INCHES)	16.4			13.5		
10 PERCENTILE	146			92		
50 PERCENTILE	26			16		
95 PERCENTILE	0			.05		

* See REMARKS.

ROANOKE RIVER BASIN

02077200 HYCO CREEK NEAR LEASBURG, NC--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: 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 North Hyco Creek near Leasburg (station 02077202). Prior to October 1967 daily water temperature data published as North Hyco Creek near Leasburg.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 29.5°C Aug. 11, 12, 1980, July 9, Aug. 6, 1987; minimum, 0.0°C on several days during winter months in most years.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 28.8°C July 10; minimum, 0.0°C several days during Dec. and Jan.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	16.7	16.0	16.3	15.1	13.5	14.4	5.7	4.4	5.1	5.7	.0	3.8
2	18.4	16.7	17.4	13.3	11.8	12.6	4.7	4.0	4.3	4.3	2.1	2.7
3	19.0	17.5	18.3	12.4	10.8	11.8	4.4	2.7	4.0	2.7	2.0	2.4
4	18.8	16.2	17.2	10.6	8.8	9.6	3.1	2.0	2.4	4.9	2.8	3.9
5	16.1	14.0	14.5	10.2	8.0	9.1	3.6	2.0	2.9	7.7	5.7	6.7
6	15.8	14.0	14.2	10.9	9.3	10.2	6.0	3.6	4.9	7.9	7.4	7.7
7	17.9	15.8	16.6	12.4	10.8	11.8	6.5	5.1	5.6	7.4	6.3	6.6
8	16.1	14.1	15.0	13.7	12.1	12.8	5.3	.0	2.6	6.4	5.4	6.0
9	13.9	11.7	12.7	15.4	13.7	14.4	.0	.0	.0	5.3	4.4	4.8
10	12.4	12.4	10.2	13.7	11.1	12.4	.0	.0	.0	5.2	4.4	4.8
11	13.0	10.3	11.6	11.2	9.4	10.5	1.3	.0	.5	5.2	3.8	4.2
12	14.1	11.4	12.6	12.4	9.8	11.0	1.3	1.3	1.3	4.6	4.1	4.4
13	15.3	12.8	14.0	12.6	10.5	11.5	1.5	1.0	1.2	4.2	2.9	3.5
14	16.4	14.6	15.4	14.5	11.7	13.2	1.8	1.4	1.5	2.7	1.6	2.0
15	17.2	15.0	16.1	15.0	14.0	14.5	3.0	1.8	2.0	4.6	2.1	3.2
16	18.6	15.4	16.9	15.5	12.8	14.9	3.0	.7	2.1	5.9	4.1	5.0
17	18.9	16.9	17.9	12.6	8.8	10.4	.6	.0	.1	7.4	4.9	6.1
18	19.3	18.0	18.7	8.9	7.6	8.3	.0	.0	.0	9.0	7.2	8.0
19	17.5	14.4	15.5	7.9	6.4	7.1	.0	.0	.0	8.7	7.4	8.1
20	14.3	12.5	13.8	8.4	5.7	6.9	.0	.0	.0	8.7	7.7	8.2
21	12.4	10.6	11.5	8.9	7.5	8.3	.0	.0	.0	10.7	8.8	9.7
22	12.0	9.6	10.9	7.2	5.1	5.9	.0	.0	.0	9.9	7.9	8.8
23	11.4	9.4	10.6	5.7	4.8	5.3	.0	.0	.0	7.9	6.0	7.1
24	11.7	9.6	10.7	4.7	3.6	4.0	.0	.0	.0	8.5	7.7	8.1
25	11.7	9.4	10.5	4.6	3.1	3.6	.0	.0	.0	10.4	8.4	9.0
26	11.8	9.3	10.5	7.6	4.6	6.0	.0	.0	.0	10.5	8.1	9.4
27	12.1	9.7	10.9	9.0	7.5	8.1	.0	.0	.0	7.9	5.6	6.4
28	12.0	9.6	10.9	10.6	8.8	9.6	.0	.0	.0	7.1	5.4	6.1
29	13.6	10.9	12.0	10.4	8.4	9.6	.0	.0	.0	7.8	7.1	7.4
30	13.9	12.0	13.0	8.2	5.4	6.4	.0	.0	.0	7.9	6.9	7.4
31	15.9	13.8	14.8	---	---	---	.0	.0	.0	8.2	6.9	7.6
MONTH	19.3	9.3	13.9	15.5	3.1	9.8	6.5	.0	1.3	10.7	.0	6.1

02077200 HYCO CREEK NEAR LEASBURG, NC--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.9	6.2	7.2	10.3	7.8	9.0	15.7	12.1	13.6	21.1	18.3	19.7
2	9.8	7.1	8.4	10.2	8.9	9.7	17.3	15.7	16.5	20.6	19.3	19.9
3	11.5	9.7	10.5	10.8	9.5	10.2	16.5	12.6	13.7	20.5	18.1	18.8
4	11.4	10.4	11.0	10.0	8.6	9.5	12.8	10.3	11.5	20.2	17.7	18.5
5	11.0	8.7	9.5	9.6	7.6	8.8	14.3	11.0	12.8	20.5	19.6	20.1
6	8.7	6.4	7.5	11.5	7.8	9.6	14.7	13.3	14.1	20.0	17.3	18.2
7	10.8	7.9	9.4	11.8	9.8	10.7	13.9	11.2	12.6	18.1	16.3	17.3
8	10.1	8.5	9.5	9.4	7.3	8.5	13.0	10.1	11.8	18.8	16.7	17.9
9	11.4	8.6	9.9	11.8	7.7	9.7	13.6	10.5	12.2	18.5	17.9	18.2
10	13.0	11.5	12.5	14.5	10.2	12.3	14.0	12.4	13.2	20.3	18.0	18.8
11	12.1	9.5	10.6	16.5	12.2	14.3	15.6	13.8	14.6	19.4	16.6	17.5
12	10.4	8.8	9.5	18.3	14.4	16.5	14.1	11.2	12.8	17.8	16.4	17.0
13	9.5	7.6	8.7	19.7	15.7	17.9	14.1	9.7	12.1	18.8	17.1	18.0
14	12.2	9.6	10.9	20.2	16.5	18.6	14.1	11.5	12.9	20.7	18.0	19.2
15	13.4	11.6	12.4	19.6	14.9	18.7	15.7	12.8	14.1	20.5	19.1	19.8
16	14.4	13.2	13.9	20.1	18.2	19.2	17.7	14.5	16.0	22.7	19.4	20.7
17	14.0	12.8	13.5	19.7	18.4	19.1	19.2	16.8	17.9	23.2	21.1	21.9
18	12.6	9.8	10.6	18.1	16.2	17.1	17.6	15.0	16.4	22.2	19.3	20.6
19	10.9	9.3	10.1	17.1	14.7	16.0	15.8	12.3	14.3	21.3	17.2	19.3
20	10.7	9.1	10.0	15.7	10.7	12.9	16.9	13.9	15.4	21.4	19.5	20.3
21	9.9	7.4	8.4	12.1	7.8	10.2	17.3	15.7	16.5	23.3	20.1	21.4
22	11.5	8.5	9.4	13.5	8.5	11.3	18.5	15.6	17.0	22.3	17.3	20.0
23	13.5	11.6	12.6	16.1	11.2	13.9	20.3	15.3	17.9	17.5	15.6	16.7
24	13.3	9.4	11.3	15.3	12.8	13.9	21.5	16.8	19.4	19.5	15.8	17.3
25	9.2	5.7	6.9	13.0	10.9	11.9	23.2	18.6	21.0	18.2	16.5	16.9
26	5.6	3.9	4.4	14.1	11.0	12.6	23.5	20.0	21.9	20.8	16.7	18.4
27	7.6	4.4	5.7	14.5	10.6	12.7	23.7	20.5	22.2	21.4	19.6	20.4
28	10.9	7.1	8.1	13.8	10.0	12.2	22.6	20.3	21.6	20.5	17.0	18.3
29	---	---	---	13.1	10.3	11.7	21.2	19.5	20.4	17.2	16.3	16.7
30	---	---	---	11.0	9.5	10.1	19.2	17.5	18.3	18.4	16.3	17.0
31	---	---	---	13.0	10.9	11.8	---	---	---	19.1	17.2	18.2
MONTH	14.4	3.9	9.7	20.2	7.3	12.9	23.7	9.7	15.8	23.3	15.6	18.8
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	20.0	17.9	18.9	27.1	24.5	25.6	25.9	23.0	24.3	23.7	20.2	21.9
2	19.9	19.4	19.6	26.1	23.6	24.8	24.8	20.5	22.5	24.2	20.6	22.1
3	20.4	19.0	19.6	25.2	20.9	23.2	26.3	20.8	23.0	24.6	21.8	23.1
4	20.8	19.7	20.2	25.5	21.0	23.4	27.0	20.7	22.9	24.0	21.0	22.3
5	20.6	18.8	19.8	26.7	22.7	24.6	25.5	21.8	23.7	---	---	---
6	20.0	16.8	18.3	27.1	24.6	25.8	24.2	21.2	23.0	---	---	---
7	21.5	19.2	20.1	26.6	24.4	25.4	24.5	22.2	23.4	---	---	---
8	23.6	20.4	21.7	25.3	24.3	24.9	24.4	22.2	23.4	---	---	---
9	25.3	21.2	23.1	27.7	24.3	25.8	24.4	22.8	23.6	---	---	---
10	22.4	20.6	21.3	28.8	25.4	26.9	22.8	22.2	22.4	---	---	---
11	22.4	20.4	21.3	27.3	25.0	26.2	24.4	21.7	22.8	---	---	---
12	21.4	19.7	20.5	27.1	24.9	25.9	24.4	21.1	22.7	---	---	---
13	20.5	18.8	19.7	26.6	24.7	25.5	25.0	22.8	23.7	---	---	---
14	22.2	19.1	20.4	25.8	24.4	25.1	25.0	23.3	24.2	---	---	---
15	21.3	19.6	20.8	27.0	24.6	25.6	25.0	23.9	23.3	---	---	---
16	22.2	20.5	21.2	26.4	24.3	25.3	24.4	23.3	24.0	---	---	---
17	23.2	20.2	21.5	25.2	24.0	24.7	25.0	22.8	23.6	---	---	---
18	24.4	20.8	22.5	25.2	22.9	24.2	25.0	22.8	23.9	---	---	---
19	25.6	22.5	23.8	25.2	23.9	24.6	25.6	23.3	24.2	---	---	---
20	24.4	21.7	23.2	26.3	23.2	24.6	25.6	23.9	24.7	---	---	---
21	25.3	22.2	23.5	27.1	24.0	25.3	25.6	24.0	24.6	---	---	---
22	25.2	22.8	24.1	27.7	24.1	25.6	24.0	23.1	23.6	---	---	---
23	26.3	23.4	24.6	27.3	24.5	25.9	24.5	22.8	23.6	---	---	---
24	24.6	21.7	23.3	26.6	24.1	25.2	24.4	23.3	23.7	---	---	---
25	24.6	20.5	22.5	26.3	22.7	24.3	24.3	22.7	23.5	---	---	---
26	23.6	20.4	22.1	26.0	22.4	24.0	25.1	22.6	23.8	---	---	---
27	24.4	21.2	22.8	24.7	21.8	23.3	26.3	23.4	24.7	---	---	---
28	25.3	22.1	23.5	25.5	22.7	23.9	26.8	23.4	25.0	---	---	---
29	26.4	22.8	24.5	25.8	21.7	23.6	25.5	24.1	24.9	---	---	---
30	26.8	24.1	25.2	26.4	21.9	23.9	25.2	22.8	24.0	---	---	---
31	---	---	---	27.2	23.3	25.0	24.3	21.5	22.7	---	---	---
MONTH	26.8	16.8	21.8	28.8	20.9	24.9	27.0	20.5	23.7	---	---	---
YEAR	28.8	.0										

ROANOKE RIVER BASIN

02077303 HYCO RIVER BELOW AFTERBAY DAM NEAR McGEHEES MILL, NC

LOCATION.--Lat 36°31'24", long 78°59'48", Person County, Hydrologic Unit 03010104, on right bank 600 ft downstream from afterbay dam of Carolina Power and Light Company, 1.2 mi upstream from Ghent Creek, and 1.8 mi east-northeast of McGehees Mill.

DRAINAGE AREA.--202 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR NC-81-1: Drainage area.

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

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Roxboro Steam-Electric Generating Plant Afterbay Reservoir (station 02077302).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	107	14	694	201	117	122	116	652	72	15	23
2	1050	106	14	1300	201	118	283	145	134	70	15	24
3	1800	106	16	902	201	118	758	328	133	70	15	24
4	1130	106	15	361	229	119	741	726	132	69	15	23
5	551	106	15	249	571	126	467	657	131	69	15	23
6	389	104	15	122	886	134	279	332	131	68	15	22
7	155	98	15	126	850	135	299	328	130	68	14	22
8	157	97	14	531	471	135	285	325	129	67	15	22
9	129	96	14	1430	116	136	284	287	128	35	15	22
10	113	95	16	1290	118	136	279	228	141	14	15	22
11	113	82	36	555	121	136	277	173	393	14	15	22
12	65	34	103	126	814	129	276	142	387	14	15	23
13	24	15	1170	147	427	118	256	142	327	14	15	22
14	24	15	1420	162	392	118	211	143	464	14	15	22
15	24	15	1060	161	384	118	218	142	300	14	15	22
16	24	14	251	152	451	118	215	142	131	14	15	22
17	24	14	301	145	513	118	218	141	131	14	14	22
18	24	14	265	141	597	118	219	140	129	14	14	22
19	25	14	219	136	932	118	218	112	128	14	14	22
20	25	14	196	131	1000	117	215	98	128	14	17	21
21	25	14	147	134	967	118	213	96	126	14	20	21
22	54	14	125	138	826	119	212	95	124	14	20	21
23	112	14	124	140	845	119	162	95	124	14	19	21
24	112	14	123	139	801	119	91	94	112	14	19	21
25	112	14	124	488	495	119	92	93	78	14	20	21
26	111	14	124	1420	115	118	90	94	77	14	20	20
27	110	14	124	1600	116	118	93	61	75	14	20	20
28	110	14	123	1110	117	118	94	17	74	15	20	20
29	109	14	123	506	---	118	94	148	73	15	19	20
30	108	14	123	202	---	119	94	1060	73	15	19	19
31	107	---	122	202	---	120	---	1030	---	15	19	---
MEAN	224	46.4	211	482	491	122	245	249	176	29.0	16.5	21.7
MAX	1800	107	1420	1600	1000	136	758	1060	652	72	20	24
MIN	21	14	14	122	115	117	90	17	73	14	14	19
IN.	1.28	.26	1.21	2.75	2.53	.70	1.35	1.42	.98	.17	.09	.12

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	49.1	65.3	130.2	400.5	378.2	423.4	246.3	143.2	79.5	138.1	75.1	143.6
MAX	223.8	334.4	361.2	1201	926.4	1135	692.0	863.8	456.3	1058	294.4	674.8
(WY)	1990	1986	1983	1978	1979	1975	1983	1978	1982	1975	1982	1974
MIN	6.56	6.78	12.1	18.9	11.0	18.3	12.9	7.90	3.96	9.60	1.43	1.55
(WY)	1974	1974	1985	1981	1981	1981	1985	1981	1974	1985	1977	1977

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	191.3		188.5	
HIGHEST ANNUAL MEAN			392.4	1975
LOWEST ANNUAL MEAN			17.9	1981
HIGHEST DAILY MEAN	1800	Oct 3	9280	Jul 14 1975
LOWEST DAILY MEAN	14	Nov 16	.31	Sep 21 1977
INSTANTANEOUS PEAK FLOW	1920	Oct 3	11300	Jul 14 1975
INSTANTANEOUS PEAK STAGE	12.82	Oct 3	24.40	Jul 14 1975
INSTANTANEOUS LOW FLOW	6.0	Apr 26	0	Jun 26 1980
ANNUAL RUNOFF (INCHES)	12.9		12.7	
10 PERCENTILE	502		445	
50 PERCENTILE	112		39	
95 PERCENTILE	15		7.6	

02077303 HYCO RIVER BELOW AFTERBAY DAM NEAR McGEHEES MILL, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1981 to September 1983.
WATER TEMPERATURE: June 1974 to current year.

INSTRUMENTATION.--Temperature recorder since June 1974. Water-quality monitor from October 1981 to September 1983.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 197 microsiemens Dec. 6, 1981; minimum, 89 microsiemens. May 16, 1983.
WATER TEMPERATURE: 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 TEMPERATURE: Maximum, 27.0°C July 5; minimum, 4.9°C Dec.31.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	21.5	20.4	20.9	17.2	17.0	17.1	10.4	9.5	10.0	6.8	4.3	5.7
2	21.8	20.7	21.4	17.2	16.8	17.1	10.5	9.3	9.9	7.5	6.8	7.2
3	22.6	21.1	21.8	16.9	16.1	16.7	9.8	9.2	9.6	8.3	7.4	7.9
4	22.6	21.3	22.2	16.6	15.4	16.1	9.7	8.5	9.3	8.3	7.8	8.0
5	22.2	20.9	21.9	15.7	15.2	15.5	8.6	8.0	8.4	8.3	7.8	8.1
6	22.2	21.2	21.9	15.3	15.1	15.2	8.6	7.8	8.3	8.4	7.6	8.0
7	22.4	21.5	22.2	15.4	15.1	15.3	8.6	8.0	8.3	8.8	7.9	8.3
8	22.0	21.0	21.8	15.3	15.1	15.2	8.7	8.0	8.4	9.0	8.0	8.5
9	21.8	20.5	21.4	15.5	15.1	15.3	9.0	8.8	9.0	9.0	8.7	8.9
10	21.2	20.7	21.0	15.6	14.9	15.2	9.0	7.8	8.6	9.1	8.5	8.7
11	20.9	20.4	20.6	15.4	14.3	14.9	8.1	7.8	8.0	9.3	8.1	9.0
12	21.0	20.1	20.6	15.0	14.4	14.7	8.2	7.8	8.1	8.8	8.0	8.5
13	20.7	19.6	20.2	15.0	14.2	14.5	8.3	8.0	8.2	8.9	8.7	8.8
14	20.9	19.9	20.3	15.2	14.2	14.6	8.7	8.0	8.3	8.9	8.0	8.7
15	20.9	19.6	20.1	14.9	14.6	14.7	9.5	7.9	8.8	8.7	7.8	8.2
16	20.8	19.7	20.2	14.8	14.4	14.7	9.5	8.0	9.3	8.7	7.9	8.3
17	20.9	20.1	20.5	14.9	14.1	14.6	9.5	9.5	9.5	8.8	7.9	8.3
18	20.9	19.6	20.4	14.5	13.2	14.1	9.5	8.3	9.1	8.5	8.2	8.3
19	19.6	19.2	19.4	14.5	12.9	13.8	8.9	8.0	8.7	8.7	8.1	8.5
20	19.3	18.1	18.8	13.1	12.8	13.0	8.9	8.3	8.7	8.6	8.1	8.4
21	18.4	17.6	18.0	12.9	12.1	12.6	8.5	7.5	8.1	8.7	8.3	8.6
22	18.4	17.5	17.9	13.0	12.5	12.7	8.4	7.8	8.4	9.8	8.7	9.2
23	18.1	17.7	17.9	12.7	11.3	12.2	8.4	8.4	8.4	9.7	8.7	9.4
24	17.8	17.5	17.7	12.5	10.8	11.6	8.4	7.9	8.3	9.3	8.6	9.0
25	17.5	17.2	17.4	11.9	10.7	11.1	7.9	6.9	7.6	9.6	8.6	9.0
26	17.5	16.9	17.3	10.9	10.5	10.7	6.8	5.0	5.9	9.9	8.9	9.6
27	17.3	16.7	17.1	11.0	10.1	10.8	7.4	6.1	6.8	9.9	9.5	9.8
28	17.3	16.5	17.0	10.8	10.0	10.5	6.6	4.9	5.8	10.3	10.0	10.1
29	17.2	16.6	16.9	10.9	10.1	10.5	7.2	4.9	6.1	10.4	10.0	10.3
30	17.2	16.8	17.0	11.0	9.6	10.3	5.4	4.3	5.0	10.4	10.1	10.3
31	17.3	17.0	17.2	---	---	---	5.4	4.1	4.9	10.4	9.9	10.3
MONTH	22.6	16.5	19.6	17.2	9.6	13.8	10.5	4.1	8.1	10.4	4.3	8.7

ROANOKE RIVER BASIN

02077303 HYCO RIVER BELOW AFTERBAY DAM NEAR McGEHEES MILL, NC--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	10.3	9.9	10.2	11.2	10.9	11.1	14.1	13.5	13.9	18.6	17.6	18.0
2	10.4	10.0	10.2	11.3	10.7	11.0	15.4	13.9	14.3	18.5	17.9	18.0
3	10.4	10.1	10.3	11.4	11.1	11.3	16.5	14.9	15.7	20.0	18.2	19.0
4	10.4	10.1	10.2	11.2	10.8	11.0	15.6	14.6	15.3	21.3	20.0	20.7
5	10.4	10.4	10.4	11.0	10.4	10.8	15.6	14.8	15.2	22.5	21.2	21.9
6	10.5	10.2	10.4	11.4	10.7	11.1	15.5	14.7	15.2	21.6	21.2	21.4
7	10.8	10.3	10.5	11.3	10.6	11.1	15.8	14.7	15.2	21.6	21.3	21.5
8	12.1	10.3	11.2	11.2	10.9	11.1	15.7	14.8	15.2	22.0	21.5	21.7
9	11.9	10.4	10.9	11.9	11.0	11.4	15.6	14.6	15.1	22.1	21.6	21.9
10	12.0	10.4	11.1	12.1	11.5	11.8	15.8	14.9	15.6	22.4	21.6	21.9
11	12.6	10.9	12.1	12.1	11.7	12.0	16.2	15.6	15.9	22.0	21.5	21.7
12	13.0	11.6	12.4	12.2	11.7	12.0	16.0	15.5	15.8	21.5	20.5	21.3
13	13.1	11.2	12.2	12.1	11.8	11.9	15.8	15.3	15.6	21.7	20.5	21.4
14	11.8	11.3	11.6	13.0	11.8	12.2	15.6	15.2	15.4	21.6	21.4	21.6
15	12.2	11.6	11.9	12.8	12.0	12.3	15.8	15.2	15.7	---	---	21.5
16	12.7	11.8	12.1	13.6	12.1	12.6	15.9	15.4	15.7	22.4	21.4	21.7
17	13.2	12.7	12.9	14.4	12.6	13.5	18.0	15.8	16.8	22.6	21.6	22.1
18	14.4	13.1	13.6	14.3	12.3	13.5	17.1	15.8	16.2	22.9	21.7	22.3
19	13.4	12.8	13.3	14.2	12.4	13.2	16.6	16.0	16.2	22.2	21.7	22.0
20	13.8	12.9	13.3	14.7	13.6	14.1	17.6	16.2	17.0	22.3	21.6	22.0
21	14.0	12.6	13.5	13.8	13.2	13.7	18.0	17.5	17.7	22.8	21.7	22.2
22	14.0	11.9	13.1	14.3	12.6	13.5	17.8	17.1	17.5	21.9	21.3	21.5
23	13.1	12.3	12.8	15.3	13.9	14.6	18.0	17.2	17.6	21.6	21.3	21.5
24	13.8	12.3	13.3	14.2	13.6	13.9	17.8	16.8	17.3	21.7	21.4	21.5
25	13.5	13.0	13.3	13.9	13.6	13.7	17.7	17.2	17.5	21.5	21.3	21.5
26	13.0	12.2	12.7	14.5	13.7	14.0	18.3	17.1	17.5	22.1	21.4	21.7
27	12.2	10.4	11.6	14.2	13.6	13.9	17.9	17.2	17.6	22.1	21.4	21.9
28	11.8	10.4	11.3	14.0	13.7	13.8	18.1	17.3	17.6	21.5	20.5	21.1
29	---	---	---	13.9	13.4	13.8	17.8	17.3	17.6	21.8	20.3	20.9
30	---	---	---	13.8	13.5	13.6	17.9	17.3	17.6	22.2	21.6	21.8
31	---	---	---	13.8	12.5	13.5	---	---	---	22.2	21.8	21.9
MONTH	14.4	9.9	11.9	15.3	10.4	12.6	18.3	13.5	16.2	---	---	21.3
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.5	21.8	22.1	26.0	24.5	25.2	26.8	25.2	25.9	25.9	24.3	24.9
2	22.2	21.7	21.9	25.5	24.2	25.0	26.7	25.1	25.8	27.2	24.9	25.7
3	22.5	21.8	22.1	26.8	24.4	25.5	27.3	25.3	26.1	25.9	24.7	25.2
4	22.7	21.8	22.1	27.7	25.5	26.6	26.5	25.3	25.9	26.8	24.7	25.4
5	22.1	21.7	21.8	27.7	25.9	27.0	27.3	25.8	26.3	26.4	24.3	25.3
6	22.7	21.8	22.2	27.3	26.1	26.8	27.0	25.7	26.3	27.1	24.6	25.8
7	22.8	22.1	22.5	27.2	25.8	26.4	27.1	25.7	26.4	27.2	25.3	26.2
8	22.6	22.0	22.3	27.3	25.9	26.5	27.1	25.1	26.0	27.0	25.3	26.3
9	23.6	22.3	22.7	28.1	25.8	26.9	26.3	25.2	25.8	26.3	24.8	25.6
10	24.4	22.3	22.7	27.0	25.3	26.0	26.1	25.0	25.6	27.0	25.8	26.2
11	26.1	24.4	25.2	27.2	25.6	26.3	27.0	25.2	25.9	27.0	25.0	25.9
12	25.2	24.3	24.8	27.3	25.2	26.0	27.2	25.3	26.1	26.8	25.1	26.0
13	25.0	24.1	24.6	27.2	25.5	26.2	26.7	25.5	26.2	26.1	25.0	25.5
14	25.1	24.1	24.7	27.1	25.5	26.0	27.5	26.0	26.6	26.8	25.1	25.8
15	25.0	23.5	24.2	27.2	25.5	26.2	26.9	25.5	26.5	26.8	25.3	26.2
16	24.0	23.4	23.6	27.0	25.2	26.0	26.6	25.2	25.9	27.0	24.7	25.8
17	24.3	23.5	24.0	26.8	25.2	25.8	26.4	24.6	25.5	26.3	24.1	25.2
18	24.7	23.7	24.1	26.9	24.7	25.7	26.5	24.1	25.2	25.3	23.9	24.5
19	25.0	23.9	24.4	26.4	25.2	25.8	26.7	24.5	25.5	24.3	23.5	24.0
20	24.8	23.7	24.3	26.8	25.2	26.1	26.8	24.9	26.0	24.7	23.6	24.1
21	25.5	24.0	24.8	27.1	25.9	26.3	26.3	24.7	25.6	24.2	23.5	23.8
22	25.4	24.0	24.6	27.6	25.7	26.4	26.2	25.3	25.8	24.0	23.3	23.6
23	25.9	24.4	25.1	26.8	25.8	26.3	26.1	25.0	25.6	23.5	22.7	23.0
24	25.6	24.4	25.1	26.4	25.2	25.9	26.2	24.7	25.5	22.9	22.3	22.5
25	24.8	24.0	24.2	27.0	25.1	25.9	26.2	24.6	25.4	22.8	22.0	22.4
26	25.3	23.7	24.5	26.8	25.2	25.8	26.8	24.8	25.7	22.9	22.1	22.4
27	25.6	24.0	24.8	26.4	24.9	25.8	26.9	24.9	25.7	22.8	21.5	22.4
28	25.4	24.3	24.7	26.5	25.3	26.0	27.3	24.8	26.1	22.5	21.7	22.2
29	25.9	24.2	25.1	26.9	25.5	26.0	26.9	25.2	26.0	22.5	21.5	22.1
30	26.0	24.5	25.2	26.9	25.4	26.1	26.6	24.7	25.7	22.4	21.5	22.1
31	---	---	---	27.4	25.7	26.3	25.7	24.3	25.0	---	---	---
MONTH	26.1	21.7	23.8	28.1	24.2	26.1	27.5	24.1	25.9	27.2	21.5	24.5
YEAR	27.0	4.9	17.7									

02077670 MAYO CREEK NEAR BETHEL HILL, NC

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

DRAINAGE AREA.--53.5 mi%.

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

REVISED RECORDS.--WDR NC-81-1: Drainage area.

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

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Mayo Steam Electric Generating Plant. Minimum discharge, no flow, occurred periodically in 1977, 1980, 1981, and 1982. Minimum discharge for current water year and period of record, result of regulation.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	14	19	131	98	75	65	48	93	3.0	2.9	2.9
2	173	15	18	145	92	71	74	47	81	2.9	2.9	2.9
3	224	27	16	132	85	76	86	45	72	2.9	2.9	2.8
4	185	26	14	122	101	77	84	52	67	2.9	2.9	2.9
5	149	25	13	112	109	73	78	57	58	3.0	2.9	2.9
6	126	25	12	114	104	69	72	59	51	3.0	2.9	2.9
7	108	24	11	113	98	62	89	53	44	2.9	2.9	2.9
8	91	26	16	145	92	58	89	47	39	3.0	2.9	2.9
9	77	30	22	189	87	57	84	42	36	3.0	2.9	2.8
10	65	28	23	172	111	53	80	62	42	3.0	2.9	2.9
11	55	25	23	149	143	52	72	71	35	3.1	2.9	2.9
12	48	22	51	129	135	51	66	67	29	3.1	2.9	2.9
13	41	20	117	114	124	48	61	63	25	3.1	2.9	2.9
14	37	20	124	102	113	46	58	55	22	3.1	2.9	2.9
15	32	20	118	92	105	43	82	50	21	3.0	2.9	2.9
16	29	22	114	84	118	43	89	47	19	3.0	3.0	2.9
17	27	19	106	79	147	45	87	41	17	3.0	2.9	2.9
18	27	17	96	74	137	48	79	33	16	3.0	2.9	2.9
19	45	15	88	67	160	46	73	28	14	3.0	2.9	2.9
20	46	14	81	62	160	41	68	26	11	3.0	2.9	2.9
21	41	11	72	64	143	38	66	23	9.5	3.0	2.9	2.8
22	34	11	63	61	134	37	67	31	9.0	3.0	2.9	2.9
23	30	25	56	57	137	33	63	37	8.3	3.1	2.9	2.9
24	27	27	50	55	125	31	59	33	6.1	3.0	2.9	3.0
25	24	27	47	70	110	30	56	30	4.7	2.9	3.0	3.0
26	22	26	42	134	99	31	52	29	3.8	2.9	3.0	2.9
27	20	25	38	147	91	29	49	55	3.7	2.9	3.0	2.9
28	19	25	35	134	82	27	46	52	3.8	2.9	2.9	2.9
29	17	23	34	122	---	33	46	107	3.5	2.9	2.9	2.9
30	16	21	34	116	---	44	48	116	3.1	2.9	2.9	2.9
31	15	---	41	107	---	55	---	105	---	2.9	2.9	---
MEAN	62.2	21.8	51.4	109	116	49.1	69.6	52.0	28.2	2.98	2.91	2.90
MAX	224	30	124	189	160	77	89	116	93	3.1	3.0	3.0
MIN	15	11	11	55	82	27	46	23	3.1	2.9	2.9	2.8
IN.	1.34	.46	1.11	2.36	2.25	1.06	1.45	1.12	.59	.06	.06	.06

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	11.4	17.1	23.2	67.2	63.8	90.9	63.6	46.0	15.2	16.1	12.1	12.8
MAX	62.2	76.0	65.4	253.8	190.1	247.3	173.5	210.1	35.6	83.6	56.1	112.2
(WY)	1990	1980	1978	1978	1979	1987	1978	1978	1979	1984	1984	1979
MIN	.011	.011	.016	0 0	.275	.143	.198	.120	.075	.237	.038	0 0
(WY)	1981	1981	1981	1981	1981	1981	1981	1981	1981	1981	1981	1980

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	47.0		36.6	
HIGHEST ANNUAL MEAN			87.8	1978
LOWEST ANNUAL MEAN			.11	1981
HIGHEST DAILY MEAN	224	Oct 3	2080	Apr 26 1978
LOWEST DAILY MEAN	2.8	Sep 3	0	Jul 31 1977
INSTANTANEOUS PEAK FLOW	232	Oct 3	3950	Apr 26 1978
INSTANTANEOUS PEAK STAGE	3.84	Oct 3	10.83	Apr 26 1978
INSTANTANEOUS LOW FLOW	2.6	Sep 9	0*	Aug 1 1977
ANNUAL RUNOFF (INCHES)	11.9		9.28	
10 PERCENTILE	116		93	
50 PERCENTILE	35		5.8	
95 PERCENTILE	2.8		0	

* See REMARKS.

ROANOKE RIVER BASIN

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, NC
(National stream-quality accounting network station)

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

DRAINAGE AREA.--8,384 mi^2.

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. WDR NC-83-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 43.84 ft above 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 upstream at different datum. Aug. 6, 1941 to Mar. 1, 1973, auxiliary water-stage recorder, 3.6 mi downstream from base gage. Satellite data transmitter at station.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since August 1950 by Philpott Lake on Smith River, usable capacity, 6,325,000,000 ft^3; since September 1950 by John H. Kerr Reservoir, usable capacity, 101,247,000,000ft^3; since June 1955 by Roanoke Rapids Lake (station 02080100); since September 1962 by Leesville Lake, since October 1962 by Lake Gaston (station 02079964); and since September 1963 by Smith Mountain Lake. Prior to regulation, maximum discharge, 261,000 ft ^{3}/s, Aug. 18, 1940, gage height 39.0 ft, from floodmarks; minimum discharge, about 250 ^{3}/s Dec. 16, 1955. Minimum discharge for current water year also occurred Dec. 3.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in November 1877, discharge, 212,000 ft^3/s, reached a stage of about 2 ft lower at Old Gaston than flood in August 1940 which was 21.5 ft. Flood in August 1940 is the maximum known since at least 1771.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15500	5710	4250	1590	18700	19500	5830	6710	19300	1990	3360	2100
2	17900	10100	1560	9340	16900	19500	10500	6940	19100	2200	2740	2100
3	20400	8380	3630	19300	10700	16600	14000	9520	19100	2280	2790	2100
4	20200	5320	14100	19300	8090	6430	16900	9530	19100	2530	4290	2090
5	20300	2950	9190	19100	14000	15200	20100	8550	19200	5700	3060	2080
6	20200	5010	6750	19100	13100	19200	20300	8620	19400	7340	2490	6420
7	20300	10800	6490	19000	12000	19300	20200	8160	18900	2090	3040	9730
8	20600	12700	10300	19100	14400	19600	20100	9060	19000	2530	4170	8450
9	20500	10700	14900	18800	15300	17300	20200	9460	19500	6110	7790	4130
10	20600	5040	9040	19100	10000	5440	20300	9460	19500	6110	4690	4050
11	19800	2570	10500	19100	13700	3650	20000	10100	19200	2080	8240	2090
12	18900	2710	8480	19200	17400	2950	19900	12600	19100	3360	5730	2070
13	19000	7130	5480	19200	19400	2950	20100	12500	19100	2260	7180	2110
14	18800	6030	9340	19200	19400	4450	20100	13200	19100	2530	8570	2060
15	19000	3740	9480	19100	19400	6920	8670	15200	19100	2170	4130	1970
16	17500	5890	10100	19100	19500	1870	12400	15200	19100	8540	2560	2070
17	13700	8370	14100	19500	19400	3590	20300	15100	18600	15300	2520	2480
18	13100	9890	12500	19400	19500	6070	20300	15200	7970	15300	2510	2050
19	13400	12100	15100	19400	19500	18200	20500	15100	10800	15200	2270	2170
20	19500	9400	12100	17100	19500	19700	18700	9990	10200	15200	2010	2060
21	19800	9430	14000	1120	19500	19700	7930	9510	10300	15200	2030	1980
22	19700	14700	19100	11200	19500	19900	7900	9510	10300	12800	3470	2130
23	18700	15900	19400	7380	19500	19900	7840	9520	2570	4320	3090	3100
24	15400	12800	19400	8810	19500	17200	7890	9540	2000	2360	2810	2020
25	15500	7990	9270	11300	19500	1620	7780	9530	5230	4970	2310	2150
26	15500	1780	1380	10200	18800	8080	7960	11300	8250	8420	2030	2120
27	14500	4530	3030	13000	19600	5440	7970	12700	9080	6040	9150	2000
28	6410	5410	5640	6960	19400	9640	8040	18300	8620	4080	15300	4950
29	3640	8420	13400	14200	---	11000	7950	19900	7580	2660	8680	4200
30	1830	11000	2370	17000	---	11800	7870	19500	2180	3740	6370	4300
31	3780	---	1360	15400	---	4850	---	19600	---	4170	2390	---
MEAN	16260	7883	9540	15180	16970	11530	14280	11910	14020	6115	4573	3111
MAX	20600	15900	19400	19500	19600	19900	20500	19900	19500	15300	15300	9730
MIN	1830	1780	1360	1120	8090	1620	5830	6710	2000	1990	2010	1970
(†)	-2505	-18	-1118	+1738	+2238	+1006	-192	+3992	-6667	-284	-43	-978

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD*, BY WATER YEAR (WY)

MEAN	5613	6605	7344	9383	10270	10270	10260	10750	7375	5811	5349	5223
MAX	20360	17690	18380	16250	19590	23950	30700	31750	15260	20560	9755	12490
(WY)	1980	1986	1973	1973	1978	1979	1975	1978	1982	1972	1975	1987
MIN	2031	1987	3417	3540	2613	2259	2527	3974	2365	2581	2544	2186
(WY)	1971	1987	1981	1989	1981	1981	1985	1981	1977	1970	1977	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD*	
AVERAGE FLOW	10910	‡10674	7841	(UNADJUSTED)
HIGHEST ANNUAL MEAN			12920	1973
LOWEST ANNUAL MEAN			3117	1981
HIGHEST DAILY MEAN	20600	Oct 8	35600	Apr 14 1975
LOWEST DAILY MEAN	1120	Jan 21	818	Nov 15 1970
INSTANTANEOUS PEAK FLOW	23900	Oct 10	37400	May 1 1978
INSTANTANEOUS PEAK STAGE	9.43	Oct 10	11.74	May 1 1978
INSTANTANEOUS LOW FLOW	1020*	Nov 1	760	Nov 23 1970
ANNUAL RUNOFF (INCHES)	17.7		12.7	
10 PERCENTILE	19900		18500	
50 PERCENTILE	9910		5970	
95 PERCENTILE	2020		1420	

† Change in contents, equivalent in cubic feet per second, in Leesville and Smith Mountain Lakes, furnished by Appalachian Power Co.; Philpott and Kerr Reservoirs, furnished by U. S. Army Corps of Engineers; and Lake Gaston and Raanoke Rapids Lake, furnished by North Carolina Power Company.
‡ Adjusted for change in contents.
* Regulated period only (1964-1990). See REMARKS.

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, NC--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1976 to September 1984.
WATER TEMPERATURE: October 1948 to September 1949, October 1976 to September 1984.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 153 microsiemens Sept. 15, 1981; minimum daily, 65 microsiemens Apr. 7, 1979.
WATER TEMPERATURE: Maximum daily, 32.5°C July 30, 1949; minimum daily, 1.0°C Jan. 18-22, 30, 31, Feb. 1, 1977.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
NOV												
29...	1000	10600	94	6.2	11.5	4.1	764	10.2	--	K25	6.6	2.7
FEB												
01...	1200	19000	100	6.9	7.0	9.0	768	11.8	K3	84	7.0	2.9
MAY												
16...	1415	15200	87	6.2	21.0	2.0	761	9.1	K1	93	7.0	2.6
SEP												
06...	1145	2010	73	7.2	27.5	2.1	758	5.8	K320	K490	7.0	2.8

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	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)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)
NOV												
29...	6.4	31	0.5	2.3	27	22	8.0	5.7	0.10	7.9	54	<0.010
FEB												
01...	6.6	31	0.5	2.0	22	18	8.0	6.4	0.10	12	71	<0.010
MAY												
16...	5.9	30	0.5	1.7	31	25	7.3	6.3	<0.10	11	57	--
SEP												
06...	6.3	30	0.5	2.0	17	14	6.9	7.2	<0.10	10	53	<0.010

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)
NOV											
29...	0.170	0.020	0.020	0.03	0.03	0.38	0.40	0.020	<0.010	<0.010	40
FEB											
01...	0.280	0.050	0.040	0.06	0.05	0.75	0.80	0.030	0.010	<0.010	120
MAY											
16...	--	--	--	--	--	--	--	--	--	--	20
SEP											
06...	<0.100	0.040	0.040	0.05	0.05	0.36	0.40	0.040	<0.010	<0.010	<10

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV											
29...	<1	21	<0.5	<1.0	<1	<3	3	84	<1	<4	5
FEB											
01...	<1	22	<0.5	<1.0	<5	<3	<10	180	<10	<4	17
MAY											
16...	<1	16	0.9	<1.0	<1	<3	3	55	1	<4	3
SEP											
06...	<1	15	<0.5	1.0	<1	<3	3	27	6	<4	13

ROANOKE RIVER BASIN

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV											
29...	<0.1	<10	1	<1	<1.0	47	<6	5	17	487	53
FEB											
01...	<0.1	<10	<10	<1	<1.0	49	<6	<3	6	308	95
MAY											
16...	0.2	<10	<1	<1	<1.0	45	<6	<3	3	123	90
SEP											
06...	0.1	<10	1	<1	<1.0	61	<6	<3	3	16	63

0208111310 CASHIE RIVER AT SECONDARY ROAD 1527 NEAR WINDSOR, NC

LOCATION.--Lat 36°23'15", long 76°59'07", Bertie County, Hydrologic Unit 03010107, at downstream side of bridge on Secondary Road 1257, 2.0 miles above NC 13, near Windsor, NC.

DRAINAGE AREA.--108 mi^2.

PERIOD OF RECORD.--June 3, 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is 15.0 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except those below 10 ft^3/s and those for estimated daily discharges, which are poor. Minimum discharge for period of record, occurs periodically.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	13	134	133	122	188	e500	e26	201	.35	1.1	80
2	69	12	109	150	109	151	e620	e30	150	.44	.88	88
3	361	18	90	163	100	147	e700	e27	104	.38	.58	86
4	1090	20	72	158	92	175	e750	e23	71	.14	.54	65
5	965	28	59	152	84	205	e700	e28	52	.04	.51	42
6	628	31	49	149	80	220	e570	e37	38	0	.50	26
7	385	47	40	156	78	207	e450	e52	29	.07	.49	14
8	243	67	64	209	76	177	e340	e55	22	.05	.54	26
9	157	72	197	337	74	145	e275	e44	15	.05	1.6	128
10	92	76	520	434	81	120	e225	e37	11	0	22	105
11	47	78	768	427	104	104	e175	e30	7.8	0	102	54
12	24	65	806	387	139	93	e140	e24	6.6	0	80	26
13	14	57	715	312	177	83	e115	e20	6.3	.98	27	32
14	8.9	67	615	241	191	74	e95	e18	6.1	2.8	12	78
15	6.0	136	552	191	176	65	e75	e14	6.0	4.0	14	109
16	3.6	195	503	157	146	57	e63	e12	5.2	18	12	54
17	3.1	180	427	131	136	51	e55	e11	5.1	44	40	23
18	4.5	140	339	114	133	113	e50	9.4	6.3	87	70	11
19	14	119	266	102	164	243	e60	4.8	6.9	131	97	6.7
20	49	149	226	93	232	276	e64	4.8	5.2	112	150	4.2
21	87	152	e185	94	283	276	e55	5.0	4.7	81	116	3.4
22	195	132	e160	104	287	243	e40	17	3.7	50	89	3.1
23	312	154	e135	118	292	191	e43	116	4.3	25	138	2.6
24	266	226	e120	129	335	142	e46	245	3.7	12	255	2.0
25	200	253	e110	152	345	108	e40	246	2.9	5.8	396	1.4
26	145	289	e100	180	325	88	e36	230	2.7	3.8	482	1.1
27	95	303	100	199	282	72	e37	185	1.9	3.1	380	.92
28	58	253	97	198	233	63	e30	128	.23	3.4	264	.79
29	34	201	98	174	---	e75	e26	117	.26	2.7	174	.67
30	22	167	104	150	---	e150	e22	167	.39	1.8	115	.58
31	19	---	116	134	---	e330	---	214	---	1.3	91	---
MEAN	181	123	254	188	174	149	213	70.2	26.0	19.1	101	35.8
MAX	1090	303	806	434	345	330	750	246	201	131	482	128
MIN	3.1	12	40	93	74	51	22	4.8	.23	0	.49	.58
IN.	1.93	1.27	2.71	2.01	1.68	1.60	2.20	.75	.27	.20	1.08	.37

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	61.5	49.0	100.1	139.8	177.6	290.2	228.6	151.8	34.4	29.9	48.1	14.5
MAX	180.8	123.3	254.1	188.0	200.7	662.9	326.1	321.2	75.0	76.1	101.1	35.8
(WY)	1990	1990	1990	1990	1989	1989	1989	1989	1989	1989	1990	1990
MIN	.126	.889	15.1	73.4	157.9	58.3	146.4	63.9	5.41	.638	.651	2.75
(WY)	1988	1988	1989	1989	1988	1988	1988	1988	1987	1987	1987	1989

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	127.9		*****	
HIGHEST ANNUAL MEAN			155.6	1989
LOWEST ANNUAL MEAN			57.1	1988
HIGHEST DAILY MEAN	1090	Oct 4	1540	May 3 1989
LOWEST DAILY MEAN	0	Jul 6	0	Jul 30 1987
INSTANTANEOUS PEAK FLOW	1180	Oct 4	1580	May 3 1989
INSTANTANEOUS PEAK STAGE	8.66	Oct 4	9.57	May 3 1989
INSTANTANEOUS LOW FLOW	0*	Jul 6	0*	Jul 29 1987
ANNUAL RUNOFF (INCHES)	16.1		*****	
10 PERCENTILE	300		303	
50 PERCENTILE	84		37	
95 PERCENTILE	.46		.35	

***** Indicates not enough data, therefore statistic is not computed

* See REMARKS.

PAMLICO RIVER BASIN

02081500 TAR RIVER NEAR TAR RIVER, NC

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

DRAINAGE AREA.--167 mi^2.

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Occasional intermittent diversion for irrigation. Due to the uncertainties of the gage height record for the current water year, minimum discharges cannot be determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	25	e67	e504	169	129	757	298	144	14	e5.8	e5.9
2	2200	26	e65	e355	146	121	544	281	104	19	e5.8	e5.3
3	1260	306	e65	e202	137	190	2230	273	88	14	e5.5	e4.4
4	214	183	e62	e167	266	355	569	291	80	12	e4.9	e3.8
5	95	85	e59	e158	716	214	283	281	76	12	e4.7	e3.6
6	70	64	e59	e225	300	155	198	553	60	11	e5.8	e3.6
7	57	56	e59	e325	213	131	507	197	53	11	62	e3.2
8	47	52	e80	e944	183	116	463	117	49	11	16	e2.8
9	38	e77	e188	e853	154	112	241	94	45	11	e7.1	e2.9
10	32	e99	e127	e375	880	112	180	570	45	11	e8.0	e4.0
11	29	e72	e159	e260	1380	107	160	736	55	12	e8.2	e4.1
12	25	e63	e838	e218	427	101	138	207	44	37	e7.8	e4.4
13	23	e63	e1840	171	264	95	118	125	37	23	e9.7	e4.0
14	21	e62	e598	138	204	95	109	103	35	14	21	e3.0
15	20	e59	e362	125	173	88	346	86	32	e10	21	e2.9
16	19	e59	e401	118	596	85	499	77	32	12	11	e2.2
17	17	e75	e262	112	1820	92	223	69	32	12	e10	e2.0
18	17	e67	e195	107	462	346	162	58	30	15	e9.0	e1.7
19	459	e62	e178	104	839	222	127	49	29	16	e9.0	e1.7
20	332	e59	e156	99	730	135	112	43	26	13	e8.0	e1.7
21	105	e56	e139	143	334	113	107	41	23	11	e6.9	e2.2
22	67	e56	e101	194	248	103	134	45	22	11	e6.9	e2.2
23	53	e287	e95	138	438	95	141	67	23	e10	e7.6	e1.7
24	45	e223	e86	117	356	87	110	65	20	e9.8	18	e1.7
25	38	e136	e77	205	226	82	93	51	19	e9.4	11	e1.0
26	34	e103	e82	1620	165	83	84	45	18	e8.7	e10	e.90
27	30	e86	e80	931	144	84	77	75	17	e7.6	12	e.86
28	28	e77	e77	336	139	80	71	101	16	e7.2	15	e1.0
29	26	e72	e75	245	---	598	71	1330	15	e6.9	11	e1.1
30	25	e69	e86	267	---	1150	435	1990	14	e6.4	e8.3	e.91
31	25	---	e109	220	---	889	---	270	---	e6.4	6.8	---
MEAN	181	92.6	220	322	432	205	310	277	42.8	12.4	11.4	2.69
MAX	2200	306	1840	1620	1820	1150	2230	1990	144	37	62	5.9
MIN	17	25	59	99	137	80	71	41	14	6.4	4.7	.86
IN.	1.25	.62	1.52	2.22	2.70	1.42	2.07	1.91	.29	.09	.08	.02

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	69.4	117.3	153.7	244.6	333.2	314.2	219.2	130.7	79.5	82.1	84.0	66.2
MAX	564.9	599.0	558.4	819.2	798.4	917.5	675.5	474.6	488.1	677.1	542.2	670.9
(WY)	1972	1973	1973	1978	1960	1975	1978	1978	1982	1975	1955	1945
MIN	.413	.283	4.39	7.04	62.6	61.0	33.2	16.9	4.30	.921	1.39	.278
(WY)	1971	1942	1942	1942	1968	1981	1942	1941	1970	1966	1976	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	174.4		157.0	
HIGHEST ANNUAL MEAN			335.8	1973
LOWEST ANNUAL MEAN			51.0	1981
HIGHEST DAILY MEAN	2230	Apr 3	10500	Aug 18 1955
LOWEST DAILY MEAN	.86	Sep 27	.02	Aug 13 1977
INSTANTANEOUS PEAK FLOW	3420	May 30	14200	Apr 27 1978
INSTANTANEOUS PEAK STAGE	9.31	May 30	18.87	Apr 27 1978
INSTANTANEOUS LOW FLOW	NOT DETEDMINED*		0	Aug 14 1977
ANNUAL RUNOFF (INCHES)	14.2		12.8	
10 PERCENTILE	422		344	
50 PERCENTILE	77		46	
95 PERCENTILE	2.8		1.6	

* See REMARKS.

PAMLICO RIVER BASIN

02081747 TAR RIVER AT U.S. 401 AT LOUISBURG, NC

LOCATION.--Lat 36°05'34", long 78°17'48", Franklin County, Hydrologic Unit 03020101, on left bank 0.1 mi downstream from bridge on U.S. Highway 401 (Bickett Boulevard), at Louisburg, and 0.2 mi upstream from Fox Creek.

DRAINAGE AREA.--427 mi^2.

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

REVISED RECORDS.--WDR NC-81-1: Drainage area.

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

REMARKS.--Records good except for estimated daily discharges, which are fair. Maximum gage height for period of record, from floodmarks. Minimum discharge for current water year also occurred on Aug. 6. National Weather Service gage height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of December 1934, September 1945 and August 1955 reached stages of 26 ft, 24 ft, and 24 ft, respectively, at site and datum 0.4 mi upstream, from information of U. S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3640	215	326	620	553	485	3220	1160	e572	82	38	82
2	4340	586	305	1270	485	456	2200	793	e380	176	34	69
3	1140	981	288	760	457	518	3630	708	e276	134	32	62
4	481	526	269	557	456	779	4860	752	e245	81	32	56
5	382	397	250	493	1180	694	2540	854	e297	70	30	52
6	318	339	246	509	971	531	864	1140	e266	65	33	48
7	272	312	243	849	628	468	937	823	e230	60	262	49
8	243	319	349	957	547	423	1460	478	e215	56	342	92
9	220	1290	839	2410	487	409	871	372	e205	54	287	104
10	204	837	784	2300	885	410	665	571	e201	52	283	80
11	193	493	644	895	2750	398	597	2030	e395	77	160	99
12	183	395	1130	681	2740	378	539	1030	e274	199	99	213
13	180	339	2900	568	910	358	479	503	e198	389	79	98
14	180	319	4210	488	671	345	447	408	e183	262	197	70
15	170	314	3200	446	576	336	469	345	e172	143	150	63
16	165	346	1240	424	702	323	1110	309	e170	105	120	56
17	170	394	1080	395	3160	351	740	281	e187	266	88	49
18	446	337	741	380	4260	722	588	251	e175	403	81	43
19	1500	288	613	371	1980	813	491	216	e164	183	68	40
20	803	274	565	352	2350	516	428	198	e157	119	72	41
21	478	272	512	428	1280	425	404	190	e150	96	59	41
22	334	262	462	531	831	377	424	296	e136	82	55	42
23	277	549	345	474	921	349	456	376	e133	73	84	45
24	252	1550	417	405	1090	329	402	286	e128	62	652	43
25	236	931	391	420	771	313	360	215	e135	55	313	40
26	220	609	389	1140	597	310	322	195	e117	49	359	38
27	208	503	357	2670	530	316	298	263	e105	45	314	36
28	198	436	346	1510	507	298	276	e321	85	47	161	34
29	197	393	336	731	---	983	275	e1070	79	45	117	34
30	198	357	359	693	---	3160	628	e2730	74	43	188	34
31	200	---	411	686	---	3400	---	e1050	---	41	119	---
MEAN	582	505	792	820	1188	644	1033	652	203	117	158	61.8
MAX	4340	1550	4210	2670	4260	3400	4860	2730	572	403	652	213
MIN	165	215	243	352	456	298	275	190	74	41	30	34
IN.	1.57	1.32	2.14	2.21	2.90	1.74	2.70	1.76	.53	.31	.43	.16

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	151.6	303.1	432.0	793.4	835.7	924.3	649.9	436.0	274.7	254.0	173.8	164.7
MAX	581.5	1192	1108	1845	1616	2015	1407	983.5	1451	1692	512.5	687.8
(WY)	1990	1986	1984	1978	1983	1989	1987	1989	1982	1975	1986	1974
MIN	28.5	64.9	86.5	78.0	201.7	214.3	140.3	122.9	35.4	43.3	26.8	19.7
(WY)	1987	1982	1981	1981	1977	1988	1985	1977	1986	1986	1988	1980

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	559.1		448.5	
HIGHEST ANNUAL MEAN			729.5	1984
LOWEST ANNUAL MEAN			131.4	1981
HIGHEST DAILY MEAN	4860	Apr 4	13000	Apr 28 1978
LOWEST DAILY MEAN	30	Aug 5	8.1	Aug 14 1977
INSTANTANEOUS PEAK FLOW	5020	Apr 4	13100	Apr 28 1978
INSTANTANEOUS PEAK STAGE	18.29	Apr 4	24.36*	Apr 28 1978
INSTANTANEOUS LOW FLOW	29*	Aug 5	7.3	Aug 14 1977
ANNUAL RUNOFF (INCHES)	17.8		14.3	
10 PERCENTILE	1130		951	
50 PERCENTILE	351		179	
95 PERCENTILE	44		27	

* See REMARKS.

PAMLICO RIVER BASIN

02082506 TAR RIVER BELOW TAR RIVER RESERVOIR NEAR ROCKY MOUNT, NC

LOCATION.--Lat 35°53'58", long 77°51'57", Nash County, Hydrologic Unit 03020101, near center of span on downstream side of bridge on Secondary Road 1544, 1.8 mi downstream from Tar River Reservoir, 2.8 mi downstream from Sapony Creek, 2.9 mi upstream from Grape Branch, and 5.0 mi southwest of Rocky Mount.

DRAINAGE AREA.--777 mi^2.

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

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

REMARKS.--Records fair except those for estimated daily discharges, which are poor. The city of Rocky Mount diverted an average of 14.6 ft^3/s for municipal water supply, most of which was returned as treated effluent below station. National Weather Service gage height telemeter at station. Minimum discharge for period of record, also occurred on Oct. 20, 1981. Minimum discharge for current water year also occurred on Sept. 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	431	326	e335	447	1260	964	5560	1310	2740	220	76	671
2	594	336	e270	671	1070	931	5100	2070	1190	176	89	419
3	e1840	680	e210	1370	931	1170	5040	1970	772	178	104	269
4	e3060	1240	e168	1320	899	1440	4640	1910	954	286	96	209
5	e3610	1560	e380	999	652	1630	4990	1970	761	293	116	178
6	e2510	1070	e720	935	1040	1420	5060	1990	640	217	101	158
7	852	753	e230	990	1470	1090	2620	2080	523	164	93	146
8	568	511	e1060	1550	1100	932	1980	1620	455	142	89	133
9	445	637	e1410	2060	976	850	2200	1030	399	131	236	135
10	369	1020	e2750	2850	1450	796	1470	824	350	119	2600	159
11	332	1670	e2170	2980	2140	797	1260	1300	315	122	e1500	175
12	313	1180	e1800	1760	3160	768	1140	2440	293	117	e720	171
13	286	812	2410	1260	3370	736	1010	1880	286	113	e340	182
14	268	607	3300	1040	1870	646	906	1100	266	183	e270	214
15	255	583	3990	895	1270	642	848	868	246	282	e218	186
16	249	730	4110	820	1120	653	892	741	233	275	239	151
17	243	e1180	2550	785	1530	666	1490	643	228	221	228	131
18	260	e940	1430	750	3000	1180	1300	552	228	194	214	117
19	715	e760	1370	712	4290	1700	1060	494	237	310	189	221
20	2260	e635	1380	704	4310	1650	910	453	197	346	228	256
21	2460	e560	2030	1020	3220	1170	785	403	189	271	203	70
22	1630	e740	857	1390	2260	898	732	404	244	198	175	69
23	981	e990	519	1420	1700	776	740	646	258	154	236	69
24	658	e1380	368	1190	1870	703	763	846	267	125	2380	68
25	511	e1800	362	967	1960	667	718	747	279	112	2750	69
26	433	e2450	240	1100	1550	631	651	595	249	101	2050	69
27	388	e1430	e172	1930	1210	602	593	506	223	92	1310	69
28	364	e880	e148	2910	1030	596	548	581	221	89	911	69
29	344	e620	e158	2380	---	1690	527	1360	221	88	615	69
30	336	e445	e115	1470	---	4600	636	2190	220	84	760	69
31	337	---	282	1330	---	5620	---	2910	---	82	793	---
MEAN	900	951	1203	1355	1847	1246	1872	1240	456	177	643	166
MAX	3610	2450	4110	2980	4310	5620	5560	2910	2740	346	2750	671
MIN	243	326	115	447	652	596	527	403	189	82	76	68
IN.	1.34	1.37	1.79	2.01	2.48	1.85	2.69	1.84	.66	.26	.95	.24

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	295.1	554.0	808.1	1336	1497	1733	1219	825.8	584.7	515.8	379.5	262.9
MAX	1190	1876	2406	2794	2803	3438	2864	2123	2064	2321	1045	1046
(WY)	1973	1973	1973	1978	1983	1989	1987	1989	1982	1975	1973	1974
MIN	64.6	66.2	124.9	186.1	483.1	357.6	284.5	213.2	101.3	67.9	77.9	75.9
(WY)	1981	1981	1981	1981	1977	1981	1981	1976	1986	1986	1988	1988

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	999.2		831.7	
HIGHEST ANNUAL MEAN			1471	1973
LOWEST ANNUAL MEAN			210.7	1981
HIGHEST DAILY MEAN	5620	Mar 31	10900	Apr 30 1978
LOWEST DAILY MEAN	68	Sep 24	39	Oct 19 1981
INSTANTANEOUS PEAK FLOW	5820	Mar 31	11500	Apr 30 1978
INSTANTANEOUS PEAK STAGE	14.46	Mar 31	21.62	Apr 30 1978
INSTANTANEOUS LOW FLOW	67*	Sep 23	35*	Oct 19 1981
ANNUAL RUNOFF (INCHES)	17.5		14.5	
10 PERCENTILE	2290		2070	
50 PERCENTILE	695		384	
95 PERCENTILE	97		81	

* See REMARKS.

PAMLICO RIVER BASIN

02082585 TAR RIVER AT NC 97 AT ROCKY MOUNT, NC

LOCATION.--Lat 35°57'15", long 77°47'15", Edgecombe County, Hydrologic Unit 03020101, on left bank 20 ft downstream from bridge on NC Highway 97, 0.5 mi upstream from Cowlick Branch, and 1.0 mi north-northeast of Rocky Mount.

DRAINAGE AREA.--925 mi^2.

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

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 53.88 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some regulation at low flow caused by mill above station. The city of Rocky Mount diverted an average of 20.6 ft^3/s for municipal water supply, most of which was returned as treated effluent below station. Minimum discharge for period of record and current water year, result of temporary regulation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e513	e388	e410	1020	1350	1100	7160	1360	3140	160	64	1130
2	1010	e400	e320	1230	1180	1070	6330	2430	1390	170	59	657
3	2190	e809	e250	1730	1070	1440	6350	2340	860	222	89	382
4	3640	e1480	e200	1440	1040	1690	5600	2250	1100	315	76	286
5	4300	e1860	e460	1120	865	1830	5770	2250	880	367	101	245
6	2990	e1270	864	1080	1330	1600	5750	2310	732	264	89	202
7	963	e896	274	1110	1550	1220	3640	2330	596	248	79	187
8	673	e608	1260	1720	1200	1070	2170	1850	485	145	73	163
9	498	e758	1680	2300	1090	985	2430	1160	464	157	172	165
10	459	e1210	3270	3130	1780	930	1750	952	414	136	2470	230
11	e395	e1990	2580	3440	2390	927	1350	1270	362	132	1700	231
12	e372	e1400	2140	2070	3530	890	1240	2510	343	127	971	235
13	e340	e966	3550	1390	3870	855	1130	2160	320	123	514	201
14	e319	e722	4620	1160	2260	781	1030	1200	302	186	341	252
15	e303	e694	5400	1030	1400	751	973	963	280	318	290	280
16	e296	e869	5580	942	1240	767	978	835	270	329	246	153
17	e289	e1420	4140	905	1570	789	1450	705	263	387	283	158
18	e309	e1100	2260	869	3080	1450	1390	608	256	554	255	315
19	e851	e900	2040	827	4690	1920	1150	551	269	237	239	82
20	e2690	e780	1940	819	5100	1940	1020	447	248	373	316	289
21	e2930	e670	2770	1280	3990	1350	892	444	197	305	307	96
22	e1940	e900	1600	1620	2800	1050	822	586	256	238	252	31
23	e1170	e1200	1100	1720	1940	911	829	846	308	190	375	49
24	e783	e1600	923	1420	2140	828	840	1000	323	83	2620	77
25	e608	e2100	871	1140	2280	789	792	861	315	109	4440	88
26	e515	e2900	797	1260	1800	754	717	683	286	93	3590	135
27	e462	e1700	270	1990	1360	719	664	596	244	80	2110	28
28	e433	e1050	211	3160	1170	712	608	663	172	76	1640	32
29	e409	e740	221	2820	---	2320	551	1580	206	92	972	46
30	e400	e530	162	1650	---	5680	829	2430	123	78	1290	74
31	e401	---	774	1420	---	6930	---	3250	---	74	1270	---
MEAN	1079	1130	1708	1575	2109	1485	2207	1401	513	205	880	217
MAX	4300	2900	5580	3440	5100	6930	7160	3250	3140	554	4440	1130
MIN	289	388	162	819	865	712	551	444	123	74	59	28
IN.	1.35	1.36	2.13	1.96	2.38	1.85	2.66	1.75	.62	.26	1.10	.26

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	276.4	604.2	846.6	1497	1696	2123	1506	1063	721.5	415.3	420.8	217.8
MAX	1079	1905	1720	3230	3280	4301	3447	2725	2238	1316	977.3	805.1
(WY)	1990	1980	1984	1978	1983	1989	1987	1989	1982	1984	1989	1979
MIN	70.4	74.5	141.9	254.0	546.3	476.9	359.3	258.2	128.0	54.1	79.7	84.3
(WY)	1981	1981	1981	1981	1977	1981	1981	1986	1986	1986	1987	1980

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	1204		945.2	
HIGHEST ANNUAL MEAN			1500	1984
LOWEST ANNUAL MEAN			261.9	1981
HIGHEST DAILY MEAN	7160	Apr 1	12100	May 1 1978
LOWEST DAILY MEAN	28	Sep 27	6.6	Oct 3 1983
INSTANTANEOUS PEAK FLOW	7390	Apr 1	12300	May 1 1978
INSTANTANEOUS PEAK STAGE	17.74	Apr 1	23.66	May 1 1978
INSTANTANEOUS LOW FLOW	8.6	Sep 19	5.7*	Sep 23 1988
ANNUAL RUNOFF (INCHES)	17.7		13.9	
10 PERCENTILE	2670		2350	
50 PERCENTILE	860		437	
95 PERCENTILE	86		73	

* See REMARKS.

PAMLICO RIVER BASIN

02082770 SWIFT CREEK AT HILLIARDSTON, NC

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 northeast of Hilliardston, and 2.8 mi downstream from Gideon Swamp.

DRAINAGE AREA.--166 mi^2.

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

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 130.42 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	261	e135	269	255	188	1000	247	232	e45	e37	80
2	316	611	e128	318	220	178	881	244	156	e45	e35	78
3	343	e400	e125	304	208	218	1250	195	138	e42	e31	e65
4	340	e320	e121	249	204	295	1520	220	247	e39	e30	e58
5	208	e206	119	214	e222	254	1960	253	155	e36	e31	e55
6	126	e148	119	213	e260	203	1110	247	117	e35	e35	e52
7	103	e118	116	271	e208	175	484	227	104	e34	e50	e50
8	93	e116	192	356	e203	158	471	176	96	e33	74	e55
9	88	e139	512	551	e183	152	379	143	90	e33	434	e55
10	83	e193	444	529	e318	151	286	168	87	e31	532	e53
11	80	e186	416	474	e601	148	247	361	93	e34	426	e50
12	78	e151	502	332	e567	144	223	290	102	e51	346	e48
13	77	e128	844	267	453	139	199	213	85	109	102	e47
14	76	e116	847	224	273	134	182	295	81	200	78	e46
15	113	e120	769	202	209	131	182	168	79	202	77	e44
16	151	e156	666	193	217	129	234	142	79	95	e91	e44
17	140	e181	451	185	549	138	244	131	79	72	e89	e43
18	151	e159	377	178	659	439	229	120	78	71	e84	e40
19	180	e130	313	172	1090	361	216	109	77	94	e96	e37
20	192	e118	298	164	862	251	181	102	74	e70	e93	e35
21	258	e114	277	311	489	182	165	101	74	e60	e80	e35
22	167	e110	250	352	379	158	173	109	73	e52	e72	e35
23	139	e330	243	263	378	147	179	195	75	e46	83	e35
24	137	e656	e240	214	438	138	165	235	87	e43	411	e35
25	158	e458	e230	212	365	133	146	173	78	e40	244	e35
26	197	e252	e202	365	263	132	136	133	73	e38	226	e34
27	170	e175	e181	436	215	134	130	139	e54	e35	213	e33
28	146	e160	e166	391	199	133	123	204	e50	e38	145	e33
29	131	e155	163	305	---	529	119	713	e48	e38	105	e32
30	123	e148	175	304	---	1310	176	544	e46	e36	210	e32
31	119	---	206	286	---	1120	---	390	---	e37	98	---
MEAN	154	217	317	294	375	261	433	225	96.9	59.2	150	45.8
MAX	343	656	847	551	1090	1310	1960	713	247	202	532	80
MIN	76	110	116	164	183	129	119	101	46	31	30	32
IN.	1.07	1.46	2.20	2.04	2.35	1.82	2.91	1.57	.65	.41	1.04	.31

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	83.9	116.9	157.4	229.0	294.9	288.7	233.2	159.8	122.9	99.2	88.8	61.5
MAX	419.6	436.4	382.1	500.2	516.3	711.3	774.4	465.9	468.3	469.9	325.9	202.0
(WY)	1972	1986	1973	1987	1983	1989	1987	1984	1979	1975	1986	1974
MIN	9.65	27.8	37.3	59.5	92.6	77.6	72.9	52.8	26.4	12.3	15.8	4.90
(WY)	1971	1982	1966	1981	1968	1988	1981	1981	1981	1981	1977	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	218.0		161.0	
HIGHEST ANNUAL MEAN			289.7	1984
LOWEST ANNUAL MEAN			51.0	1981
HIGHEST DAILY MEAN	1960	Apr 5	4780	May 31 1984
LOWEST DAILY MEAN	30	Aug 4	.60	Sep 25 1968
INSTANTANEOUS PEAK FLOW	2040	Apr 5	6030	Jun 5 1979
INSTANTANEOUS PEAK STAGE	11.76	Apr 5	14.27	Jun 5 1979
INSTANTANEOUS LOW FLOW	NOT DETERMINED		.60	Sep 25 1968
ANNUAL RUNOFF (INCHES)	17.8		13.2	
10 PERCENTILE	442		356	
50 PERCENTILE	158		93	
95 PERCENTILE	36		17	

PAMLICO RIVER BASIN

02082950 LITTLE FISHING CREEK NEAR WHITE OAK, NC

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

DISCHARGE AREA.--177 mi^2.

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

REVISED RECORDS.--WSP 1723: 1960(M). WDR NC-81-1: Drainage area.

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

REMARKS.--Records good except those for estimated daily discharge, which are poor. Maximum discharge for period of record, from rating curve extended above 6,900 ft^3/s on basis of slope-conveyance study of peak flow. Maximum gage height for period of record, from floodmarks.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	73	115	359	196	211	949	274	163	33	35	e88
2	236	75	108	458	176	195	1180	184	123	32	32	e53
3	207	299	107	280	170	238	2020	148	109	29	29	e45
4	113	296	101	213	169	371	1990	139	114	27	27	e45
5	74	165	98	192	315	263	627	155	101	26	26	e42
6	59	118	99	201	263	207	356	169	84	25	27	e38
7	53	105	98	313	202	186	501	192	77	23	114	e36
8	48	102	149	416	212	168	544	134	73	25	313	e44
9	46	118	539	881	179	163	350	113	68	24	157	e42
10	43	170	375	775	502	166	276	140	64	23	645	e38
11	42	139	312	371	769	160	255	434	75	30	e350	e36
12	42	112	469	267	611	155	235	233	67	98	e230	e35
13	41	101	991	218	332	148	210	167	58	126	e89	e35
14	41	96	1190	183	250	141	194	154	53	126	e68	e33
15	41	100	755	169	214	136	198	122	51	151	e62	e31
16	41	121	467	165	237	133	231	110	52	91	e89	e32
17	41	132	402	158	939	140	223	104	52	69	e75	e31
18	46	115	267	154	1400	549	208	95	49	75	e70	e27
19	317	99	223	152	1040	493	201	86	72	66	e84	e24
20	916	93	214	145	900	261	175	79	72	56	e80	e24
21	687	92	198	202	558	202	167	97	54	50	e76	e24
22	227	88	176	236	339	176	202	91	50	46	e64	e24
23	128	530	155	178	380	162	210	202	59	44	e58	e24
24	98	723	192	155	536	153	173	164	65	41	e288	e24
25	87	384	166	194	420	146	155	112	51	38	e604	e24
26	81	207	136	441	272	148	143	97	45	35	e504	e23
27	75	169	146	459	230	164	133	151	40	33	e218	e21
28	71	148	141	274	222	147	124	311	38	33	e110	e20
29	69	139	145	215	---	533	118	765	36	36	e73	e20
30	68	126	158	244	---	1360	217	835	34	35	e92	e20
31	70	---	219	257	---	1120	---	400	---	34	e110	---
MEAN	135	174	287	288	430	284	419	208	68.3	51.0	155	33.4
MAX	916	723	1190	881	1400	1360	2020	835	163	151	645	88
MIN	41	73	98	145	169	133	118	79	34	23	26	20
IN.	.88	1.10	1.87	1.88	2.53	1.85	2.64	1.36	.43	.33	1.01	.21

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	108.3	128.1	164.1	249.0	354.5	325.0	242.7	150.7	107.5	91.4	83.9	52.7
MAX	982.1	860.4	482.2	570.4	742.4	648.0	720.0	549.9	300.3	601.8	330.0	202.4
(WY)	1973	1986	1973	1962	1984	1983	1987	1984	1965	1975	1967	1960
MIN	3.78	12.9	30.8	37.6	92.3	83.0	56.8	50.4	15.1	9.58	4.60	2.34
(WY)	1971	1982	1971	1981	1968	1981	1967	1981	1986	1981	1980	1980

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD		
AVERAGE FLOW	209.7		170.5		
HIGHEST ANNUAL MEAN			326.6		1973
LOWEST ANNUAL MEAN			47.2		1981
HIGHEST DAILY MEAN	2020	Apr 3	15000	Oct 7	1972
LOWEST DAILY MEAN	20	Sep 28	.78	Sep 4	1980
INSTANTANEOUS PEAK FLOW	1490	Feb 18	18000*	Oct 7	1972
INSTANTANEOUS PEAK STAGE	10.84	Feb 18	24.80*	Oct 7	1972
INSTANTANEOUS LOW FLOW	NOT DETERMINED		.72	Sep 5	1980
ANNUAL RUNOFF (INCHES)	16.1		13.1		
10 PERCENTILE	480		372		
50 PERCENTILE	139		82		
95 PERCENTILE	27		10		

* See REMARKS.

PAMLICO RIVER BASIN

02083000 FISHING CREEK NEAR ENFIELD, NC

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

DRAINAGE AREA.--526 mi^2.

PERIOD OF RECORD.--October 1923 to current year. Figures of daily discharge below 250 ft^3/s Oct 1, 1923 to July 3, 1924, below 350 ft^3/s May 30, 1925 to May 31, 1926, below 150 ft^3/s June 1 to Nov. 16, 1926, and below 100 ft^3/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 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 1333: 1928(M), 1932-33, 1935. WDR NC-81-1: Drainage area. See also PERIOD OF RECORD.

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

REMARKS.--No estimated daily discharges. Records good. Slight diurnal fluctuation and some regulation at low flow caused by mills above station. The National Weather Service has telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Apr. 19, 1910 reached a stage of 20.1 ft, present datum (from floodmarks of Seaboard Coast Line Railroad Co.) at site 2,000 ft upstream. Flood of July 24, 1919, reached a stage of 19.6 ft discharge, 20,300 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	223	251	419	679	679	655	3480	703	816	123	75	265
2	570	259	391	997	594	621	3240	642	492	125	73	197
3	858	478	377	974	561	653	3630	544	407	115	66	168
4	696	883	365	748	554	905	4430	489	664	106	61	152
5	459	678	351	635	596	896	5090	546	502	97	59	139
6	309	486	346	608	776	707	4180	571	358	92	57	131
7	250	391	344	718	666	617	2000	558	296	91	66	125
8	220	361	392	875	626	564	1490	464	270	86	335	145
9	202	416	1030	1530	595	536	1170	377	251	86	477	138
10	190	561	1310	2030	859	533	869	359	235	81	755	136
11	181	579	1070	1710	1680	529	757	721	242	81	1220	130
12	176	488	1150	1050	1850	511	701	823	301	97	872	124
13	174	402	2000	746	1430	496	635	536	243	249	455	123
14	171	357	2920	630	955	477	583	571	206	302	232	115
15	170	357	3080	565	719	460	569	443	189	367	207	110
16	171	469	2320	542	656	449	623	366	184	296	231	110
17	170	556	1390	527	1320	449	707	332	183	194	217	106
18	175	502	838	515	2280	874	653	306	184	163	238	95
19	286	411	627	502	3180	1370	635	278	215	222	275	87
20	1240	361	574	488	3440	950	565	254	267	175	268	83
21	1730	342	549	605	2750	661	515	253	230	139	272	81
22	971	328	498	821	1540	563	528	279	183	126	178	81
23	499	778	361	717	1070	512	601	398	189	111	173	83
24	364	1740	278	582	1220	482	548	584	224	97	659	82
25	312	1560	361	557	1260	460	482	446	217	84	1180	84
26	285	890	388	775	939	452	439	346	177	77	1740	82
27	268	624	362	1170	732	472	410	325	154	73	1090	75
28	254	540	362	1020	677	470	385	549	142	89	577	71
29	249	493	353	773	---	760	363	1220	133	90	320	70
30	245	458	398	696	---	2820	417	2020	128	86	291	70
31	247	---	488	752	---	3530	---	1650	---	81	294	---
MEAN	397	567	829	824	1222	788	1356	579	276	136	420	115
MAX	1730	1740	3080	2030	3440	3530	5090	2020	816	367	1740	265
MIN	170	251	278	488	554	449	363	253	128	73	57	70
IN.	.87	1.20	1.82	1.81	2.42	1.73	2.88	1.27	.59	.30	.92	.24

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	264.5	335.2	494.1	706.4	891.9	877.0	715.4	450.5	321.3	312.5	342.6	262.9
MAX	2035	1948	1391	2303	2145	2158	2049	2174	1255	1483	1828	2080
(WY)	1930	1986	1935	1936	1960	1989	1987	1958	1938	1975	1940	1928
MIN	14.0	26.0	46.0	60.4	198.4	248.0	170.2	151.6	70.6	42.8	29.1	14.2
(WY)	1934	1934	1934	1934	1934	1981	1967	1927	1986	1981	1980	1980

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	621.3		496.0	
HIGHEST ANNUAL MEAN			871.3	1984
LOWEST ANNUAL MEAN			147.8	1981
HIGHEST DAILY MEAN	5090	Apr 5	12100	Aug 18 1940
LOWEST DAILY MEAN	57	Aug 6	6.9	Oct 5 1968
INSTANTANEOUS PEAK FLOW	5180	Apr 5	12600	Dec 2 1934
INSTANTANEOUS PEAK STAGE	14.50	Apr 5	17.72	Aug 18 1940
INSTANTANEOUS LOW FLOW	55	Aug 6	NOT DETERMINED	
ANNUAL RUNOFF (INCHES)	16.0		12.8	
10 PERCENTILE	1280		1120	
50 PERCENTILE	450		275	
95 PERCENTILE	80		50	

PAMLICO RIVER BASIN

02083500 TAR RIVER AT TARBORO, NC
(National stream-quality accounting network station)

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 downstream from Fishing Creek, and 49.2 mi upstream from Pamlico River at Washington.

DRAINAGE AREA.--2,183 mi^2.

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. WDR NC-81-1: Drainage area.

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

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some diurnal fluctuation at low flow caused by mills above station. Town of Tarboro diverted 3.9 ft^3/s for municipal water supply. Minimum discharge for period of record, also occurred on Oct. 22, 1933 and Oct. 6, 1968. Minimum discharge for current water year also occurred on Aug. 4, 6 and Sept. 29, 30. National Weather Service gage height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 27, 1919 reached a stage of 34.0 ft, present datum, from floodmarks, discharge, 52,800 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1090	956	2310	2110	e5000	4150	9340	2030	5070	401	243	2100
2	1690	944	2000	2650	e4000	3470	10400	2790	5590	391	229	1850
3	2250	1160	1820	3090	e3450	3330	12100	3600	4640	421	219	1290
4	3640	1830	1640	3680	e2880	3920	13000	3740	3330	419	221	893
5	4490	2530	1540	3630	e3080	4290	13100	3740	2910	472	222	692
6	4930	2980	1510	3190	e3500	4450	12800	3910	2560	507	223	573
7	4080	2490	1660	3030	e3350	4220	12900	3980	2090	454	226	508
8	2100	2040	1340	3190	3190	3610	12800	3850	1660	393	230	434
9	1500	1920	3120	4430	2870	3110	11500	3350	1370	355	289	440
10	1190	2240	4400	5030	3030	2790	9220	2510	1150	286	750	399
11	1010	2720	5790	5680	4130	2570	7430	2090	987	286	2800	467
12	889	3150	6530	6310	4940	2440	5520	2500	857	303	2810	462
13	808	2740	6750	6240	5740	2320	4050	3550	801	313	2330	470
14	736	2210	7320	5460	6510	2210	3340	3360	782	351	1690	396
15	711	1920	8130	4150	6620	2080	2870	2540	712	475	1280	446
16	685	1830	8880	3340	5360	1960	2610	2150	655	618	1020	474
17	638	2090	9570	2790	4600	1940	2530	1870	610	723	840	353
18	671	2220	9930	2540	4300	2360	2950	1630	582	890	768	343
19	1140	2140	9320	2380	5470	3430	3000	1440	612	1350	675	438
20	2320	1920	7600	e2240	6790	4200	2710	1270	649	839	630	324
21	3730	1750	6250	e2200	7750	4550	2510	1090	620	769	723	359
22	4400	1610	5720	e2100	8610	4240	2290	1100	596	644	778	322
23	4240	1700	4400	e2200	8900	3480	2140	1420	624	528	714	231
24	3060	2680	3180	e2460	8530	2820	2100	1870	640	472	1080	223
25	2300	3820	2520	e2980	7800	2390	2070	2070	615	346	3260	223
26	1810	4560	2330	e4460	6970	2130	1930	1960	632	316	4680	227
27	1500	4670	2260	e6000	6070	1960	1750	1660	599	288	5180	264
28	1280	4340	1830	e7000	4850	1850	1610	1530	534	267	4860	237
29	1110	3330	1620	e8000	---	2480	1490	1980	464	257	3700	218
30	1030	2750	1620	e7800	---	5370	1550	3380	432	261	2550	217
31	960	---	1670	e7000	---	7700	---	4280	---	262	2290	---
MEAN	2000	2441	4341	4108	5296	3285	5787	2524	1446	473	1533	529
MAX	4930	4670	9930	8000	8900	7700	13100	4280	5590	1350	5180	2100
MIN	638	944	1340	2100	2870	1850	1490	1090	432	257	219	217
IN.	1.06	1.25	2.29	2.17	2.53	1.74	2.96	1.33	.74	.25	.81	.27

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	1041	1268	2062	3259	4348	4377	3310	1942	1363	1357	1460	1225
MAX	6591	5049	6195	10020	12920	11050	8553	8411	4873	6291	8260	7577
(WY)	1960	1948	1949	1936	1899	1989	1987	1958	1979	1975	1940	1945
MIN	56.7	115.2	191.1	252.5	496.9	1116	819.5	540.9	242.6	192.5	205.9	63.8
(WY)	1934	1934	1934	1934	1934	1981	1981	1981	1986	1986	1983	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	2796		2243	
HIGHEST ANNUAL MEAN			4057	1960
LOWEST ANNUAL MEAN			593.7	1981
HIGHEST DAILY MEAN	13100	Apr 5	36100	Aug 20 1940
LOWEST DAILY MEAN	217	Sep 30	36	Oct 17 1933
INSTANTANEOUS PEAK FLOW	13200	Apr 5	37200	Aug 20 1940
INSTANTANEOUS PEAK STAGE	21.70	Apr 5	31.77	Aug 20 1940
INSTANTANEOUS LOW FLOW	217*	Aug 3	36*	Oct 17 1933
ANNUAL RUNOFF (INCHES)	17.4		14.0	
10 PERCENTILE	6220		5700	
50 PERCENTILE	2190		1240	
95 PERCENTILE	267		209	

* See REMARKS.

PAMLICO RIVER BASIN

02083500 TAR RIVER AT TARBORO, NC--Continued

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 September 1986.
WATER TEMPERATURE: October 1944 to September 1945, October 1953 to September 1954, October 1961 to September 1967, July 1973 to September 1986.

INSTRUMENTATION.--Water-quality monitor from October 1981 to September 1986.

REMARKS.--Station operated as part of NASQAN network from October 1974 to present. Interruptions in the daily record were due to malfunctions of the monitor. Daily records of specific conductance for water years 1954, 1959-64 are available in files of district office in Raleigh, NC. Miscellaneous chemical data published for water years 1944, 1947, 1955-61.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 300 microsiemens Aug 12, 1986; minimum daily, 34 microsiemens Aug. 22, 1967.
WATER TEMPERATURE: Maximum, 33.0°C July 19, 20, 1986; minimum daily, 0.0°C on several days in 1963 and 1966, Jan. 18, 19, 1977, Jan. 18, 1982.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
NOV 29...	1330	3440	83	7.4	10.0	13	764	9.8	K2000	530	5.4	2.3
FEB 01...	1530	3690	90	6.6	10.0	18	766	10.9	390	230	5.4	2.1
MAY 16...	1100	2170	78	6.8	21.0	17	765	7.3	180	120	5.6	2.2
SEP 06...	1430	562	97	7.3	26.0	5.5	765	6.5	K72	K1600	6.1	2.2

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	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)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)
NOV 29...	6.4	34	0.6	3.4	9	7	8.0	9.0	0.20	12	79	--
FEB 01...	6.1	35	0.6	2.4	9	7	8.0	7.5	0.20	10	75	--
MAY 16...	5.9	33	0.5	2.1	20	17	3.3	6.2	<0.10	13	51	0.480
SEP 06...	8.3	39	0.7	3.3	24	20	11	6.7	<0.10	15	66	--

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)
NOV 29...	<0.010	0.280	0.110	0.110	0.14	0.14	0.59	0.70	0.070	0.050	0.040	0.12
FEB 01...	<0.010	0.360	0.100	0.100	0.13	0.13	0.90	1.0	0.080	0.040	0.030	0.09
MAY 16...	0.020	0.500	0.080	0.060	0.10	0.08	0.52	0.60	0.110	0.050	0.050	0.15
SEP 06...	<0.010	0.400	0.030	0.020	0.04	0.03	0.57	0.60	0.150	0.060	0.070	0.21

DATE	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV 29...	200	<1	28	<0.5	<1.0	1	<3	2	540	<1	<4	21
FEB 01...	120	<1	27	<0.5	<1.0	<5	<3	<10	250	40	<4	21
MAY 16...	90	1	22	0.9	1.0	<1	<3	2	390	1	<4	34
SEP 06...	60	1	29	<0.5	1.0	<1	<3	5	940	2	5	60

PAMLICO RIVER BASIN

02083500 TAR RIVER AT TARBORO, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV											
29...	<0.1	<10	1	<1	<1.0	40	<6	6	12	111	79
FEB											
01...	<0.1	<10	<10	<1	<1.0	36	<6	3	37	369	57
MAY											
16...	<0.1	<10	1	<1	<1.0	42	<6	7	20	117	90
SEP											
06...	<0.1	<10	2	<1	<1.0	57	<6	7	17	26	58

PAMLICO RIVER BASIN

02083800 CONETOE CREEK NEAR BETHEL, NC

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

DRAINAGE AREA.--78.1 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 30 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Record good except those for estimated daily discharges, which are fair. Minimum discharge for period of record also occurred on Aug. 29 and Sept. 3, 1980.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	36	68	101	71	93	461	134	74	12	5.2	33
2	e460	34	62	128	66	83	337	108	58	16	4.9	29
3	e450	56	59	109	64	135	282	97	51	13	4.3	26
4	231	70	54	96	61	227	246	112	162	11	4.3	23
5	138	60	52	90	59	177	178	140	144	11	4.1	22
6	104	53	49	88	55	138	140	168	91	11	4.9	20
7	84	49	47	112	53	112	122	135	68	11	5.0	19
8	77	46	90	e180	51	93	113	93	55	10	8.1	18
9	77	56	e450	e440	51	84	100	73	45	9.8	50	17
10	65	96	e580	e310	65	79	89	65	39	9.3	47	16
11	58	76	e540	206	94	71	84	73	34	8.3	21	15
12	51	64	e460	163	84	65	78	66	30	7.8	15	13
13	48	56	e400	130	75	60	69	55	26	7.9	12	12
14	e44	51	e300	107	66	55	63	51	23	30	11	10
15	e42	65	256	96	60	53	61	45	20	54	92	12
16	e40	194	203	88	59	48	58	41	19	18	36	11
17	36	165	162	80	95	48	54	37	19	20	24	11
18	36	117	137	77	92	145	50	33	17	17	19	11
19	49	93	123	73	159	198	47	30	24	14	16	11
20	72	81	138	67	286	146	44	29	19	13	25	11
21	70	79	136	78	199	108	42	31	17	11	19	8.2
22	60	65	123	110	148	86	41	45	16	9.7	15	7.5
23	51	126	102	93	205	73	40	113	21	8.7	67	8.3
24	46	177	90	80	247	63	37	105	23	7.9	286	7.8
25	43	131	83	74	201	54	33	74	18	7.3	129	7.5
26	40	112	82	80	143	49	32	61	15	6.9	85	7.3
27	37	96	83	95	118	45	30	53	14	6.8	77	6.8
28	35	86	78	85	105	41	28	52	13	6.5	59	5.0
29	33	84	76	77	---	144	29	119	12	6.2	47	5.7
30	32	76	76	81	---	544	59	158	10	6.1	43	6.3
31	35	---	80	83	---	569	---	102	---	5.8	39	---
MEAN	86.9	85.0	169	119	108	125	102	80.6	39.2	12.5	41.1	13.7
MAX	460	194	580	440	286	569	461	168	162	54	286	33
MIN	32	34	47	67	51	41	28	29	10	5.8	4.1	5.0
IN.	1.28	1.21	2.50	1.75	1.44	1.85	1.45	1.19	.56	.18	.61	.20

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	53.9	36.4	62.4	116.6	160.7	159.4	99.5	67.8	43.5	39.6	65.0	39.5
MAX	462.4	181.3	217.9	295.8	327.1	281.8	281.6	251.4	274.0	210.4	452.3	328.5
(WY)	1972	1978	1958	1978	1960	1983	1959	1978	1979	1962	1967	1960
MIN	2.82	3.14	3.77	9.96	22.5	17.5	13.2	9.91	5.90	6.43	4.10	2.67
(WY)	1979	1987	1969	1981	1981	1981	1981	1981	1986	1987	1983	1980

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	81.8		78.9	
HIGHEST ANNUAL MEAN			147.7	1960
LOWEST ANNUAL MEAN			12.0	1981
HIGHEST DAILY MEAN	580	Dec 10	2480	Aug 23 1967
LOWEST DAILY MEAN	4.1	Aug 5	.92	Aug 28 1987
INSTANTANEOUS PEAK FLOW	591	Mar 31	2580	Aug 23 1967
INSTANTANEOUS PEAK STAGE	10.58	Mar 31	15.74	Aug 23 1967
INSTANTANEOUS LOW FLOW	3.8	Aug 5	.40*	Aug 28 1980
ANNUAL RUNOFF (INCHES)	14.2		13.7	
10 PERCENTILE	161		191	
50 PERCENTILE	59		35	
95 PERCENTILE	7.3		3.0	

* See REMARKS.

PAMLICO RIVER BASIN

02084472 PAMLICO RIVER AT WASHINGTON, NC

LOCATION.--Lat 35°32'33", long 77°03'43", Beaufort County, Hydrologic Unit 03020104, at bridge on U.S. Highway 17 at Washington, and 0.7 mi downstream from Kennedy Creek.

TIDAL-ELEVATION RECORDS

PERIOD OF RECORD.--March 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 10.0 ft below National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations NGVD.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 3.91 ft September 22, 1989; minimum, 3.70 ft below NGVD, January 4, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2.15 ft November 4; minimum, 2.80 ft below NGVD, December 3.

ELEVATION, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.49	1.25	.26	-.33	.44	.80	1.20	.61	1.24	.36	.96	1.39
2	1.21	1.54	.41	.38	.23	.57	1.18	.54	1.01	.74	1.27	1.19
3	1.14	1.05	-1.98	.18	.35	.56	.76	.72	.71	1.08	1.19	.98
4	1.23	1.54	-.63	.14	-.10	.85	.19	.58	.34	.57	1.00	1.44
5	1.16	1.36	-.01	.09	.36	.89	.88	-.16	.98	.02	.83	1.32
6	.62	.98	.22	.11	.49	.64	.82	-.23	.89	.48	.77	1.12
7	.76	.91	.46	.32	.23	1.27	.53	.52	.21	1.09	.53	.85
8	1.22	.93	1.07	.05	.66	1.13	1.00	.22	.57	.97	.94	1.24
9	.92	.79	1.34	.56	.51	.28	1.16	.22	.20	.39	.94	1.61
10	1.13	.70	1.10	-.06	.19	.55	.78	.41	-.05	-.02	.93	1.15
11	.91	1.19	.96	.59	.90	.42	.38	-.47	.23	.15	.87	1.30
12	.94	.74	1.12	-.03	.30	.37	.48	.84	.76	-.11	.79	1.30
13	.83	1.09	.75	-.32	.76	.38	.94	.34	1.09	.09	.86	1.21
14	.88	.91	1.10	.53	.24	.46	.87	.57	1.01	.61	.64	1.17
15	.98	.81	1.01	.36	.42	.57	.50	.75	1.31	.37	.75	.74
16	.93	.20	.23	.29	.29	.58	.69	.43	1.31	.26	.72	1.30
17	.85	.25	.82	.33	.31	.56	.36	-.08	1.15	.54	.90	1.11
18	.81	.28	.76	.11	.99	-.01	.59	-.31	1.04	.54	.85	1.28
19	.97	.33	.61	.45	.44	.78	1.08	.16	.46	.46	.87	1.14
20	.50	-.30	.53	.23	.77	-.16	.52	.12	.79	.25	.69	.92
21	.52	-.84	.57	-.13	.87	.05	-.10	-.15	.79	.15	1.02	1.52
22	.39	.53	.37	.05	.70	.47	.15	1.27	.84	.19	1.22	1.01
23	.94	-.13	.11	.29	.32	.20	.19	1.23	.53	.44	1.48	.65
24	1.11	.56	-.55	.37	-.80	.79	.07	1.00	.51	.68	1.22	.87
25	1.23	.48	.69	.47	-1.03	.92	.02	.92	1.12	.94	1.39	.89
26	1.28	.19	.58	-.62	.62	.86	.31	.63	1.21	1.05	1.11	.49
27	1.12	.55	.40	.44	.57	1.11	.41	.63	.89	1.12	1.08	.62
28	1.20	.31	.21	.27	.51	1.28	.35	1.61	.77	1.23	1.02	.92
29	1.23	.63	.18	.45	---	1.58	.24	1.00	.47	1.16	.74	.87
30	1.25	.21	.17	-.02	---	.67	.44	1.04	.13	1.20	.94	.75
31	1.12	---	.25	.53	---	1.17	---	1.51	---	.85	1.38	---
TOTAL	30.87	19.04	13.11	6.08	10.54	20.59	16.99	16.47	22.51	17.85	29.90	32.35
MEAN	1.00	.63	.42	.20	.38	.66	.57	.53	.75	.58	.96	1.08
MAX	1.49	1.54	1.34	.59	.99	1.58	1.20	1.61	1.31	1.23	1.48	1.61
MIN	.39	-.84	-1.98	-.62	-1.03	-.16	-.10	-.47	-.05	-.11	.53	.49

WTR YR 1990 TOTAL 236.30 MEAN .65 MAX 1.61 MIN -1.98

PAMLICO RIVER BASIN

0208453500 BATH CREEK AT BATH CREEK, NC

LOCATION.--Lat 35°28'36", long 76°48'54", Beaufort County, Hydrologic Unit 03020104, 0.1 miles below NC 92 at Bath.

TIDAL-ELEVATION RECORDS

PERIOD OF RECORD.--March 1988 to September 1990 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 10 ft above National Geodetic Vertical Datum of 1929, gage readings have been reduced to elevations NGVD.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 3.42 ft September 22, 1989; minimum, 2.17 ft below NGVD, December 3, 1989.

EXTEMES FOR CURRENT YEAR.--Maximum elevation, 1.99 ft May 28; minimum, 2.17 ft below NGVD, December 3.

ELEVATION, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.43	1.31	.32	---	.44	.75	1.23	.82	1.30	.57	1.10	1.40
2	1.21	1.55	.42	---	.26	.58	1.16	.74	1.09	.93	1.33	1.23
3	1.21	1.22	-1.32	---	.33	.59	.82	.90	.78	1.17	1.23	1.03
4	1.30	1.55	-.39	---	.04	.84	.43	.76	.47	.72	1.06	1.47
5	1.18	1.40	.06	.13	.43	.89	.98	.10	1.07	.22	.90	1.36
6	.69	1.05	.27	.18	.51	.65	.90	.09	.96	.63	.82	1.17
7	.78	.95	.45	.36	.32	1.20	.73	.77	.38	1.11	.64	.94
8	1.23	.95	1.07	.18	.64	1.12	1.09	.44	.66	1.02	.99	1.28
9	1.00	.86	1.40	.56	.52	.38	1.14	.44	.36	.54	1.00	1.61
10	1.15	.79	1.24	.13	.26	.57	.79	.55	.16	.17	1.04	1.23
11	.98	1.19	.99	.58	.87	.47	.54	-.05	.46	.29	.97	1.35
12	.99	.80	1.07	.16	.40	.44	.64	.94	.92	.04	.88	1.37
13	.89	1.07	.82	-.10	.73	.45	1.05	.53	1.17	.21	.91	1.28
14	.93	.91	1.07	.53	.28	.50	.99	.77	1.08	.69	.66	1.24
15	.99	.83	.94	.38	.40	.58	.71	.93	1.30	.48	.81	.88
16	.96	.35	.35	.33	.28	.58	.88	.65	1.40	.40	.81	1.37
17	.90	.39	---	.37	.38	.56	.58	.22	1.24	.65	.96	1.22
18	.85	.35	---	.19	.95	.17	.79	.09	1.13	.62	.92	1.35
19	1.04	.38	---	.43	.45	.76	1.16	.42	.64	.56	.94	1.20
20	.67	-.19	---	.29	.72	.10	.63	.37	.95	.37	.80	.99
21	.62	-.54	---	.01	.81	.22	.12	.17	.92	.25	1.11	1.50
22	.50	.52	---	.15	.57	.49	.35	1.44	.97	.34	1.29	1.09
23	.97	.07	---	.31	.25	.27	.39	1.45	.66	.58	1.49	.85
24	1.14	.62	---	.40	-.68	.75	.29	1.10	.71	.82	1.32	1.00
25	1.26	.50	---	.46	-.80	.94	.27	1.01	1.22	1.04	1.42	.96
26	1.31	.26	---	-.37	.54	.90	.51	.73	1.26	1.14	1.20	.62
27	1.16	.53	---	.45	.48	1.10	.60	.76	1.01	1.17	1.16	.74
28	1.24	.35	---	.31	.44	1.25	.53	1.64	.90	1.28	1.10	1.00
29	1.27	.66	---	.42	---	1.46	.47	1.15	.61	1.27	.84	.94
30	1.27	.33	---	.10	---	.79	.64	1.25	.32	1.31	.98	.83
31	1.23	---	---	.53	---	1.19	---	1.56	---	.98	1.38	---
TOTAL	32.35	21.01	---	---	10.82	21.54	21.41	22.74	26.10	21.57	32.06	34.50
MEAN	1.04	.70	---	---	.39	.69	.71	.73	.87	.70	1.03	1.15
MAX	1.43	1.55	---	---	.95	1.46	1.23	1.64	1.40	1.31	1.49	1.61
MIN	.50	-.54	---	---	-.80	.10	.12	-.05	.16	.04	.64	.62

PAMLICO RIVER BASIN

02084540 DURHAM CREEK AT EDWARD, NC

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

DRAINAGE AREA.--26 mi^2.

PERIOD OF RECORD.--Occasional low-flow measurements water years 1950-54, 1956-65. August 1965 to current year. Records of runoff in cubic feet per second per square mile and inches published in WDR NC-78-1 and NC-79-1 are unreliable and should not be used.

REVISED RECORDS.--WDR NC-74-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 0.19 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for estimated daily discharges and those for August to September, which are poor. Runoff affected by ditches and canals above station. Several measurements of water temperature were made during the year. Periods of no flow occur periodically.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	28	17	92	22	23	232	7.0	23	e9.0	0	23
2	169	27	16	113	21	23	173	5.5	20	e8.5	0	21
3	284	30	15	108	20	30	125	5.0	18	e8.0	0	20
4	203	30	15	95	19	35	86	5.7	16	e7.0	0	20
5	128	29	15	83	25	24	58	5.5	e15	e6.0	0	19
6	90	28	16	79	25	17	39	4.6	e14	e5.0	0	18
7	69	26	15	81	23	15	28	3.8	e13	e4.0	.18	17
8	60	25	47	96	22	13	21	3.0	e12	e3.5	1.8	15
9	58	27	99	114	21	12	16	2.3	e11	e3.0	3.2	14
10	52	31	226	104	21	12	13	2.8	e11	2.6	4.4	13
11	46	29	231	88	19	11	17	9.3	e10	1.8	4.4	19
12	41	26	170	76	17	10	23	11	e10	1.4	3.9	17
13	36	24	133	64	16	9.9	18	13	e9.5	1.4	3.2	14
14	33	22	110	54	16	9.5	14	19	e9.0	1.0	4.6	16
15	31	20	92	46	16	9.3	12	16	e8.5	1.3	17	17
16	31	20	80	40	15	9.2	11	15	e8.0	1.8	17	16
17	30	20	69	36	15	9.2	10	12	e7.5	3.4	26	14
18	31	19	62	33	18	22	9.6	12	6.8	3.3	29	13
19	34	18	59	30	23	26	9.1	12	8.7	2.9	22	12
20	35	17	72	27	25	19	8.5	12	9.1	2.6	20	11
21	34	16	75	22	24	16	7.8	13	8.3	2.2	25	9.3
22	32	16	70	21	23	13	8.3	16	8.7	1.7	24	8.5
23	30	20	68	19	26	12	8.8	21	12	1.1	23	7.5
24	29	23	64	18	29	11	8.3	22	14	.68	27	6.4
25	27	24	58	17	28	11	7.1	21	15	.38	37	5.5
26	26	23	57	21	26	11	5.5	19	14	.22	36	4.7
27	25	23	61	22	25	11	4.4	18	13	.15	35	4.0
28	24	23	59	19	24	11	3.7	21	12	.15	29	3.3
29	22	23	59	18	---	32	6.3	31	11	.11	28	2.7
30	21	18	64	20	---	311	7.6	30	e10	.08	27	2.2
31	27	---	75	21	---	286	---	26	---	.02	25	---
MEAN	59.3	23.5	73.2	54.1	21.6	34.3	33.0	13.4	11.9	2.72	15.2	12.8
MAX	284	31	231	114	29	311	232	31	23	9.0	37	23
MIN	21	16	15	17	15	9.2	3.7	2.3	6.8	.02	.00	2.2
IN.	2.63	1.01	3.25	2.40	.86	1.52	1.42	.59	.51	.12	.68	.55

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	25.7	20.4	36.4	62.2	62.7	60.8	38.3	27.3	22.3	16.7	35.1	21.6
MAX	378.4	150.1	91.0	175.9	162.4	146.3	102.5	112.9	132.4	70.4	116.4	147.7
(WY)	1972	1978	1984	1978	1972	1983	1973	1976	1976	1976	1971	1984
MIN	.000	.000	.338	11.1	13.8	10.7	3.90	.330	.001	.034	.000	.000
(WY)	1979	1974	1989	1989	1968	1981	1981	1986	1985	1980	1980	1980

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	29.8		35.7	
HIGHEST ANNUAL MEAN			78.4	1972
LOWEST ANNUAL MEAN			18.8	1985
HIGHEST DAILY MEAN	311	Mar 30	1880	Oct 1 1971
LOWEST DAILY MEAN	0	Aug 1	0	Sep 22 1968
INSTANTANEOUS PEAK FLOW	345	Mar 30	2070	Oct 1 1971
INSTANTANEOUS PEAK STAGE	8.62	Mar 30	13.24	Oct 1 1971
INSTANTANEOUS LOW FLOW	0*	Aug 1	0*	Sep 22 1968
ANNUAL RUNOFF (INCHES)	15.6		18.7	
10 PERCENTILE	71		94	
50 PERCENTILE	19		16	
95 PERCENTILE	1.2		0	

* See REMARKS.

PAMLICO RIVER BASIN

0208455120 SOUTH CREEK NEAR HICKORY POINT, NC

LOCATION.--Lat 35°21'34", long 76°42'39", Beaufort County, Hydrologic Unit 03020104, 0.8 miles east of Gage Point and 1.0 miles west of Hickory Point.

TIDAL-ELEVATION RECORDS

PERIOD OF RECORD.--March 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 10 ft above National Geodetic Vertical Datum of 1929, gage readings have been reduced to elevations NGVD.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 2.99 ft September 22, 1989; minimum, 1.07 ft below NGVD, December 3, 1989, February 25, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1.98 ft December 9; minimum, 1.07 ft below NGVD, December 3, February 25.

ELEVATION, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.37	1.34	.22	-.06	.34	.68	1.12	.71	1.24	.73	1.03	1.36
2	1.17	1.59	.28	.29	.14	.46	1.01	.70	1.02	1.11	1.21	1.12
3	1.20	1.31	---	.08	.21	.51	.82	.83	.68	1.29	1.08	.94
4	1.33	1.59	---	.01	-.06	.79	.43	.60	.45	.84	.91	1.41
5	1.19	1.45	-.06	.00	.44	.79	.86	-.07	1.10	.37	.73	1.28
6	.67	1.10	.12	.08	.40	.57	.71	.08	.92	.80	.61	1.06
7	.79	1.00	32	.24	.24	1.25	.69	.69	.38	1.24	.52	.81
8	1.27	.96	1.06	.11	.53	1.03	1.02	.33	.62	1.14	.85	1.19
9	1.05	.86	1.47	.40	.37	.30	.98	.28	.32	.67	.87	1.47
10	1.16	.87	1.26	.03	.09	.46	.58	.32	.21	.32	.92	1.11
11	.99	1.24	.91	.37	.77	.37	.41	-.07	.58	.44	.83	1.28
12	.99	.85	.95	.10	.38	.33	.57	.77	1.04	.01	.75	1.28
13	.89	1.12	.81	-.10	.54	.35	.92	.36	1.22	.03	.75	1.19
14	.93	.95	1.00	.39	.16	.38	.84	.66	1.10	.48	.54	1.14
15	.99	.86	.78	.25	.23	.43	.59	.81	1.29	.26	.68	.80
16	.95	.37	.40	.21	.05	.39	.76	.51	1.45	.25	.72	1.28
17	.86	.42	.73	.23	.35	.26	.50	.10	1.29	.50	.85	1.20
18	.83	.33	.65	.05	.86	.13	.80	.05	1.16	.48	.82	1.30
19	1.02	.36	.51	.31	.37	.60	1.06	.32	.72	.41	.79	1.06
20	.71	-.23	.48	.18	.68	.14	.49	.23	1.05	.22	.68	.90
21	.62	-.52	.46	-.15	.71	.18	-.02	.07	1.00	.10	1.01	1.39
22	.56	.46	.45	.04	.32	.35	.29	1.38	1.06	.21	1.18	.97
23	1.00	.09	---	.18	.05	.16	.30	1.41	.70	.45	1.32	.82
24	1.20	.50	---	.25	-.65	.68	.19	1.01	.85	.73	1.19	.93
25	1.34	.38	---	.21	---	.88	.21	.94	1.32	.96	1.30	.83
26	1.37	.11	---	-.41	.50	.81	.42	.60	1.34	1.09	1.09	.49
27	1.21	.39	---	.29	.37	1.01	.50	.71	1.11	1.06	1.06	.66
28	1.29	.20	---	.17	.34	1.13	.41	1.59	1.00	1.17	1.00	.89
29	1.33	.54	.04	.22	---	1.36	.39	1.12	.71	1.17	.74	.83
30	1.32	.27	.06	.01	---	.75	.57	1.27	.44	1.18	.91	.72
31	1.28	---	.12	.42	---	1.07	---	1.49	---	.86	1.35	---
TOTAL	32.88	20.76	---	4.40	---	18.60	18.42	19.80	27.37	20.57	28.29	31.71
MEAN	1.06	.69	---	.14	---	.60	.61	.64	.91	.66	.91	1.06
MAX	1.37	1.59	---	.42	---	1.36	1.12	1.59	1.45	1.29	1.35	1.47
MIN	.56	-.52	---	-.41	---	.13	-.02	-.07	.21	.01	.52	.49

PAMLICO RIVER BASIN

0208455145 CAMPBELL CREEK AT CAMPBELL CREEK, NC

LOCATION.--Lat 35°17'13", long 76°41'13", Beaufort County, Hydrologic Unit 03020104, at NC 33 and 0.5 miles southeast of Campbell Creek.

TIDAL-ELEVATION RECORDS

PERIOD OF RECORD.--March 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 10 ft above National Geodetic Vertical Datum of 1929, gage readings have been reduced to elevations NGVD.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximun elevation, 2.71 ft September 21, 1989; minimum, 1.00 ft below NGVD, November 28, 1988, February 25, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2.35 ft December 9; minimum, 1.00 ft below NGVD, February 25.

ELEVATION, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.36	1.30	.33	.06	.39	.74	1.18	.75	1.20	.53	1.11	1.41
2	1.17	1.54	.33	.37	.17	.51	1.04	.78	.96	.91	1.23	1.14
3	1.21	1.26	-.71	.15	.25	.57	.92	.91	.60	1.08	1.09	.99
4	1.36	1.53	-.19	.05	-.03	.88	.54	.63	.40	.62	.95	1.47
5	1.20	1.37	.02	.06	.59	.86	.87	-.07	1.07	.14	.74	1.31
6	.65	1.01	.17	.15	.45	.63	.67	.20	.84	.57	.61	1.07
7	.77	.90	.43	.31	.29	1.45	.80	.76	.29	.99	.56	.83
8	1.29	.87	1.28	.21	.57	1.11	1.08	.36	.53	.88	.89	1.22
9	1.07	.73	1.78	.45	.38	.35	.99	.29	.21	.40	.91	1.49
10	1.16	.79	1.44	.11	.10	.49	.54	.28	.12	.04	---	1.13
11	.96	1.11	1.02	.38	.83	.40	.43	.03	.55	.15	---	1.32
12	.98	.77	1.04	.18	.49	.36	.66	.79	1.00	-.18	---	1.32
13	.86	1.00	.98	.05	.56	.39	.96	.37	1.13	.06	---	1.23
14	.90	.83	1.05	.44	.20	.41	.89	.69	.97	.50	---	1.16
15	.95	.71	.84	.29	.25	.45	.64	.85	1.15	.27	---	.83
16	.89	.27	.56	.26	.02	.38	.82	.54	1.35	.30	---	1.29
17	.79	.46	.83	.27	.41	.21	.56	.12	1.16	.56	---	1.27
18	.78	.31	.76	.09	.95	.20	.95	.13	1.01	.54	---	1.33
19	.95	.41	.64	.39	.46	.61	1.14	.36	.57	.46	---	1.06
20	.70	-.28	.62	.25	.80	.27	.52	.24	.92	.26	---	.90
21	.57	-.38	.54	-.13	.81	.29	.01	.11	.84	.13	---	1.38
22	.52	.54	.69	.09	.29	.36	.36	1.48	.89	.26	---	.97
23	.97	.29	.63	.24	.06	.18	.35	1.53	.51	.48	---	.89
24	1.21	.64	.30	.29	-.53	.76	.22	1.04	.71	.78	---	.97
25	1.33	.47	.66	.21	-.41	.94	.24	.96	1.13	1.03	---	.82
26	1.34	.21	.29	-.31	.60	.86	.46	.56	1.17	1.19	---	.50
27	1.18	.51	.30	.34	.42	1.07	.53	.70	.91	1.11	---	.68
28	1.25	.29	.17	.22	.37	1.17	.43	1.58	.81	1.22	---	.90
29	1.28	.72	.15	.24	---	1.42	.45	1.13	.51	1.24	---	.84
30	1.29	.37	.14	.10	---	.84	.62	1.26	.24	1.22	---	.73
31	1.21	---	.17	.50	---	1.11	---	1.46	---	.89	1.41	---
TOTAL	32.15	20.55	17.26	6.31	9.74	20.27	19.87	20.82	23.75	18.63	---	32.45
MEAN	1.04	.68	.56	.20	.35	.65	.66	.67	.79	.60	---	1.08
MAX	1.36	1.54	1.78	.50	.95	1.45	1.18	1.58	1.35	1.24	---	1.49
MIN	.52	-.38	-.71	-.31	-.53	.18	.01	-.07	.12	-.18	---	.50

PAMLICO RIVER BASIN

0208455500 PAMLICO RIVER AT PAMLICO BEACH, NC

LOCATION.--Lat 35°23'37", long 76°36'22", Beaufort County, Hydrologic Unit 03020104, 0.7 miles northwest of Adams Point at Pamlico Beach.

TIDAL-ELEVATION RECORDS

PERIOD OF RECORD.--March 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 10 ft above National Geodetic Vertical Datum of 1929, gage readings have been reduced to elevations NGVD.

REMARKS.-- Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 2.76 ft September 22, 1989; minimum, 1.20 ft below NGVD, February 25, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1.84 ft May 28; minimum, 1.20 ft below NGVD, February 25.

ELEVATION, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.29	1.31	---	.07	.40	.68	1.15	.74	1.21	.54	1.06	1.37
2	1.13	1.52	---	.35	.22	.51	1.05	.73	1.00	.88	1.24	1.16
3	1.18	1.28	---	.15	.27	.55	.86	.85	.69	1.07	1.11	.98
4	1.28	1.52	---	.09	.07	.79	.55	.69	.45	.66	.95	1.39
5	1.14	1.39	---	.06	.45	.82	.92	.14	1.01	.20	.80	1.30
6	.69	1.06	---	.14	.48	.60	.84	.16	.85	.57	.68	1.11
7	.76	---	---	.29	.33	1.16	.72	.75	.35	.95	.57	.88
8	1.18	---	---	.22	.58	1.04	1.04	.43	.56	.87	.88	1.19
9	1.01	---	---	.48	.46	.39	.99	.38	.31	.47	.91	1.48
10	1.09	---	---	.17	.26	.52	.66	.44	.17	.14	.96	1.16
11	.95	---	---	.48	.80	.43	.49	.05	.49	.22	.89	1.30
12	.95	---	---	.21	.47	.40	.61	.80	.91	-.02	.80	1.30
13	.86	---	---	.04	.64	.41	.91	.45	1.09	.12	.80	1.21
14	.90	---	---	.44	.28	.44	.85	.69	.98	.55	.59	1.18
15	.94	---	---	.32	.34	.50	.64	.83	1.14	.36	.71	.89
16	.91	---	---	.27	.24	.50	.79	.58	1.30	.32	.75	1.29
17	.86	---	---	.28	.40	.45	.54	.23	1.15	.56	.86	1.21
18	.82	---	---	.14	.87	.23	.75	.16	1.02	.53	.85	1.29
19	1.01	---	---	.32	.44	.65	1.02	.39	.64	.49	.82	1.10
20	.78	---	---	.24	.67	.22	.50	.32	.90	.31	.71	.94
21	.67	---	---	-.02	.73	.28	.08	.18	.85	.21	1.03	1.37
22	.56	---	---	.11	.42	.42	.31	1.32	.91	.31	1.20	1.00
23	.95	---	---	.24	.21	.23	.35	1.41	.59	.53	1.34	.86
24	1.13	---	---	.32	-.44	.67	.25	1.02	.72	.78	1.22	.95
25	1.26	---	---	.34	-.51	.89	.27	.94	1.13	.98	1.33	.85
26	1.30	---	---	-.23	.51	.83	.45	.68	1.14	1.09	1.12	.56
27	1.15	---	---	.36	.41	1.00	.53	.73	.93	1.08	1.09	.68
28	1.23	---	---	.23	.38	1.11	.46	1.53	.82	1.16	1.04	.90
29	1.24	---	.27	.32	---	1.26	.45	1.14	.56	1.20	.79	.84
30	1.25	---	.12	.11	---	.80	.59	1.25	.29	1.23	.94	.76
31	1.25	---	.22	.46	---	1.09	---	1.45	---	.92	1.34	---
TOTAL	31.72	---	---	7.00	10.38	19.87	19.62	21.46	24.16	19.28	29.38	32.50
MEAN	1.02	---	---	.23	.37	.64	.65	.69	.81	.62	.95	1.08
MAX	1.30	---	---	.48	.87	1.26	1.15	1.53	1.30	1.23	1.34	1.48
MIN	.56	---	---	-.23	-.51	.22	.08	.05	.17	-.02	.57	.56

PAMLICO RIVER BASIN

0208455600 GOOSE CREEK NEAR LOWLAND, NC

LOCATION.--Lat 35°19'34", long 76°36'35", Beaufort County, Hydrologic Unit 03020104, at end of Secondary Road 1233 and 3.0 northwest of Lowland.

TIDAL-ELEVATION RECORDS

PERIOD OF RECORD.--March 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 10 ft above National Geodetic Vertical Datum of 1929, gage readings have been reduced to elevations NGVD.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 3.11 ft April 13, 1988; minimum, 1.08 ft below NGVD, February 25, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2.19 ft December 9; minimum, 1.08 ft below NGVD, February 25.

ELEVATION, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.35	1.30	.37	.08	.31	.71	1.18	.76	1.21	.59	1.13	1.41
2	1.17	1.52	.37	.34	.13	.51	1.06	.77	.98	.95	1.26	1.17
3	1.23	1.28	-.65	.13	.18	.56	.93	.89	.65	1.11	1.12	1.00
4	1.36	1.52	-.15	.05	-.04	.84	.61	.66	.45	.70	.97	1.46
5	1.20	1.36	.09	.03	.46	.84	.92	.04	1.07	.23	.80	1.34
6	.72	1.02	.24	.12	.40	.62	.78	.22	.85	.61	.65	1.13
7	.81	.92	.45	.27	.26	1.31	.79	.77	.37	1.01	.60	.89
8	1.26	.90	1.20	.21	.52	1.07	1.08	.41	.57	.92	.91	1.24
9	1.07	.77	1.67	.43	.37	.41	1.00	.34	.29	.49	.93	1.51
10	1.14	.81	1.42	.13	.13	.52	.61	.35	.19	.15	1.00	1.18
11	.98	1.12	1.05	.39	.75	.44	.49	.07	.58	.24	.91	1.35
12	.98	.79	1.05	.08	.44	.41	.66	.78	1.00	-.05	.82	1.35
13	.88	1.00	1.00	-.09	.54	.43	.95	.41	1.14	.13	.80	1.25
14	.92	.85	1.09	.27	.20	.45	.87	.70	1.00	.56	.60	1.21
15	.96	.74	.89	.17	.25	.49	.67	.84	1.17	.35	.73	.90
16	.93	.35	.59	.14	.08	.45	.81	.56	1.35	.36	.78	1.34
17	.84	.47	.84	.17	.38	.31	.58	.20	1.19	.59	.89	1.29
18	.81	.33	.75	.03	.86	.24	.88	.17	1.05	.57	.87	1.37
19	1.00	.40	.63	.28	.41	.63	1.09	.38	.66	.50	.83	1.12
20	.76	-.19	.62	.18	.70	.30	.52	.28	.96	.32	.74	.96
21	.64	-.32	.55	-.10	.73	.32	.07	.15	.90	.21	1.07	1.41
22	.57	.51	.60	.08	.30	.41	.36	1.40	.95	.32	1.23	1.03
23	.98	.28	.52	.23	.09	.23	.36	1.48	.59	.54	1.36	.94
24	1.17	.64	.23	.25	-.44	.72	.26	1.03	.77	.82	1.25	1.01
25	1.30	.49	---	.16	-.41	.93	.29	.96	1.18	1.04	1.36	.88
26	1.31	.27	---	-.32	.54	.86	.48	.63	1.19	1.17	1.15	.59
27	1.16	.50	---	.26	.41	1.05	.56	.75	.96	1.12	1.13	.73
28	1.23	.34	---	.14	.37	1.15	.46	1.57	.86	1.22	1.07	.96
29	1.25	.69	---	.18	---	1.33	.46	1.16	.59	1.25	.81	.89
30	1.26	.42	---	.03	---	.85	.62	1.30	.32	1.26	.97	.80
31	1.23	---	.16	.40	---	1.11	---	1.47	---	.95	1.41	---
TOTAL	32.47	21.08	---	4.72	8.92	20.50	20.40	21.50	25.04	20.23	30.15	33.71
MEAN	1.05	.70	---	.15	.32	.66	.68	.69	.83	.65	.97	1.12
MAX	1.36	1.52	---	.43	.86	1.33	1.18	1.57	1.35	1.26	1.41	1.51
MIN	.57	-.32	---	-.32	-.44	.23	.07	.04	.19	-.05	.60	.59

PAMLICO RIVER BASIN

02084557 VAN SWAMP NEAR HOKE, NC

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 east of Hoke.

DRAINAGE AREA.--23 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 20 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for period August to September, which are fair. Several measurements of water temperature were made during the year. No flow occurs periodically. Minimum discharge for current water year also occurred on Aug. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	24	36	68	30	33	113	34	110	.66	.10	13
2	76	21	33	81	29	31	105	29	92	.57	.06	9.6
3	117	32	31	80	28	37	97	25	78	.57	.04	6.9
4	109	36	29	75	27	51	88	38	66	.47	.04	5.0
5	95	32	27	69	27	48	80	45	53	.39	.03	3.7
6	81	28	25	66	27	44	72	45	43	.34	.03	2.6
7	70	25	23	67	26	40	64	40	35	.30	.16	1.9
8	63	24	34	78	25	37	58	33	30	.25	.37	1.3
9	58	35	85	93	24	34	51	28	26	.22	.62	.75
10	50	70	114	90	23	32	46	27	22	.18	.79	.51
11	43	68	113	84	22	29	45	27	18	.14	.63	.52
12	37	61	104	79	21	27	47	23	15	.14	.63	.58
13	32	52	95	72	20	25	42	20	12	.14	.53	.61
14	29	45	88	66	19	24	37	26	10	.24	.49	1.3
15	27	40	82	60	18	22	34	22	8.0	.34	2.0	1.1
16	24	38	76	55	18	21	31	18	6.2	.16	16	.78
17	22	35	69	50	17	20	28	15	5.0	.17	14	.55
18	21	33	64	46	16	44	25	16	3.9	.45	14	.36
19	50	30	59	43	17	58	23	17	5.0	.43	11	.26
20	57	28	64	41	20	53	21	16	4.6	.29	8.7	.15
21	49	26	62	39	19	46	19	15	3.0	.22	22	.14
22	39	24	56	38	19	41	18	15	2.2	.25	19	.14
23	32	35	51	35	39	37	17	45	2.3	.23	16	.14
24	27	52	47	33	48	33	15	46	3.8	.44	15	.14
25	24	50	43	31	47	30	13	36	3.6	.37	15	.14
26	20	46	42	31	43	29	11	30	2.6	.29	55	.09
27	17	42	40	32	39	27	9.6	25	1.9	.31	45	.07
28	15	38	39	31	37	25	8.5	50	1.4	.22	33	.04
29	13	40	38	29	---	43	8.1	122	1.1	.14	25	.04
30	12	39	40	30	---	112	19	134	.87	.14	20	.04
31	20	---	46	30	---	116	---	126	---	.14	16	---
MEAN	44.0	38.3	56.6	55.5	26.6	40.3	41.5	38.3	22.2	.30	11.3	1.75
MAX	117	70	114	93	48	116	113	134	110	.66	55	13
MIN	12	21	23	29	16	20	8.1	15	.87	.14	.03	.04
IN.	2.21	1.86	2.84	2.79	1.20	2.02	2.01	1.92	1.08	.01	.57	.08

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	8.60	19.6	18.5	46.3	46.7	62.5	47.9	34.8	9.54	6.97	12.4	11.6
MAX	44.0	120.6	56.6	123.7	109.6	142.5	101.3	122.4	23.5	55.2	64.8	38.4
(WY)	1990	1978	1990	1978	1983	1983	1983	1978	1977	1989	1986	1984
MIN	.018	.052	.033	.720	10.2	14.2	4.68	.583	.286	.272	.090	.035
(WY)	1979	1979	1989	1989	1989	1981	1985	1985	1985	1982	1983	1980

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	31.5		26.8	
HIGHEST ANNUAL MEAN			51.7	1978
LOWEST ANNUAL MEAN			7.76	1981
HIGHEST DAILY MEAN	134	May 30	385	Nov 7 1977
LOWEST DAILY MEAN	.03	Aug 5	0	Aug 21 1983
INSTANTANEOUS PEAK FLOW	135	May 30	409	Nov 6 1977
INSTANTANEOUS PEAK STAGE	4.25	Mar 30	5.66	Jul 18 1989
INSTANTANEOUS LOW FLOW	.02*	Aug 6	0*	Oct 1 1978
ANNUAL RUNOFF (INCHES)	18.6		15.8	
10 PERCENTILE	73		81	
50 PERCENTILE	27		8.5	
95 PERCENTILE	.14		.03	

* See REMARKS.

NEUSE RIVER BASIN

02084909 SEVENMILE CREEK NEAR EFLAND, NC

LOCATION.--Lat 36°03'56", long 79°08'39", Orange County, Hydrologic Unit 03020201, at culvert on I-85, 1 mile upstream of mouth, and 1.5 miles southeast of Efland.

DRAINAGE AREA.--14.1 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1981 to July 1982. June 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is 560 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharge, which are poor. Maximum discharge from rating curve extended above 350 ft^3/s. Minimum discharge for current water year and period of record, occurs frequently most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	14	4.7	23	14	15	30	11	5.7	3.1	e.84	.15
2	86	14	4.6	17	14	15	40	15	5.1	2.1	e.84	.12
3	13	17	4.7	15	13	33	155	22	5.6	2.3	e.79	.09
4	5.8	13	4.7	14	18	27	24	34	5.3	3.6	e.74	.08
5	4.0	12	4.5	14	19	19	18	27	4.9	3.7	e.72	.08
6	3.8	12	4.6	18	15	17	16	27	4.6	3.5	e.79	.04
7	3.7	14	5.3	18	14	15	27	14	4.8	3.1	e.72	.02
8	3.6	14	13	46	13	14	18	11	4.3	2.8	e.66	0
9	3.6	16	13	30	12	14	15	9.7	4.4	2.7	e.74	0
10	3.8	12	11	21	70	14	14	52	4.2	2.7	e.70	0
11	4.2	10	15	18	36	13	14	22	3.7	3.2	e.60	0
12	4.1	9.2	94	16	22	13	12	13	3.9	1.9	e.59	0
13	4.9	8.4	79	15	17	12	12	11	3.6	1.3	e.59	0
14	4.2	7.9	23	14	16	12	13	9.2	3.6	.92	e.59	0
15	5.3	10	18	13	15	11	101	8.2	3.6	1.0	.54	0
16	6.0	12	19	12	289	11	27	7.3	3.8	1.5	11	0
17	6.8	11	e18	12	86	12	19	6.7	3.6	7.0	4.3	0
18	6.2	9.8	e16	12	26	20	16	6.0	3.8	1.8	.30	0
19	34	7.9	e15	11	42	13	14	5.9	5.1	1.3	e.23	0
20	11	7.5	e14	11	26	12	13	7.0	4.2	1.3	e.22	0
21	7.6	7.8	e13	18	20	11	13	6.9	5.1	1.3	e.22	0
22	e6.6	9.1	e13	16	30	11	13	8.4	7.0	2.3	e.21	.02
23	e6.8	17	e12	13	50	10	12	7.8	6.2	1.2	e.20	.05
24	e7.2	9.7	e12	13	24	9.8	11	6.4	4.3	e1.1	e.20	.05
25	e8.0	7.2	e11	20	19	9.7	10	6.1	2.9	e1.1	e.21	.04
26	e8.6	6.4	e11	120	17	10	9.6	6.2	3.3	e1.0	e.19	.05
27	e9.6	5.8	e10	29	16	9.4	9.0	7.4	4.1	e1.0	e.18	.01
28	e11	5.6	e10	20	16	9.0	8.6	8.4	4.5	e.99	e.19	0
29	e10	5.4	e11	18	---	48	10	43	4.8	e.93	.26	0
30	e12	5.0	e12	17	---	33	13	11	4.9	e.87	.25	0
31	13	---	15	15	---	60	---	7.0	---	e.84	.18	---
MEAN	10.9	10.4	16.5	20.9	34.6	17.2	23.6	14.1	4.50	2.05	.93	.027
MAX	86	17	94	120	289	60	155	52	7.0	7.0	11	.15
MIN	3.6	5.0	4.5	11	12	9.0	8.6	5.9	2.9	.84	.18	0
IN.	.89	.82	1.35	1.71	2.56	1.41	1.87	1.15	.36	.17	.08	0

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	6.42	9.51	9.53	15.8	30.2	25.7	18.4	18.2	4.35	4.49	3.88	2.67
MAX	10.9	13.9	16.5	20.9	46.5	55.6	23.6	36.3	10.6	14.4	8.27	4.66
(WY)	1990	1989	1990	1990	1989	1989	1990	1989	1989	1989	1989	1988
MIN	.450	4.22	2.94	7.63	9.49	4.39	8.37	4.19	1.10	.206	.253	.027
(WY)	1988	1988	1989	1989	1988	1988	1988	1988	1987	1988	1987	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	12.8		*****	
HIGHEST ANNUAL MEAN			19.1	1989
LOWEST ANNUAL MEAN			5.92	1988
HIGHEST DAILY MEAN	289	Feb 16	635	Feb 21 1989
LOWEST DAILY MEAN	0	Sep 8	0	Aug 3 1988
INSTANTANEOUS PEAK FLOW	1180	Feb 16	2150	Feb 21 1989
INSTANTANEOUS PEAK STAGE	8.14	Feb 16	9.40	Feb 21 1989
INSTANTANEOUS LOW FLOW	0*	Sep 8	0*	Aug 6 1987
ANNUAL RUNOFF (INCHES)	12.3		*****	
10 PERCENTILE	24		23	
50 PERCENTILE	9.2		5.0	
95 PERCENTILE	.02		.04	

***** Indicates not enough data, therefore statistic is not computed

* See REMARKS.

NEUSE RIVER BASIN

02085000 ENO RIVER AT HILLSBOROUGH, NC

LOCATION.--Lat 36°04'18", Long 79°05'49", Orange County, Hydrologic Unit 03020201, on left bank 900 ft downstream from bridge on State Highway 86, at Hillsborough, and 2 mi downstream from Sevenmile Creek.

DRAINAGE AREA.--66.0 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1927 to September 1971, October 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 487.44 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Diversions above station of 1.1 ft^3/s by Orange-Alamance Water System, Inc. and 2.3 ft^3/s for municipal supply for town of Hillsborough, part of which is returned below station as treated effluent.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	171	18	26	124	65	69	177	83	44	5.5	4.3	2.1
2	899	25	25	93	61	66	165	373	35	4.7	4.6	2.1
3	230	60	25	65	58	138	847	253	33	3.8	2.5	2.3
4	88	40	21	55	104	140	156	255	30	3.2	2.0	1.9
5	49	29	23	53	162	93	109	191	25	2.5	1.9	1.6
6	34	24	21	83	90	77	87	190	22	2.4	3.6	1.6
7	27	23	22	97	73	68	178	102	22	2.2	2.8	1.7
8	23	24	91	237	63	61	122	73	21	2.3	1.6	1.8
9	20	56	120	212	57	60	89	59	20	2.2	6.2	2.4
10	18	47	76	119	360	59	78	294	18	4.3	2.2	2.6
11	17	33	96	88	272	54	77	166	18	38	1.7	3.0
12	16	28	312	74	132	53	66	90	15	18	1.8	2.1
13	17	25	439	62	94	49	59	69	13	10	2.5	2.1
14	16	23	215	54	80	48	61	59	11	10	2.4	2.2
15	16	27	136	49	71	47	379	50	12	8.3	.86	2.2
16	16	43	131	47	510	47	168	44	20	9.7	60	2.4
17	14	43	94	44	578	56	107	39	17	100	117	2.6
18	24	32	75	43	161	102	87	34	13	25	13	2.0
19	305	27	67	42	240	65	69	30	21	15	6.5	2.5
20	115	24	61	39	170	55	62	29	16	10	3.9	3.9
21	59	23	54	83	114	50	61	27	11	16	2.9	5.8
22	39	26	49	76	119	46	64	41	18	38	5.0	5.7
23	31	144	41	55	312	44	54	46	33	11	4.1	5.6
24	26	94	37	49	154	42	49	33	17	5.5	5.6	5.6
25	23	58	35	93	105	40	45	29	11	3.5	11	5.7
26	20	46	37	438	83	42	41	32	8.6	2.4	9.5	4.1
27	20	39	36	205	76	41	38	51	7.2	1.7	4.2	4.1
28	21	34	37	117	73	37	35	65	6.8	1.7	2.5	4.3
29	20	31	36	93	---	207	36	332	5.6	1.8	6.8	2.9
30	18	27	40	92	---	190	80	123	5.4	1.8	3.5	2.5
31	19	---	51	77	---	282	---	65	---	4.7	2.3	---
MEAN	77.8	39.1	81.6	98.6	158	78.3	122	107	18.3	11.8	9.64	3.05
MAX	899	144	439	438	578	282	847	373	44	100	117	5.8
MIN	14	18	21	39	57	37	35	27	5.4	1.7	.86	1.6
IN.	1.36	.66	1.43	1.72	2.50	1.37	2.06	1.88	.31	.21	.17	.05

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	27.3	45.9	57.5	84.1	114.0	111.1	92.2	54.4	36.6	41.2	36.8	33.7
MAX	181.5	212.6	165.8	326.0	272.9	270.0	263.5	165.4	155.3	358.7	256.5	342.4
(WY)	1930	1986	1946	1936	1960	1929	1936	1931	1938	1938	1939	1945
MIN	.630	.823	3.64	5.16	21.5	29.9	18.8	9.67	1.75	1.28	.846	.283
(WY)	1987	1942	1942	1942	1931	1988	1942	1986	1986	1986	1987	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	66.6		60.9	
HIGHEST ANNUAL MEAN			107.9	1960
LOWEST ANNUAL MEAN			26.3	1988
HIGHEST DAILY MEAN	899	Oct 2	4570	Sep 18 1945
LOWEST DAILY MEAN	.86	Aug 15	.02	Jul 10 1986
INSTANTANEOUS PEAK FLOW	2390	Apr 3	11000	Sep 18 1945
INSTANTANEOUS PEAK STAGE	12.70	Apr 3	20.01	Sep 18 1945
INSTANTANEOUS LOW FLOW	.62	Aug 15	.01	Jul 10 1986
ANNUAL RUNOFF (INCHES)	13.7		12.5	
10 PERCENTILE	161		119	
50 PERCENTILE	39		28	
95 PERCENTILE	2.0		2.5	

NEUSE RIVER BASIN

02085000 ENO RIVER AT HILLSBOROUGH, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1989 to current year.

REMARKS.--Station operated to define water quality as part of a six-county regional surface water-quality assessment. QW data not previously published.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT
OCT												
10...	0900	20	89	6.4	10.0	65	753	8.9	7.1	2.9	4.7	24
NOV												
16...	0930	41	88	6.7	15.0	50	735	7.8	7.5	3.0	5.4	26
DEC												
12...	1000	235	108	6.9	4.5	30	748	12.4	7.5	3.1	9.3	37
JAN												
18...	0930	42	78	5.9	7.0	55	753	11.8	6.1	2.7	5.0	28
FEB												
21...	1545	102	--	7.4	10.0	60	759	9.6	5.1	2.2	4.0	27
MAR												
28...	0830	37	81	7.2	11.0	35	759	10.5	6.7	2.7	5.1	28
APR												
30...	0900	85	80	6.4	17.5	52	746	8.1	6.5	2.6	4.8	27
MAY												
29...	1000	657	72	7.3	17.0	90	71	8.0	4.6	2.0	3.6	27
JUN												
14...	1000	13	85	7.7	20.0	15	748	7.3	7.0	3.0	5.6	28
JUL												
17...	1015	85	82	7.4	23.5	90	756	6.8	6.8	2.7	4.6	25
AUG												
08...	0915	1.8	110	6.5	22.0	55	750	3.8	9.3	3.6	6.2	25
SEP												
07...	1000	1.9	105	6.3	21.5	32	745	5.2	8.9	3.4	6.1	26

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	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)	RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)
OCT												
10...	0.4	2.0	6.0	5.1	0.20	13	70	--	<0.010	0.400	0.040	0.05
NOV												
16...	0.4	2.0	5.0	5.6	0.30	15	68	0.180	0.020	0.200	0.050	0.06
DEC												
12...	0.7	2.0	7.0	15	0.10	12	84	--	0.020	--	0.080	0.10
JAN												
18...	0.4	1.2	5.0	5.2	<0.10	14	--	--	<0.010	0.400	0.040	0.05
FEB												
21...	0.4	1.4	5.0	4.3	0.10	12	62	--	<0.010	0.400	0.040	0.05
MAR												
28...	0.4	1.1	3.7	4.8	<0.10	13	66	--	<0.010	0.200	<0.010	--
APR												
30...	0.4	1.2	2.9	5.5	<0.10	13	55	--	<0.010	0.400	0.020	0.03
MAY												
29...	0.4	1.1	3.4	4.3	<0.10	12	150	0.490	0.010	0.500	0.090	0.12
JUN												
14...	0.4	1.1	3.4	5.0	0.20	16	60	--	<0.010	0.400	0.030	0.04
JUL												
17...	0.4	1.9	3.1	4.0	<0.10	12	62	0.270	0.030	0.300	0.120	0.15
AUG												
08...	0.4	1.9	6.9	6.8	<0.10	13	77	0.290	0.010	0.300	0.110	0.14
SEP												
07...	0.4	1.9	6.5	5.6	<0.10	13	64	0.190	0.010	0.200	0.050	0.06

NEUSE RIVER BASIN

02085000 ENO RIVER AT HILLSBOROUGH, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHATE, 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)
OCT 10...	0.36	0.46	0.40	0.50	0.80	3.5	0.90	0.030	0.09	<0.010	0.030	0.010
NOV 16...	0.25	0.37	0.30	0.40	0.50	2.2	0.60	0.040	0.12	0.020	0.040	0.020
DEC 12...	0.52	0.63	0.60	0.70	--	--	1.1	0.080	0.09	1.20	0.030	0.030
JAN 18...	--	--	0.50	--	--	--	--	0.020	0.06	0.010	0.020	0.020
FEB 21...	0.46	0.27	0.50	0.30	0.90	4.0	0.60	0.030	0.09	0.020	0.030	<0.010
MAR 28...	--	0.39	0.20	0.40	0.40	1.8	0.70	0.020	<0.03	0.010	<0.010	<0.010
APR 30...	0.48	0.17	0.50	0.20	0.90	4.0	0.50	0.050	0.03	<0.010	0.010	<0.010
MAY 29...	2.8	0.62	2.9	0.70	3.4	15	1.3	0.090	0.09	0.070	0.030	0.040
JUN 14...	0.27	0.67	0.30	0.70	0.70	3.1	1.1	0.010	<0.03	0.030	<0.010	<0.010
JUL 17...	0.58	0.41	0.70	0.50	1.0	4.4	0.80	0.120	0.15	0.020	0.050	<0.010
AUG 08...	0.29	0.25	0.40	0.40	0.70	3.1	0.70	0.030	<0.03	0.010	<0.010	<0.010
SEP 07...	0.35	0.35	0.40	0.40	0.60	2.7	0.60	0.040	0.09	<0.010	0.030	<0.010

DATE	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)
OCT 10...	0.03	230	<1	<1	<1	1	1	1500	1	140	<0.10	1
NOV 16...	0.06	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	0.09	--	--	--	--	--	--	--	--	--	--	--
JAN 18...	0.06	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	<0.03	--	--	--	--	--	--	--	--	--	--	--
MAR 28...	<0.03	--	--	--	--	--	--	--	--	--	--	--
APR 30...	<0.03	970	<1	<1	4	1	3	3200	3	220	<0.10	2
MAY 29...	0.12	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	<0.03	90	<1	<1	<1	<1	2	850	1	110	<0.10	1
JUL 17...	<0.03	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	<0.03	160	<1	<1	<1	<1	2	960	1	590	<0.10	1
SEP 07...	<0.03	110	<1	<1	<1	1	2	790	1	350	<0.10	1

NEUSE RIVER BASIN

02085000 ENO RIVER AT HILLSBOROUGH, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	ALDRIN, TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)
OCT 10...	<1	<1	<10	5.2	0.04	<0.001	<0.1	<0.001	<0.001	<0.001	<0.01
NOV 16...	--	--	--	5.3	0.02	--	--	--	--	--	--
DEC 12...	--	--	--	6.8	0.03	--	--	--	--	--	--
JAN 18...	--	--	--	3.1	0.02	--	--	--	--	--	--
FEB 21...	--	--	--	6.1	0.03	--	--	--	--	--	--
MAR 28...	--	--	--	3.6	0.02	--	--	--	--	--	--
APR 30...	<1	<1	<10	4.4	0.03	<0.001	<0.1	<0.001	<0.001	<0.001	<0.01
MAY 29...	--	--	--	9.6	0.03	--	--	--	--	--	--
JUN 14...	<1	<1	<10	3.5	0.02	--	--	--	--	--	--
JUL 17...	--	--	--	7.4	0.03	--	--	--	--	--	--
AUG 08...	<1	<1	<10	4.3	0.04	<0.001	<0.1	<0.001	<0.001	<0.001	<0.01
SEP 07...	<1	<1	<10	4.2	0.01	--	--	--	--	--	--

DATE	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	PCB, TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)
OCT 10...	<0.001	<0.001	<0.001	<0.01	<0.1	<0.10	<0.001	<0.001	<0.001	<0.01	<0.01
NOV 16...	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--
JAN 18...	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	--	--	--	--	--	--	--	--	--	--	--
MAR 28...	--	--	--	--	--	--	--	--	--	--	--
APR 30...	<0.001	<0.001	<0.001	<0.01	<0.1	<0.10	<0.001	<0.001	<0.001	<0.01	<0.01
MAY 29...	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--	--
JUL 17...	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	0.001	<0.001	<0.001	<0.01	<0.1	<0.10	<0.001	<0.001	<0.001	<0.01	<0.01
SEP 07...	--	--	--	--	--	--	--	--	--	--	--

NEUSE RIVER BASIN

02085000 ENO RIVER AT HILLSBOROUGH, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	METHYL PARA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	BENZENE TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)
OCT 10...	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20
NOV 16...	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--
JAN 18...	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	--	--	--	--	--	--	--	--	--	--	--
MAR 28...	--	--	--	--	--	--	--	--	--	--	--
APR 30...	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20
MAY 29...	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--	--
JUL 17...	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20
SEP 07...	--	--	--	--	--	--	--	--	--	--	--

DATE	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	STYRENE TOTAL (UG/L)
OCT 10...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
NOV 16...	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--
JAN 18...	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	--	--	--	--	--	--	--	--	--	--	--
MAR 28...	--	--	--	--	--	--	--	--	--	--	--
APR 30...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
MAY 29...	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--	--
JUL 17...	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
SEP 07...	--	--	--	--	--	--	--	--	--	--	--

NEUSE RIVER BASIN

02085000 ENO RIVER AT HILLSBOROUGH, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)
OCT 10...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
NOV 16...	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--
JAN 18...	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	--	--	--	--	--	--	--	--	--	--	--
MAR 28...	--	--	--	--	--	--	--	--	--	--	--
APR 30...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
MAY 29...	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--	--
JUL 17...	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
SEP 07...	--	--	--	--	--	--	--	--	--	--	--

DATE	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 10...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	20	1.1
NOV 16...	--	--	--	--	--	--	--	--	--	17	1.9
DEC 12...	--	--	--	--	--	--	--	--	--	34	22
JAN 18...	--	--	--	--	--	--	--	--	--	6	0.68
FEB 21...	--	--	--	--	--	--	--	--	--	24	6.6
MAR 28...	--	--	--	--	--	--	--	--	--	6	0.60
APR 30...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	39	9.0
MAY 29...	--	--	--	--	--	--	--	--	--	162	287
JUN 14...	--	--	--	--	--	--	--	--	--	6	0.22
JUL 17...	--	--	--	--	--	--	--	--	--	87	20
AUG 08...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	7	0.03
SEP 07...	--	--	--	--	--	--	--	--	--	6	0.03

NEUSE RIVER BASIN

02085070 ENO RIVER NEAR DURHAM, NC

LOCATION.--Lat 36°04'20", long 78°54'30", Durham County, Hydrologic Unit 03020201, on right bank 275 ft downstream from bridge on U.S. Highway 501, 0.2 mi downstream from Crooked Creek, and 5 mi north of Durham.

DRAINAGE AREA.--141 mi^2.

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

REVISED RECORDS.--WDR NC-72-1: 1968-71(M), 1971(P).

GAGE.--Water-stage recorder. Datum of gage is 270 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 19, 1966, at site 275 ft upstream at datum 2.35 ft higher. Nov. 20, 1966 to Sept. 30, 1967 water-stage recorder and crest-stage gage at present site at datum 0.94 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some regulation during periods of low flow caused by mill 600 ft upstream. Minimum discharge for period of record, also occurred on Aug. 15, 1977. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	243	34	55	244	141	142	578	246	112	e20	3.3	12
2	1310	54	53	229	128	131	346	949	87	e16	3.6	8.2
3	600	127	51	140	122	258	1530	760	79	e13	4.5	6.4
4	192	91	48	113	202	393	464	843	76	e11	4.8	9.1
5	99	62	46	104	392	219	289	588	68	e9.0	4.2	19
6	68	51	46	150	221	168	214	576	61	e20	32	21
7	54	47	44	225	160	144	467	277	55	25	42	20
8	45	46	184	477	135	123	344	173	52	25	17	21
9	39	100	368	594	121	118	223	130	50	27	19	19
10	35	109	199	309	797	118	182	617	47	50	26	17
11	32	71	225	203	785	113	170	522	43	24	20	16
12	31	58	829	160	372	110	148	222	40	58	10	15
13	29	51	1540	130	238	101	129	154	36	35	6.8	16
14	28	46	604	110	184	97	120	130	33	36	7.8	16
15	31	47	361	101	154	90	607	108	50	62	3.5	e15
16	30	71	315	94	768	88	469	99	45	32	115	e13
17	29	90	232	89	1420	106	259	91	44	77	283	e12
18	38	72	167	87	470	252	195	80	41	84	78	e11
19	682	59	142	85	593	162	149	69	42	41	34	e10
20	310	54	131	80	499	118	131	67	42	29	19	e9.8
21	124	51	114	130	300	105	123	67	37	24	12	e9.2
22	78	52	101	168	249	95	125	75	35	39	9.5	e8.6
23	62	367	90	116	625	88	120	106	50	47	11	e8.0
24	52	241	75	100	393	83	103	80	51	24	17	e8.1
25	46	131	76	171	246	79	92	67	36	14	11	8.3
26	41	97	78	1260	181	79	84	67	29	9.4	32	6.8
27	37	83	73	601	157	79	79	107	26	7.0	30	5.9
28	35	71	71	311	152	76	72	129	24	5.7	14	7.0
29	34	67	71	224	---	575	72	923	23	4.7	59	6.9
30	34	61	71	217	---	680	194	387	e21	4.1	56	6.2
31	33	---	78	175	---	748	---	164	---	3.7	27	---
MEAN	145	85.4	211	232	364	185	269	286	47.8	28.3	32.6	12.0
MAX	1310	367	1540	1260	1420	748	1530	949	112	84	283	21
MIN	28	34	44	80	121	76	72	67	21	3.7	3.3	5.9
IN.	1.19	.68	1.72	1.90	2.69	1.51	2.13	2.34	.38	.23	.27	.10

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	55.6	77.6	114.2	186.3	262.2	261.0	177.5	139.2	91.7	79.9	60.9	49.5
MAX	456.4	461.7	405.8	491.3	551.1	625.9	424.4	429.1	411.0	451.9	282.0	311.6
(WY)	1972	1986	1973	1978	1979	1975	1983	1978	1982	1975	1985	1974
MIN	4.77	11.0	19.5	21.4	64.7	67.4	46.2	26.1	6.86	6.35	3.34	.838
(WY)	1964	1970	1981	1981	1968	1988	1985	1986	1986	1977	1977	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	157.2		129.0	
HIGHEST ANNUAL MEAN			244.5	1973
LOWEST ANNUAL MEAN			60.4	1977
HIGHEST DAILY MEAN	1540	Dec 13	6210	Apr 26 1978
LOWEST DAILY MEAN	3.3	Aug 1	.08	Aug 14 1977
INSTANTANEOUS PEAK FLOW	2920	Apr 3	9620	Apr 26 1978
INSTANTANEOUS PEAK STAGE	9.29	Apr 3	19.65	Apr 26 1978
INSTANTANEOUS LOW FLOW	.91	Aug 15	.06*	Aug 14 1977
ANNUAL RUNOFF (INCHES)	15.1		12.4	
10 PERCENTILE	404		271	
50 PERCENTILE	80		54	
95 PERCENTILE	7.3		3.5	

* See REMARKS.

NEUSE RIVER BASIN

02085079 ENO RIVER NEAR WEAVER, NC

LOCATION.--Lat 36°04'19", long 78°51'47", Durham County, Hydrologic Unit 03020201, at bridge on Secondary Road 1004, 1.3 mi above Little River, and 1.5 mi northeast of Weaver.

DRAINAGE AREA.--148 mi².

PERIOD OF RECORD.--Water years 1983 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1982 to September 1985.
WATER TEMPERATURE: October 1982 to September 1985.

INSTRUMENTATION.--Water-quality monitor from October 1982 to September 1985.

REMARKS.--Station operated to define water quality as part of a six-county regional surface water-quality assessment.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 293 microsiemens July 11, 1984, minimum, 32 microsiemens Aug. 18, 1984.
WATER TEMPERATURE: Maximum recorded, 30.5°C Aug. 23, 1983, minimum, 0.0°C on several days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT
OCT												
10...	1015	41	162	7.0	13.5	50	760	9.1	8.6	3.5	18	50
NOV												
16...	1015	80	133	6.8	15.5	55	743	7.6	9.4	4.1	12	38
DEC												
12...	1130	591	123	7.1	4.0	80	754	12.0	8.0	3.3	13	44
JAN												
18...	1100	93	110	6.9	7.5	45	759	11.5	7.2	3.0	9.9	40
FEB												
21...	1345	308	--	7.1	12.0	60	769	10.7	5.8	2.4	6.4	35
MAR												
28...	1100	80	145	7.2	11.5	22	767	10.2	9.4	3.0	14	45
APR												
10...	1230	168	119	7.2	13.0	65	760	9.7	8.2	2.7	11	42
MAY												
30...	0945	376	88	7.0	17.0	90	750	9.3	6.7	2.4	6.0	31
JUN												
14...	1230	28	199	7.6	22.0	20	754	6.7	10	3.4	24	55
22...	1030	--	--	--	--	--	--	--	--	--	--	--
JUL												
17...	1145	22	320	7.5	25.0	65	762	6.2	19	4.1	39	55
AUG												
08...	1045	19	215	7.1	24.0	130	756	5.9	11	3.0	24	54
SEP												
07...	1130	18	375	7.3	23.0	42	750	7.4	15	3.7	45	62

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	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)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)
OCT												
10...	1	2.9	25	8.8	0.30	14	102	1.09	0.010	1.10	0.030	0.04
NOV												
16...	0.8	2.4	12	8.0	0.10	14	91	0.270	0.030	0.300	0.120	0.15
DEC												
12...	1	2.0	10	16	<0.10	12	90	0.470	0.030	0.500	0.070	0.09
JAN												
18...	0.8	1.5	12	7.8	0.10	13	62	--	<0.010	0.700	0.030	0.04
FEB												
21...	0.6	1.5	8.0	5.1	0.10	12	70	0.490	0.010	0.500	0.040	0.05
MAR												
28...	1	1.7	18	12	<0.10	8.4	100	--	<0.010	0.400	<0.010	--
APR												
10...	0.9	1.6	15	9.6	0.10	12	64	--	<0.010	0.500	0.010	0.01
MAY												
30...	0.5	1.5	5.3	6.3	0.10	11	60	0.570	0.030	0.600	0.070	0.09
JUN												
14...	2	2.4	29	14	<0.10	13	110	1.09	0.010	1.10	0.030	0.04
22...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
17...	2	4.1	45	34	0.10	11	194	1.38	0.020	1.40	0.050	0.06
AUG												
08...	2	3.7	28	23	0.20	7.9	132	1.64	0.060	1.70	0.120	0.15
SEP												
07...	3	4.9	52	37	0.20	11	211	2.97	0.030	3.00	0.060	0.08

NEUSE RIVER BASIN

02085079 ENO RIVER NEAR WEAVER, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC 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)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHATE, 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)
OCT												
10...	0.47	0.57	0.50	0.60	1.6	7.1	1.8	0.050	0.15	0.030	0.050	0.040
NOV												
16...	0.38	0.38	0.50	0.50	0.80	3.5	0.81	0.050	0.12	0.040	0.040	0.030
DEC												
12...	0.73	0.94	0.80	1.0	1.3	5.8	1.5	0.110	0.21	0.040	0.070	0.040
JAN												
18...	0.37	--	0.40	--	--	--	--	0.040	0.15	0.040	0.050	0.050
FEB												
21...	1.9	0.47	1.9	0.50	2.4	11	1.0	0.050	0.12	0.030	0.040	0.020
MAR												
28...	--	0.39	0.30	0.40	0.70	3.1	0.80	0.060	0.12	0.030	0.040	0.010
APR												
10...	--	--	<0.20	0.40	--	--	0.90	0.050	0.09	0.020	0.030	0.010
MAY												
30...	0.23	0.55	0.30	0.60	0.90	4.0	1.1	0.110	0.18	0.030	0.060	0.020
JUN												
14...	0.47	0.57	0.50	0.60	1.6	7.1	1.7	0.070	0.18	0.060	0.060	0.050
22...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
17...	0.45	0.63	0.50	0.70	1.9	8.4	2.0	0.090	0.18	0.070	0.060	0.110
AUG												
08...	0.68	0.37	0.80	0.50	2.5	11	2.2	0.090	0.31	0.050	0.100	0.050
SEP												
07...	0.64	0.86	0.70	0.90	3.7	16	3.9	0.090	0.21	0.030	0.070	0.040

DATE	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)
OCT												
10...	0.12	140	<1	2	<1	<1	4	760	3	60	<0.10	3
NOV												
16...	0.09	--	--	--	--	--	--	--	--	--	--	--
DEC												
12...	0.12	--	--	--	--	--	--	--	--	--	--	--
JAN												
18...	0.15	--	--	--	--	--	--	--	--	--	--	--
FEB												
21...	0.06	--	--	--	--	--	--	--	--	--	--	--
MAR												
28...	0.03	--	--	--	--	--	--	--	--	--	--	--
APR												
10...	0.03	630	<1	<1	1	<1	3	1700	1	60	<0.10	1
MAY												
30...	0.06	--	--	--	--	--	--	--	--	--	--	--
JUN												
14...	0.15	370	<1	<1	<1	1	4	920	<1	60	<0.10	1
22...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
17...	0.34	--	--	--	--	--	--	--	--	--	--	--
AUG												
08...	0.15	2700	<1	<1	3	1	7	4000	4	120	<0.10	5
SEP												
07...	0.12	370	<1	<1	<1	2	5	770	2	120	<0.10	3

NEUSE RIVER BASIN

02085079 ENO RIVER NEAR WEAVER, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	ALDRIN, TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)
OCT											
10...	<1	<1	10	5.7	0.07	<0.001	<0.1	<0.001	<0.001	<0.001	<0.01
NOV											
16...	--	--	--	4.6	0.02	--	--	--	--	--	--
DEC											
12...	--	--	--	6.8	0.04	--	--	--	--	--	--
JAN											
18...	--	--	--	3.3	0.03	--	--	--	--	--	--
FEB											
21...	--	--	--	5.6	0.05	--	--	--	--	--	--
MAR											
28...	--	--	--	3.4	0.03	--	--	--	--	--	--
APR											
10...	<1	<1	<10	5.3	0.12	<0.001	<0.1	<0.001	<0.001	<0.001	<0.01
MAY											
30...	--	--	--	8.6	0.03	--	--	--	--	--	--
JUN											
14...	<1	<1	10	4.3	0.05	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
JUL											
17...	--	--	--	5.8	0.06	--	--	--	--	--	--
AUG											
08...	<1	<1	20	6.2	0.08	<0.001	<0.1	<0.001	<0.001	<0.001	0.04
SEP											
07...	<1	2	10	5.2	0.05	--	--	--	--	--	--

DATE	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	PCB, TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)
OCT											
10...	<0.001	<0.001	<0.001	<0.01	<0.1	<0.10	<0.001	<0.001	0.001	<0.01	<0.01
NOV											
16...	--	--	--	--	--	--	--	--	--	--	--
DEC											
12...	--	--	--	--	--	--	--	--	--	--	--
JAN											
18...	--	--	--	--	--	--	--	--	--	--	--
FEB											
21...	--	--	--	--	--	--	--	--	--	--	--
MAR											
28...	--	--	--	--	--	--	--	--	--	--	--
APR											
10...	<0.001	<0.001	<0.001	<0.01	<0.1	<0.10	<0.001	<0.001	<0.001	<0.01	<0.01
MAY											
30...	--	--	--	--	--	--	--	--	--	--	--
JUN											
14...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
JUL											
17...	--	--	--	--	--	--	--	--	--	--	--
AUG											
08...	0.001	<0.001	<0.001	<0.01	<0.1	<0.10	0.001	<0.001	0.005	<0.01	<0.01
SEP											
07...	--	--	--	--	--	--	--	--	--	--	--

NEUSE RIVER BASIN

02085079 ENO RIVER NEAR WEAVER, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	METHYL PARA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	BENZENE TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)
OCT											
10...	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20
NOV											
16...	--	--	--	--	--	--	--	--	--	--	--
DEC											
12...	--	--	--	--	--	--	--	--	--	--	--
JAN											
18...	--	--	--	--	--	--	--	--	--	--	--
FEB											
21...	--	--	--	--	--	--	--	--	--	--	--
MAR											
28...	--	--	--	--	--	--	--	--	--	--	--
APR											
10...	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20
MAY											
30...	--	--	--	--	--	--	--	--	--	--	--
JUN											
14...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
JUL											
17...	--	--	--	--	--	--	--	--	--	--	--
AUG											
08...	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20
SEP											
07...	--	--	--	--	--	--	--	--	--	--	--

DATE	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	STYRENE TOTAL (UG/L)
OCT											
10...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
NOV											
16...	--	--	--	--	--	--	--	--	--	--	--
DEC											
12...	--	--	--	--	--	--	--	--	--	--	--
JAN											
18...	--	--	--	--	--	--	--	--	--	--	--
FEB											
21...	--	--	--	--	--	--	--	--	--	--	--
MAR											
28...	--	--	--	--	--	--	--	--	--	--	--
APR											
10...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
MAY											
30...	--	--	--	--	--	--	--	--	--	--	--
JUN											
14...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
JUL											
17...	--	--	--	--	--	--	--	--	--	--	--
AUG											
08...	<0.20	<0.20	0.30	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
SEP											
07...	--	--	--	--	--	--	--	--	--	--	--

NEUSE RIVER BASIN

02085079 ENO RIVER NEAR WEAVER, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)
OCT											
10...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
NOV											
16...	--	--	--	--	--	--	--	--	--	--	--
DEC											
12...	--	--	--	--	--	--	--	--	--	--	--
JAN											
18...	--	--	--	--	--	--	--	--	--	--	--
FEB											
21...	--	--	--	--	--	--	--	--	--	--	--
MAR											
28...	--	--	--	--	--	--	--	--	--	--	--
APR											
10...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
MAY											
30...	--	--	--	--	--	--	--	--	--	--	--
JUN											
14...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
JUL											
17...	--	--	--	--	--	--	--	--	--	--	--
AUG											
08...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
SEP											
07...	--	--	--	--	--	--	--	--	--	--	--

DATE	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT											
10...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	6	0.66
NOV											
16...	--	--	--	--	--	--	--	--	--	7	1.5
DEC											
12...	--	--	--	--	--	--	--	--	--	71	113
JAN											
18...	--	--	--	--	--	--	--	--	--	6	1.5
FEB											
21...	--	--	--	--	--	--	--	--	--	53	44
MAR											
28...	--	--	--	--	--	--	--	--	--	9	1.9
APR											
10...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	12	5.4
MAY											
30...	--	--	--	--	--	--	--	--	--	150	152
JUN											
14...	--	--	--	--	--	--	--	--	--	12	0.91
22...	--	--	--	--	--	--	--	--	--	--	--
JUL											
17...	--	--	--	--	--	--	--	--	--	32	1.9
AUG											
08...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	98	5.0
SEP											
07...	--	--	--	--	--	--	--	--	--	16	0.78

NEUSE RIVER BASIN

0208521324 LITTLE RIVER AT SECONDARY ROAD 1461 NEAR ORANGE FACTORY, NC

LOCATION.--Lat 36°08'30", long 78°55'10", Durham County, Hydrologic Unit 03020201, at Secondary Road 1461 and 1.8 mi northwest of Orange Factory.

DRAINAGE AREA.--78.2 mi^2.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is 380 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Minimum discharge for period of record also occurred on Aug. 19-29, 1988. Minimum discharge for current water year also occurred on Sept. 23 and 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	20	30	171	84	77	268	159	77	15	3.7	3.6
2	771	21	29	159	78	72	235	623	65	14	3.5	3.1
3	326	66	27	92	74	121	1160	396	61	14	3.2	2.7
4	121	54	27	72	104	174	243	269	57	13	3.1	2.6
5	58	32	26	67	265	104	132	224	51	12	2.5	2.4
6	37	27	26	101	122	85	95	373	47	11	2.5	1.8
7	29	26	26	159	91	74	244	145	45	9.9	7.1	1.6
8	25	25	63	380	79	66	160	99	43	9.5	8.3	1.6
9	24	43	169	371	71	63	98	79	39	8.5	4.6	1.6
10	21	67	95	188	419	63	82	361	65	14	7.0	1.4
11	19	38	111	131	410	61	78	268	57	16	4.8	1.3
12	19	31	623	102	178	57	68	116	39	13	4.5	1.2
13	18	28	996	81	120	54	61	89	34	12	3.2	1.1
14	17	26	326	67	96	53	59	78	31	22	5.0	1.1
15	17	25	203	61	84	53	413	70	57	21	4.1	1.1
16	16	31	189	59	447	51	225	66	64	15	33	1.1
17	15	36	143	56	705	55	114	61	41	92	89	.91
18	15	34	104	57	211	103	89	55	36	63	15	.76
19	218	30	90	54	388	81	74	50	40	21	7.6	.67
20	129	28	81	50	265	64	66	48	32	15	5.6	.66
21	55	27	71	70	150	60	64	47	29	13	4.6	.67
22	34	26	61	98	130	55	65	49	26	10	4.1	.57
23	28	185	106	68	337	51	63	61	26	9.6	6.7	.52
24	24	132	152	59	189	46	56	56	31	7.8	31	.54
25	23	70	140	101	122	44	53	49	25	7.0	9.6	.56
26	21	51	69	800	96	44	50	48	21	6.4	7.7	.56
27	21	42	46	287	88	47	49	68	20	5.6	7.5	.57
28	21	37	44	161	84	43	47	88	18	5.0	7.6	.61
29	20	35	43	124	---	286	46	696	17	4.8	6.1	.61
30	20	31	43	115	---	354	149	216	17	3.8	5.2	.61
31	20	---	45	105	---	386	---	106	---	3.7	4.2	---
MEAN	74.3	44.1	136	144	196	95.1	154	165	40.4	15.7	10.1	1.27
MAX	771	185	996	800	705	386	1160	696	77	92	89	3.6
MIN	15	20	26	50	71	43	46	47	17	3.7	2.5	.52
IN.	1.10	.63	2.00	2.12	2.61	1.40	2.19	2.43	.58	.23	.15	.02

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	32.6	39.3	67.4	91.3	172.4	148.1	116.3	109.2	37.4	40.3	42.9	8.64
MAX	74.3	57.1	135.6	144.1	255.5	318.3	153.5	164.9	64.1	103.5	113.7	17.3
(WY)	1990	1989	1990	1990	1989	1989	1990	1990	1989	1989	1989	1989
MIN	6.12	16.7	13.3	29.0	65.6	30.9	51.5	24.3	7.74	1.59	4.82	1.27
(WY)	1988	1988	1989	1989	1988	1988	1988	1988	1988	1988	1988	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	89.0		*****	
HIGHEST ANNUAL MEAN			105.1	1989
LOWEST ANNUAL MEAN			30.8	1988
HIGHEST DAILY MEAN	1160	Apr 3	2200	Feb 21 1989
LOWEST DAILY MEAN	.52	Sep 23	.00	Aug 19 1988
INSTANTANEOUS PEAK FLOW	1950	Apr 3	4170	Feb 21 1989
INSTANTANEOUS PEAK STAGE	5.80	Apr 3	7.59	Feb 21 1989
INSTANTANEOUS LOW FLOW	.52*	Sep 22	0*	Aug 18 1988
ANNUAL RUNOFF (INCHES)	15.5		*****	
10 PERCENTILE	214		172	
50 PERCENTILE	50		26	
95 PERCENTILE	1.0		.40	

***** Indicates not enough data, therefore statistic is not computed

* See REMARKS.

0208521324 LITTLE RIVER AT SECONDARY ROAD 1461 NEAR ORANGE FACTORY, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1988 to current year.

REMARKS.--Station operated to define the impacts of various land-use development on surface-water quality in the upper Neuse River Basin.

COOPERATION.--Samples for October 26, 1989, April 26, 1990 and August 28, 1990 were collected by the North Carolina Department of Environment, Health and Natural Resouces and analyzed by the U. S. Geological Survey.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT
OCT												
26...	1200	21	83	7.3	11.0	--	--	10.8	--	--	--	--
NOV												
06...	1120	38	87	6.8	11.0	33	754	10.4	7.3	3.1	5.6	27
JAN												
23...	1330	73	68	6.8	8.0	65	754	--	5.9	2.5	5.1	29
MAR												
14...	0955	68	78	6.7	16.5	17	754	10.0	6.1	2.5	5.0	29
29...	1410	443	63	6.8	10.0	55	757	10.9	5.0	2.0	4.1	29
APR												
26...	0930	67	75	7.5	20.0	--	--	9.2	--	--	--	--
MAY												
09...	1140	79	70	6.6	16.5	95	755	9.8	5.2	2.2	3.9	27
29...	1130	982	60	6.5	16.5	170	740	8.7	4.6	2.0	3.2	24
JUN												
28...	1200	24	85	8.0	24.0	22	755	9.2	7.0	2.6	5.1	27
AUG												
28...	1135	7.6	82	7.3	26.0	--	--	7.3	--	--	--	--
SEP												
26...	1430	0.56	100	7.6	19.0	--	747	9.4	9.4	3.8	5.9	23

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	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)	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 TOTAL (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
OCT												
26...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
06...	0.4	2.2	4.0	6.2	0.10	15	53	--	0.100	<0.010	--	--
JAN												
23...	0.4	1.4	6.0	5.4	0.10	13	74	--	0.400	0.020	0.03	0.28
MAR												
14...	0.4	1.0	3.1	4.5	<0.10	11	63	--	0.300	0.020	0.03	0.38
29...	0.4	1.1	6.2	4.3	0.20	9.3	61	--	0.300	0.040	0.05	0.76
APR												
26...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
09...	0.4	1.0	3.9	4.1	<0.10	15	60	--	0.500	0.020	0.03	0.58
29...	0.3	1.8	3.7	3.4	<0.10	7.9	45	--	0.700	0.160	0.21	0.74
JUN												
28...	0.4	1.2	1.7	4.9	0.30	17	60	--	0.400	0.010	0.01	0.29
AUG												
28...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
26...	0.4	2.7	--	6.1	--	--	--	<0.010	<0.100	<0.010	--	--

NEUSE RIVER BASIN

0208521324 LITTLE RIVER AT SECONDARY ROAD 1461 NEAR ORANGE FACTORY, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHATE, TOTAL (MG/L AS PO4)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)
OCT												
26...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
06...	0.50	0.60	2.7	0.030	0.09	0.030	50	<1	--	<1	--	<1
JAN												
23...	0.30	0.70	3.1	0.030	0.09	0.030	400	<1	--	<1	--	<1
MAR												
14...	0.40	0.70	3.1	0.030	0.06	0.020	370	<1	--	<1	--	<1
29...	0.80	1.1	4.9	0.090	0.06	0.020	3600	<1	--	1	--	4
APR												
26...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
09...	0.60	1.1	4.9	0.050	0.09	0.030	600	<1	--	<1	--	1
29...	0.90	1.6	7.1	0.180	0.34	0.110	4000	<1	--	<1	--	4
JUN												
28...	0.30	0.70	3.1	0.040	--	<0.010	140	1	6	<1	<1	<1
AUG												
28...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
26...	0.30	--	--	<0.010	0.03	0.010	--	--	--	--	--	--

DATE	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)
OCT												
26...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
06...	--	<1	1	--	880	--	1	--	30	--	<0.10	--
JAN												
23...	--	1	2	--	1500	--	2	--	50	--	<0.10	--
MAR												
14...	--	<1	4	--	1700	--	1	--	40	--	<0.10	--
29...	--	2	5	--	6700	--	3	--	370	--	<0.10	--
APR												
26...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
09...	--	1	5	--	1900	--	2	--	60	--	<0.10	--
29...	--	2	6	--	6700	--	4	--	610	--	0.10	--
JUN												
28...	40	1	1	8	1400	26000	<1	20	20	780	<0.10	0.01
AUG												
28...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
26...	--	--	--	--	--	--	--	--	--	--	--	--

0208521324 LITTLE RIVER AT SECONDARY ROAD 1461 NEAR ORANGE FACTORY, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	ALDRIN, TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)
OCT												
26...	--	--	--	--	--	--	<0.001	<0.1	<0.001	<0.001	<0.001	<0.01
NOV												
06...	2	<1	<1	<10	--	4.6	--	--	--	--	--	--
JAN												
23...	2	<1	<1	<10	--	5.0	--	--	--	--	--	--
MAR												
14...	1	<1	<1	<10	--	3.0	--	--	--	--	--	--
29...	2	<1	<1	10	--	9.4	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01
APR												
26...	--	--	--	--	--	--	<0.001	<0.1	<0.001	<0.001	<0.001	<0.01
MAY												
09...	1	<1	--	<10	--	6.2	--	--	--	--	--	--
29...	2	<3	<1	20	--	14	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01
JUN												
28...	1	<1	<1	<10	30	3.7	--	--	--	--	--	--
AUG												
28...	--	--	--	--	--	--	<0.001	<0.1	<0.001	<0.001	<0.001	<0.01
SEP												
26...	--	--	--	--	--	3.9	--	--	--	--	--	--

DATE	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	PCB, TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)
OCT											
26...	<0.001	<0.001	<0.001	<0.01	<0.1	<0.10	<0.001	<0.001	0.001	<0.01	<0.01
NOV											
06...	--	--	--	--	--	--	--	--	--	--	--
JAN											
23...	--	--	--	--	--	--	--	--	--	--	--
MAR											
14...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.010	<0.010	<0.010	<0.01	<0.1	<0.10	<0.010	<0.010	<0.010	<0.01	<0.01
APR											
26...	<0.001	<0.001	<0.001	<0.01	<0.1	<0.10	<0.001	<0.001	<0.001	<0.01	<0.01
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.010	<0.010	<0.010	<0.01	<0.1	<0.10	<0.010	<0.010	<0.010	<0.01	<0.01
JUN											
28...	--	--	--	--	--	--	--	--	--	--	--
AUG											
28...	<0.001	<0.001	<0.001	<0.01	<0.1	<0.10	<0.001	<0.001	<0.001	<0.01	<0.01
SEP											
26...	--	--	--	--	--	--	--	--	--	--	--

NEUSE RIVER BASIN

0208521324 LITTLE RIVER AT SECONDARY ROAD 1461 NEAR ORANGE FACTORY, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	METHYL PARA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	BENZENE TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)
OCT											
26...	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20
NOV											
06...	--	--	--	--	--	--	--	--	--	--	--
JAN											
23...	--	--	--	--	--	--	--	--	--	--	--
MAR											
14...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20
APR											
26...	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20
JUN											
28...	--	--	--	--	--	--	--	<0.20	<0.20	<0.20	<0.20
AUG											
28...	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20
SEP											
26...	--	--	--	--	--	--	--	--	--	--	--

DATE	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	STYRENE TOTAL (UG/L)
OCT											
26...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
NOV											
06...	--	--	--	--	--	--	--	--	--	--	--
JAN											
23...	--	--	--	--	--	--	--	--	--	--	--
MAR											
14...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
APR											
26...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
JUN											
28...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	<0.2
AUG											
28...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
SEP											
26...	--	--	--	--	--	--	--	--	--	--	--

NEUSE RIVER BASIN

0208521324 LITTLE RIVER AT SECONDARY ROAD 1461 NEAR ORANGE FACTORY, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)
OCT											
26...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
NOV											
06...	--	--	--	--	--	--	--	--	--	--	--
JAN											
23...	--	--	--	--	--	--	--	--	--	--	--
MAR											
14...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
APR											
26...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
JUN											
28...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
AUG											
28...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
SEP											
26...	--	--	--	--	--	--	--	--	--	--	--

DATE	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT											
26...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--
NOV											
06...	--	--	--	--	--	--	--	--	--	5	0.51
JAN											
23...	--	--	--	--	--	--	--	--	--	16	3.2
MAR											
14...	--	--	--	--	--	--	--	--	--	7	1.3
29...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	148	177
APR											
26...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--
MAY											
09...	--	--	--	--	--	--	--	--	--	13	2.8
29...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	298	790
JUN											
28...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	3	0.19
AUG											
28...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--
SEP											
26...	--	--	--	--	--	--	--	--	--	--	--

NEUSE RIVER BASIN

02085500 FLAT RIVER AT BAHAMA, NC

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

DRAINAGE AREA.--149 mi^2.

WATER DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1333: 1926, 1928(M), 1938, 1946. WDR NC-81-1: Drainage area.

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

REMARKS.--No estimated daily discharges. Records good. Prior to December 1962, some diurnal fluctuation and infrequent regulation at low flow caused by small mill 5 mi upstream. Maximum discharge for period of record, computed on the basis of records for nearby stations (gage height, not determined). Minimum discharge for current water year also occurred on Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	183	37	60	450	157	138	466	272	107	20	5.2	5.3
2	1330	44	58	317	142	129	431	513	83	18	5.2	4.7
3	499	196	58	180	134	194	1430	405	72	16	4.9	3.9
4	168	121	55	149	348	287	393	480	102	14	4.4	3.4
5	102	69	53	141	549	181	245	456	88	13	4.2	3.2
6	71	56	53	201	248	149	188	649	63	12	5.2	3.2
7	56	52	53	290	192	130	494	243	57	10	6.9	2.9
8	48	52	71	843	167	116	337	161	54	10	7.0	2.5
9	43	69	168	762	146	115	210	129	50	10	6.3	2.6
10	38	88	113	335	863	115	173	753	384	9.8	7.1	3.6
11	36	64	142	228	856	109	163	454	143	18	7.3	3.7
12	35	56	748	190	348	103	140	200	72	27	7.0	3.9
13	33	56	1640	158	234	98	120	150	55	18	6.9	3.6
14	31	55	534	129	189	96	113	125	49	27	7.5	2.7
15	30	53	325	117	167	93	701	108	48	48	34	2.6
16	28	53	358	115	446	90	412	98	65	37	18	2.0
17	27	67	234	106	1120	94	228	88	54	29	14	1.8
18	28	60	174	100	358	175	174	77	47	31	10	1.5
19	321	55	159	98	793	139	140	68	46	20	8.1	1.5
20	193	53	139	93	530	108	124	65	47	16	7.1	1.5
21	90	50	124	130	295	105	121	64	37	14	6.2	2.0
22	62	50	90	166	240	99	193	68	33	13	6.2	1.9
23	52	256	85	119	474	90	152	100	35	11	6.8	1.5
24	45	199	77	106	314	84	120	77	43	9.7	31	1.5
25	43	121	69	232	212	80	104	65	32	9.0	22	.90
26	40	92	73	1570	167	79	94	62	27	7.8	76	.80
27	38	77	71	541	154	79	86	78	24	6.8	35	.77
28	38	69	69	285	148	74	79	94	22	6.4	18	.92
29	38	64	67	217	---	459	75	1210	21	6.2	11	.95
30	38	62	77	232	---	599	435	391	19	5.7	7.4	.81
31	38	---	97	196	---	602	---	165	---	5.7	6.1	---
MEAN	123	79.9	197	284	357	162	271	254	66.0	16.1	13.0	2.40
MAX	1330	256	1640	1570	1120	602	1430	1210	384	48	76	5.3
MIN	27	37	53	93	134	74	75	62	19	5.7	4.2	.77
IN.	.95	.60	1.52	2.20	2.49	1.25	2.03	1.96	.49	.12	.10	.02

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	65.8	98.0	134.9	213.2	278.0	270.1	219.6	119.6	79.2	91.4	81.4	73.4
MAX	561.1	489.4	421.1	761.1	669.5	892.6	611.5	573.1	551.4	798.0	430.6	647.4
(WY)	1972	1986	1973	1936	1979	1975	1936	1978	1938	1975	1939	1945
MIN	1.24	.710	1.81	4.29	44.4	72.4	31.1	22.2	7.85	5.16	2.93	.708
(WY)	1942	1934	1934	1934	1931	1967	1942	1927	1986	1966	1977	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	150.9		143.2	
HIGHEST ANNUAL MEAN			285.0	1973
LOWEST ANNUAL MEAN			53.5	1981
HIGHEST DAILY MEAN	1640	Dec 13	9900	Oct 2 1929
LOWEST DAILY MEAN	.77	Sep 27	.27	Sep 24 1968
INSTANTANEOUS PEAK FLOW	2770	Dec 13	20000	Jul 26 1938
INSTANTANEOUS PEAK STAGE	5.60	Dec 13	NOT DETERMINED*	
INSTANTANEOUS LOW FLOW	.68*	Sep 27	.23	Sep 26 1968
ANNUAL RUNOFF (INCHES)	13.8		13.0	
10 PERCENTILE	397		284	
50 PERCENTILE	76		51	
95 PERCENTILE	2.4		3.8	

* See REMARKS.

02085500 FLAT RIVER AT BAHAMA, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1988 to current year.

REMARKS.--Station operated to define the impacts of various land-use development on surface-water quality in the upper Neuse River Basin.

COOPERATION.--Samples for October 16, 1989, April 25, 1990 and August 28, 1990 were collected by the North Carolina Department of Environment, Health and Natural Resources and analyzed by the U.S. Geological Survey.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT
OCT												
16...	1100	28	79	7.3	17.0	--	--	8.2	--	--	--	--
NOV												
06...	1155	56	83	7.2	11.0	55	753	9.4	6.1	2.8	5.7	29
JAN												
24...	1500	106	60	7.9	8.5	50	759	--	5.3	2.3	5.5	--
MAR												
14...	1030	97	73	7.2	16.0	35	754	9.5	5.1	2.1	5.4	34
29...	1545	305	65	6.9	10.0	45	757	10.8	4.5	1.9	5.0	34
APR												
25...	1130	104	69	7.2	19.0	--	--	8.4	--	--	--	--
MAY												
09...	1230	129	67	6.9	16.5	62	755	9.4	4.7	2.1	4.2	30
29...	1245	1940	53	6.8	16.0	110	740	8.4	3.8	1.7	3.0	26
JUN												
28...	1245	30	82	7.5	25.0	45	754	7.0	5.7	2.4	5.4	31
AUG												
28...	1100	18	69	6.9	26.0	--	--	5.3	--	--	--	--
SEP												
25...	1500	0.90	94	7.3	19.5	26	750	6.4	6.2	3.1	6.6	31

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	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)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
OCT												
16...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
06...	0.5	3.0	6.0	7.6	0.10	14	55	0.200	<0.010	--	--	0.40
JAN												
24...	--	1.6	6.0	6.0	<0.10	13	66	0.400	0.040	0.05	0.36	0.40
MAR												
14...	0.5	1.1	<1.0	<0.50	<0.10	10	51	0.200	0.020	0.03	0.18	0.20
29...	0.5	1.3	5.0	5.2	0.20	9.6	55	0.200	0.020	0.03	1.8	1.8
APR												
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
09...	0.4	1.1	4.4	4.5	<0.10	15	62	0.400	0.050	0.06	--	<0.20
29...	0.3	1.5	2.8	3.2	<0.10	7.1	52	0.600	0.120	0.15	0.88	1.0
JUN												
28...	0.5	1.7	2.8	5.6	0.30	16	54	0.400	0.040	0.05	0.26	0.30
AUG												
28...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
25...	0.5	3.1	3.2	7.5	0.20	11	66	<0.100	0.040	0.05	0.46	0.50

NEUSE RIVER BASIN

02085500 FLAT RIVER AT BAHAMA, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHATE, TOTAL (MG/L AS PO4)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT												
16...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
06...	0.60	2.7	0.050	0.09	0.030	140	<1	--	1	--	<1	--
JAN												
24...	0.80	3.5	0.040	0.12	0.040	380	<1	--	<1	--	<1	--
MAR												
14...	0.40	1.8	0.030	0.06	0.020	240	<1	--	<1	--	<1	--
29...	2.0	8.9	0.040	0.06	0.020	3000	<1	--	<1	--	4	--
APR												
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
09...	--	--	0.050	0.12	0.040	620	<1	--	<1	--	<1	--
29...	1.6	7.1	0.160	0.34	0.110	4700	<1	--	<1	--	6	--
JUN												
28...	0.70	3.1	0.060	0.09	0.030	820	1	3	<1	<1	<1	20
AUG												
28...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
25...	--	--	0.010	0.06	0.020	210	<1	--	<1	--	<1	--

DATE	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)
OCT												
16...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
06...	1	2	--	940	--	1	--	50	--	<0.10	--	2
JAN												
24...	1	2	--	1300	--	5	--	20	--	<0.10	--	1
MAR												
14...	<1	2	--	1400	--	2	--	50	--	<0.10	--	2
29...	2	4	--	5000	--	3	--	280	--	0.20	--	2
APR												
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
09...	2	4	--	1200	--	3	--	100	--	<0.10	--	<1
29...	3	7	--	8100	--	8	--	580	--	<0.10	--	3
JUN												
28...	1	2	5	8300	10000	2	<10	100	600	<0.10	0.01	1
AUG												
28...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
25...	1	2	--	980	--	1	--	210	--	<0.10	--	2

NEUSE RIVER BASIN

02085500 FLAT RIVER AT BAHAMA, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	ALDRIN, TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)
OCT												
16...	--	--	--	--	--	<0.001	<0.1	<0.001	<0.001	<0.001	<0.01	<0.001
NOV												
06...	<1	<1	<10	--	5.5	--	--	--	--	--	--	--
JAN												
24...	<1	<1	<10	--	5.1	--	--	--	--	--	--	--
MAR												
14...	<1	<1	<10	--	3.3	--	--	--	--	--	--	--
29...	<1	<1	10	--	8.5	--	--	--	--	--	<0.01	--
APR												
25...	--	--	--	--	--	<0.001	<0.1	<0.001	<0.001	<0.001	<0.01	<0.001
MAY												
09...	<1	--	<10	--	6.1	--	--	--	--	--	--	--
29...	<2	<1	20	--	15	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01	<0.010
JUN												
28...	<1	<1	<10	20	--	--	--	--	--	--	--	--
AUG												
28...	--	--	--	--	--	<0.001	<0.1	<0.001	<0.001	<0.001	<0.01	<0.001
SEP												
25...	<1	<1	<10	--	5.2	--	--	--	--	--	--	--

DATE	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	PCB, TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)
OCT												
16...	<0.001	<0.001	<0.01	<0.1	<0.10	<0.001	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01
NOV												
06...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
24...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
14...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	<0.01	--	--	--	--	--	<0.01	--	<0.01	<0.01
APR												
25...	<0.001	<0.001	<0.01	<0.1	<0.10	<0.001	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01
MAY												
09...	--	--	--	--	--	--	--	--	--	--	--	--
29...	<0.010	<0.010	<0.01	<0.1	<0.10	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01	<0.01
JUN												
28...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
28...	<0.001	<0.001	<0.01	<0.1	<0.10	<0.001	<0.001	0.001	<0.01	<0.01	<0.01	<0.01
SEP												
25...	--	--	--	--	--	--	--	--	--	--	--	--

NEUSE RIVER BASIN

02085500 FLAT RIVER AT BAHAMA, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	MIREX, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	BENZENE TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)
OCT												
16...	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
NOV												
06...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
24...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
14...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	<0.01	--	--	<0.01	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
APR												
25...	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
MAY												
09...	--	--	--	--	--	--	--	--	--	--	--	--
29...	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
JUN												
28...	--	--	--	--	--	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
AUG												
28...	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
SEP												
25...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	METHYL-CHLO-RIDE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)
OCT												
16...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.2
NOV												
06...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
24...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
14...	--	--	--	--	--	--	--	--	--	--	--	--
29...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.2
APR												
25...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.2
MAY												
09...	--	--	--	--	--	--	--	--	--	--	--	--
29...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.2
JUN												
28...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	<0.2	<0.20	<0.20	<0.20	<0.2
AUG												
28...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.2
SEP												
25...	--	--	--	--	--	--	--	--	--	--	--	--

NEUSE RIVER BASIN

02085500 FLAT RIVER AT BAHAMA, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPENE TOTAL (UG/L)
OCT 16...	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
NOV 06...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 24...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 14...	--	--	--	--	--	--	--	--	--	--	--	--
29...	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<5.0	<0.20	<0.20	<0.20
APR 25...	0.30	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
MAY 09...	--	--	--	--	--	--	--	--	--	--	--	--
29...	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
JUN 28...	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
AUG 28...	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
SEP 25...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)
OCT 16...	<0.20	<0.20	<5.0	<5.0	<5.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0	<30.0
NOV 06...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 24...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 14...	--	--	--	--	--	--	--	--	--	--	--	--
29...	<0.20	<0.20	<5.0	<5.0	<5.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0	<30.0
APR 25...	<0.20	<0.20	--	--	--	--	--	--	--	--	--	--
MAY 09...	--	--	--	--	--	--	--	--	--	--	--	--
29...	<0.20	<0.20	--	--	--	--	--	--	--	--	--	--
JUN 28...	<0.20	<0.20	--	--	--	--	--	--	--	--	--	--
AUG 28...	<0.20	<0.20	--	--	--	--	--	--	--	--	--	--
SEP 25...	--	--	--	--	--	--	--	--	--	--	--	--

NEUSE RIVER BASIN

02085500 FLAT RIVER AT BAHAMA, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	CHRY-SENE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	1,2,5,6 -DIBENZ -ANTHRA -CENE TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	4,6-DINITRO -ORTHO-CRESOL TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)
OCT												
16...	<10.0	<5.0	<10.0	<10.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<5.0	<5.0
NOV												
06...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
24...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
14...	--	--	--	--	--	--	--	--	--	--	--	--
29...	<10.0	<5.0	<10.0	<10.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<5.0	<5.0
APR												
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
09...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
28...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
28...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
25...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	HEXA-CHLORO-ETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO-SODI-PHENY-LAMINE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	N-NITRO-SODI-METHY-LAMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)
OCT											
16...	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0
NOV											
06...	--	--	--	--	--	--	--	--	--	--	--
JAN											
24...	--	--	--	--	--	--	--	--	--	--	--
MAR											
14...	--	--	--	--	--	--	--	--	--	--	--
29...	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0
APR											
25...	--	--	--	--	--	--	--	--	--	--	--
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
JUN											
28...	--	--	--	--	--	--	--	--	--	--	--
AUG											
28...	--	--	--	--	--	--	--	--	--	--	--
SEP											
25...	--	--	--	--	--	--	--	--	--	--	--

NEUSE RIVER BASIN

02085500 FLAT RIVER AT BAHAMA, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	PYRENE TOTAL (UG/L)	1,2,4-TRICHLOROBENZENE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)	1,4-DICHLOROBENZENE TOTAL (UG/L)	BIS (2-CHLOROETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLOROETHYL ETHER TOTAL (UG/L)	BIS (2-CHLOROISOPROPYL) ETHER TOTAL (UG/L)	2-CHLORONAPHTHALENE TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L)	2-NITROPHENOL TOTAL (UG/L)
OCT 16...	<5.0	<5.0	<0.20	<0.20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
NOV 06...	--	--	--	--	--	--	--	--	--	--	--
JAN 24...	--	--	--	--	--	--	--	--	--	--	--
MAR 14...	--	--	--	--	--	--	--	--	--	--	--
29...	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
APR 25...	--	--	<0.20	<0.20	--	--	--	--	--	--	--
MAY 09...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	<0.20	<0.20	--	--	--	--	--	--	--
JUN 28...	--	--	<0.20	<0.20	--	--	--	--	--	--	--
AUG 28...	--	--	<0.20	<0.20	--	--	--	--	--	--	--
SEP 25...	--	--	--	--	--	--	--	--	--	--	--

DATE	2,4-DICHLOROPHENOL TOTAL (UG/L)	2,4-DIMETHYLPHENOL TOTAL (UG/L)	2,4,-DINITROPHENOL TOTAL (UG/L)	2,4-DINITROTOLUENE TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	2,6-DINITROTOLUENE TOTAL (UG/L)	4-BROMOPHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLOROPHENYL PHENYL ETHER TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 16...	<5.0	<5.0	<20.0	<5.0	<20.0	<5.0	<5.0	<5.0	<30.0	--	--
NOV 06...	--	--	--	--	--	--	--	--	--	8	1.2
JAN 24...	--	--	--	--	--	--	--	--	--	8	--
MAR 14...	--	--	--	--	--	--	--	--	--	11	2.9
29...	<5.0	<5.0	<20.0	<5.0	<20.0	<5.0	<5.0	<5.0	<30.0	149	123
APR 25...	--	--	--	--	--	--	--	--	--	--	--
MAY 09...	--	--	--	--	--	--	--	--	--	23	8.0
29...	--	--	--	--	--	--	--	--	--	372	1950
JUN 28...	--	--	--	--	--	--	--	--	--	17	1.4
AUG 28...	--	--	--	--	--	--	--	--	--	--	--
SEP 25...	--	--	--	--	--	--	--	--	--	--	--

NEUSE RIVER BASIN

02086000 DIAL CREEK NEAR BAHAMA, NC

LOCATION.--Lat 36°01'36", Long 78°51'24", Durham County, on right bank 0.4 mile upstream from bridge on Secondary Road 1616 and Lake Michie, 1.5 miles northeast of Bahama.

DRAINAGE AREA.--4.71 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1925 to September 1971. August 1989 to current year. Prior to October 1929 published as "at Bahama".

REVISIONS (WATER YEARS).--WSP 1233: 1926-40, 1941-42 (M), 1944-45 (M), 1946-47 (M), 1948-50 (P). WSP 1333: 1931. WSP 1723: Drainage area.

GAGE.--Water-stage recorder and V-notch and sharp-crested weir. Datum of gage is 357.67 ft above mean sea level.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Maximum gage height for period of record, 7.60 ft May 24, 1940 (discharge not determined but probably greater than 3000 cfs). Minimum discharge for period of recort occurs frequently many years.

DISCHARGE, CUBIC FEET PER SECOND, AUGUST TO SEPTEMBER 1989, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	e3.0	.78
2	---	---	---	---	---	---	---	---	---	---	e3.5	.77
3	---	---	---	---	---	---	---	---	---	---	e3.0	.64
4	---	---	---	---	---	---	---	---	---	---	2.8	.44
5	---	---	---	---	---	---	---	---	---	---	2.3	.48
6	---	---	---	---	---	---	---	---	---	---	2.8	.82
7	---	---	---	---	---	---	---	---	---	---	1.8	.80
8	---	---	---	---	---	---	---	---	---	---	1.4	.75
9	---	---	---	---	---	---	---	---	---	---	1.2	.63
10	---	---	---	---	---	---	---	---	---	---	1.7	.56
11	---	---	---	---	---	---	---	---	---	---	2.0	.55
12	---	---	---	---	---	---	---	---	---	---	1.7	.57
13	---	---	---	---	---	---	---	---	---	---	1.5	.57
14	---	---	---	---	---	---	---	---	---	---	1.3	.60
15	---	---	---	---	---	---	---	---	---	---	1.6	.77
16	---	---	---	---	---	---	---	---	---	---	1.5	3.3
17	---	---	---	---	---	---	---	---	---	---	1.4	1.6
18	---	---	---	---	---	---	---	---	---	---	3.3	.88
19	---	---	---	---	---	---	---	---	---	---	2.6	.68
20	---	---	---	---	---	---	---	---	---	---	1.8	.93
21	---	---	---	---	---	---	---	---	---	---	1.3	2.2
22	---	---	---	---	---	---	---	---	---	---	1.6	1.4
23	---	---	---	---	---	---	---	---	---	---	1.4	.90
24	---	---	---	---	---	---	---	---	---	---	1.1	.70
25	---	---	---	---	---	---	---	---	---	---	4.4	2.3
26	---	---	---	---	---	---	---	---	---	---	1.5	14
27	---	---	---	---	---	---	---	---	---	---	1.4	3.0
28	---	---	---	---	---	---	---	---	---	---	1.5	1.7
29	---	---	---	---	---	---	---	---	---	---	1.2	1.3
30	---	---	---	---	---	---	---	---	---	---	1.1	1.6
31	---	---	---	---	---	---	---	---	---	---	.92	---
MEAN	---	---	---	---	---	---	---	---	---	---	1.92	1.54
MAX	---	---	---	---	---	---	---	---	---	---	4.4	14
MIN	---	---	---	---	---	---	---	---	---	---	.92	.44
IN.	---	---	---	---	---	---	---	---	---	---	.47	.36

e Estimated

SUMMARY STATISTICS	FOR AUGUST TO SEPTEMBER 1989		FOR PERIOD OF RECORD	
AVERAGE FLOW			4.18	
HIGHEST ANNUAL MEAN			7.57	1936
LOWEST ANNUAL MEAN			1.83	1932
HIGHEST DAILY MEAN	14	Sep 26	389	May 24 1940
LOWEST DAILY MEAN	.44	Sep 4	0	Oct 1 1925
INSTANTANEOUS PEAK FLOW	43	Sep 26	NOT DETERMINED*	
INSTANTANEOUS PEAK STAGE	2.53	Sep 26	7.60	May 24 1940
INSTANTANEOUS LOW FLOW	.17	Sep 5	0*	Oct 01 1925
ANNUAL RUNOFF (INCHES)	14.7		11.9	
10 PERCENTILE	11		7.8	
50 PERCENTILE	2.9		1.6	
95 PERCENTILE	.10		.04	

* See REMARKS.

NEUSE RIVER BASIN

02086000 DIAL CREEK NEAR BAHAMA, NC

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	1.5	2.2	10	5.2	4.6	12	8.3	4.8	1.0	.13	.27
2	39	2.8	2.2	6.1	4.6	4.5	27	13	4.1	.99	.11	.24
3	9.7	7.6	2.1	4.8	4.7	9.0	70	13	4.0	.82	.10	.23
4	3.8	2.8	2.0	4.4	8.1	7.1	14	13	3.7	.71	.10	.19
5	2.4	2.3	2.1	4.1	8.8	5.3	8.8	18	3.1	.67	.09	.19
6	2.1	2.1	2.0	7.1	5.8	4.8	7.0	24	2.9	.59	.26	.17
7	1.8	2.4	1.9	6.0	5.4	4.3	17	8.2	2.8	.47	.80	.18
8	2.0	2.1	6.9	18	4.7	4.1	9.4	5.6	2.6	.40	.91	.10
9	2.0	5.1	6.3	13	4.6	4.7	7.0	4.5	2.4	.39	.72	.09
10	2.0	3.3	4.5	8.0	22	4.4	6.4	26	3.6	.49	.77	.14
11	1.9	2.4	6.7	6.1	14	4.2	6.3	15	2.3	4.9	.54	.18
12	1.9	2.3	32	5.2	8.1	4.1	5.2	7.2	1.8	5.3	.37	.13
13	1.5	2.3	38	4.4	6.3	4.1	4.8	5.6	1.8	1.4	.30	.12
14	1.3	2.0	14	3.9	5.7	4.0	5.0	4.8	1.7	1.1	.43	.13
15	1.1	2.3	9.3	3.8	5.2	3.8	17	4.0	2.1	1.6	5.8	.11
16	1.1	3.9	9.4	3.7	30	3.8	9.3	3.9	2.3	1.2	.95	.11
17	1.1	2.9	6.4	3.9	25	5.9	6.7	3.5	1.9	1.0	1.0	.08
18	2.0	2.2	5.4	3.8	10	9.5	5.8	3.2	1.7	.88	.55	.08
19	26	2.2	5.2	3.7	21	5.2	5.1	2.8	1.5	.93	.38	.07
20	7.9	2.2	4.9	3.5	12	4.6	5.2	2.8	1.3	.81	.37	e.06
21	3.1	2.2	4.4	5.8	8.2	4.1	5.1	2.8	1.2	.73	.30	e.06
22	2.7	2.6	e3.8	4.4	8.3	3.7	6.5	4.4	1.3	.60	.32	e.06
23	2.3	14	e3.6	3.9	12	3.6	4.4	4.5	1.3	.50	2.4	e.06
24	2.1	6.1	e3.5	3.8	7.8	3.4	3.9	3.1	1.2	1.9	3.9	e.05
25	2.2	4.4	e3.3	7.6	5.9	3.4	3.6	2.9	1.0	.43	1.1	e.05
26	1.9	3.8	e3.2	37	5.3	3.7	3.3	3.1	1.0	.21	2.3	e.05
27	3.0	3.4	e3.1	13	5.2	3.3	3.1	4.9	.95	.17	.95	.05
28	1.2	2.8	e3.0	8.4	5.0	3.1	2.8	5.5	.89	.23	.66	.04
29	1.3	2.6	e2.9	6.7	---	20	3.0	78	.84	.23	.50	.06
30	1.5	2.4	e2.9	6.8	---	15	21	14	.78	.18	.42	.06
31	1.6	---	3.9	6.1	---	19	---	6.7	---	.20	.32	---
MEAN	4.82	3.37	6.49	7.32	9.60	5.95	10.2	10.2	2.10	1.00	.90	.11
MAX	39	14	38	37	30	20	70	78	4.8	5.3	5.8	.27
MIN	1.1	1.5	1.9	3.5	4.6	3.1	2.8	2.8	.78	.17	.09	.04
IN.	1.17	.79	1.57	1.77	2.10	1.44	2.39	2.47	.49	.24	.22	.03

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	1.87	2.90	3.91	5.69	7.87	7.34	6.75	3.61	2.77	2.93	2.62	1.92
MAX	18.1	13.8	11.8	21.8	18.2	15.3	20.3	17.7	12.7	17.9	12.9	19.8
(WY)	1930	1948	1949	1936	1960	1963	1928	1940	1938	1938	1952	1945
MIN	.000	.010	.199	.311	1.34	2.08	1.36	.594	.266	.010	.000	.000
(WY)	1934	1934	1934	1934	1931	1967	1942	1926	1970	1932	1932	1932

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	5.15		4.18	
HIGHEST ANNUAL MEAN			7.57	1936
LOWEST ANNUAL MEAN			1.83	1932
HIGHEST DAILY MEAN	78	May 29	389	May 24 1940
LOWEST DAILY MEAN	.04	Sep 28	0	Oct 1 1925
INSTANTANEOUS PEAK FLOW	258	Apr 3	NOT DETERMINED*	
INSTANTANEOUS PEAK STAGE	3.80	Apr 3	7.60	May 24 1940
INSTANTANEOUS LOW FLOW	.01	Sep 27	0*	Oct 01 1925
ANNUAL RUNOFF (INCHES)	14.7		11.9	
10 PERCENTILE	11		7.8	
50 PERCENTILE	2.9		1.6	
95 PERCENTILE	.10		.04	

* See REMARKS.

NEUSE RIVER BASIN

02086000 DIAL CREEK NEAR BAHAMA, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1989 to current.

REMARKS.--Station operated as part of a reservoir sedimentation study of Lake Michie. Sampling conducted at this station for for the purposes of defining the suspended-sediment loads being carried from the basin into Lake Michie.

COOPERATION.--Records collected in cooperation with the City of Durham and the North Carolina Department of Environmental, Health, and Natural Resources.

WATER QUALITY DATA, JULY 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
SEPT 12...	1200	0.59	119	0.19
NOV 17...	1210	2.6	7	0.05
JAN 12...	1015	5.0	7	0.09
MAR 06...	1035	4.9	6	0.07
MAY 04...	1459	16	36	1.56
JUNE 15...	1100	2.4	14	0.09
JULY 12...	1339	3.3	50	0.45
AUG 23...	1015	0.45	5	0.01
SEPT 27...	1250	0.02	15	0.001

NEUSE RIVER BASIN

02086500 FLAT RIVER AT DAM NEAR BAHAMA, NC

LOCATION.--Lat 36°08'55", long 78°49'43", Durham County, Hydrologic Unit 03020201, on right bank 900 ft downstream from Durham municipal dam, 3 mi southeast of Bahama, and 5 mi upstream from confluence with Eno River.

DRAINAGE AREA.--168 mi^2.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--August 1927 to September 1959, August 1961 to September 1966, October 1982 to September 1990 (discontinued).

REVISED RECORDS.--WDR NC-83-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 256.60 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 19, 1927, datum of gage was 1.30 ft higher.

REMARKS.--No estimated daily discharges. Records good except those below 2.0 ft^3/s, which are fair. Flow regulated by Lake Michie (Station 02086490). An average of 14.1 ft^3/s was diverted above station and 22.1 ft^3/s from Little River for Durham municipal water supply. About 13.1 ft^3/s of treated effluent was returned to tributaries downstream and about 18.6 ft^3/s was diverted to Cape Fear River basin. Minimum discharge for period of record, also occurred on Sept. 4-14, 1938 (result of construction work upstream), Sept. 26-30, 1965 and Oct. 1-3,,5,1988. Minimum discharge for current water year also occurred on Sept. 16-20, 26-30. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.28	63	70	444	206	164	740	481	153	60	.06	.02
2	1360	56	70	537	150	154	541	601	116	68	.06	.03
3	835	55	70	274	168	202	1960	550	99	72	.06	.03
4	290	125	70	205	305	342	638	528	111	72	.06	.03
5	151	79	55	183	756	261	350	590	138	72	.06	.03
6	77	96	69	227	367	205	241	868	66	73	.13	.03
7	55	68	69	398	263	194	500	382	47	75	.09	.02
8	53	68	36	753	224	149	521	204	62	75	.05	.02
9	64	50	69	1170	196	128	292	146	28	40	.07	.02
10	28	103	58	481	708	125	204	581	307	17	.06	.02
11	27	83	169	330	1290	118	206	829	260	33	.05	.02
12	49	33	865	260	517	88	159	294	80	29	.05	.02
13	57	54	2400	205	332	137	146	196	53	58	.05	.02
14	58	62	832	169	261	117	142	158	55	4.2	.05	.02
15	45	71	454	154	225	93	641	137	56	70	.05	.02
16	34	70	449	141	443	100	674	97	74	62	.05	.01
17	59	70	331	132	1520	93	307	95	86	43	.05	.01
18	60	37	246	130	552	183	227	88	65	.14	.05	.01
19	200	6.5	210	125	844	224	185	75	64	.11	.05	.01
20	351	72	200	118	815	144	139	69	64	9.8	.05	.06
21	156	40	154	157	428	98	148	74	62	.21	.05	.07
22	69	17	121	227	324	105	214	71	58	.09	.04	.08
23	62	261	88	188	536	99	206	71	58	.09	.07	.10
24	58	332	85	117	439	85	140	68	58	.08	.05	.13
25	52	178	73	194	266	101	106	50	67	.06	.15	.04
26	64	117	59	1720	223	115	116	57	72	.06	.05	.02
27	64	90	83	891	203	86	92	92	72	.07	.03	.01
28	24	77	60	427	211	95	68	129	68	.06	.03	.01
29	3.6	66	74	315	---	422	82	1440	62	.06	.04	.01
30	50	70	102	284	---	910	407	697	60	.07	.03	.01
31	63	---	132	253	---	711	---	259	---	.06	.02	---
MEAN	146	85.6	252	362	456	195	346	322	87.4	30.1	.057	.031
MAX	1360	332	2400	1720	1520	910	1960	1440	307	75	.15	.13
MIN	.28	6.5	36	117	150	85	68	50	28	.06	.02	.01

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	60.8	97.8	137.6	219.9	299.1	296.8	260.1	121.7	79.0	90.1	90.8	77.7
MAX	529.7	495.6	421.1	758.5	614.3	874.7	681.0	385.1	491.1	795.4	481.4	713.7
(WY)	1930	1986	1949	1937	1948	1989	1936	1989	1938	1938	1939	1945
MIN	.046	.042	.158	.271	9.19	62.6	13.8	.313	.202	.155	.043	.031
(WY)	1988	1988	1966	1966	1934	1931	1985	1986	1986	1966	1988	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	188.7		151.6	
HIGHEST ANNUAL MEAN			258.8	1936
LOWEST ANNUAL MEAN			47.4	1988
HIGHEST DAILY MEAN	2400	Dec 13	10500	Oct 2 1929
LOWEST DAILY MEAN	.01	Sep 16	0	Sep 4 1938
INSTANTANEOUS PEAK FLOW	3350	Dec 13	19700	Jul 26 1938
INSTANTANEOUS PEAK STAGE	9.28	Dec 13	19.50	Jul 26 1938
INSTANTANEOUS LOW FLOW	.01*	Sep 15	0*	Sep 3 1938
ANNUAL RUNOFF (INCHES)	15.3		12.3	
10 PERCENTILE	508		323	
50 PERCENTILE	86		61	
95 PERCENTILE	.02		.19	

* See REMARKS.

NEUSE RIVER BASIN

02086500 FLAT RIVER AT DAM NEAR BAHAMA, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956, 1983 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1982 to September 1985.
WATER TEMPERATURE: October 1982 to September 1985.

INSTRUMENTATION.--Water-quality monitor from October 1982 to September 1985.

REMARKS.--Station operated to define water quality as part of a six-county regional surface water-quality assessment.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 112 microsiemens Sept. 22, 1985; minimum, 39 microsiemens Apr. 23, 1983.
WATER TEMPERATURE: Maximum recorded, 32.5°C Aug. 23, 1983; minimum recorded, 1.0°C Dec. 7, 1984.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT
OCT												
10...	1330	27	69	6.6	18.5	110	--	3.7	5.1	2.1	3.9	26
NOV												
16...	1130	70	75	7.0	14.5	55	743	5.8	5.4	2.4	4.8	28
DEC												
12...	1200	542	78	7.1	7.0	60	753	11.0	5.4	2.3	4.7	28
JAN												
18...	1230	129	70	7.3	6.0	110	758	12.3	4.7	2.2	4.8	31
FEB												
21...	1430	397	100	7.2	12.0	100	766	8.7	4.1	1.8	3.9	30
MAR												
28...	1215	96	66	8.0	14.0	28	756	10.4	4.8	1.9	5.1	34
APR												
10...	1315	220	58	7.2	12.5	35	758	9.0	4.0	1.7	4.0	31
MAY												
29...	1330	2420	65	6.6	19.0	55	743	8.5	3.8	1.7	3.4	29
JUN												
20...	0845	64	62	6.2	15.0	99	751	3.5	4.7	2.0	4.0	28
JUL												
17...	1230	75	79	7.1	24.0	55	763	3.6	5.2	2.4	4.6	28
AUG												
08...	1200	0.05	95	7.3	26.0	32	757	6.0	8.8	2.9	5.1	23
SEP												
07...	1240	0.00	105	6.9	25.5	27	750	8.2	9.4	2.9	5.3	23

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	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)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)
OCT												
10...	0.4	2.6	5.0	5.1	0.20	10	53	0.190	0.010	0.200	0.220	0.28
NOV												
16...	0.4	2.3	5.0	5.2	0.10	12	56	0.080	0.020	0.100	0.220	0.28
DEC												
12...	0.4	2.4	5.0	5.5	0.10	11	56	0.080	0.020	0.100	0.270	0.35
JAN												
18...	0.5	1.8	8.0	5.9	<0.10	11	--	0.038	0.020	0.400	0.110	0.14
FEB												
21...	0.4	1.8	7.0	4.6	0.10	10	66	0.380	0.020	0.400	0.100	0.13
MAR												
28...	0.5	1.4	5.8	6.2	<0.10	11	64	--	<0.010	0.200	<0.010	--
APR												
10...	0.4	1.7	5.4	4.2	<0.10	8.3	52	0.370	0.030	0.400	0.120	0.15
MAY												
29...	0.4	1.2	3.7	4.4	<0.10	11	43	--	<0.010	0.200	0.060	0.08
JUN												
20...	0.4	1.6	4.5	4.3	0.20	11	60	0.380	0.020	0.400	0.070	0.09
JUL												
17...	0.4	1.9	3.5	5.4	<0.10	11	45	0.490	0.010	<0.100	0.120	0.15
AUG												
08...	0.4	1.9	2.9	5.2	<0.10	4.8	59	0.090	0.010	0.100	0.070	0.09
SEP												
07...	0.4	1.9	3.7	5.4	<0.10	5.5	56	0.390	0.010	<0.100	0.040	0.05

NEUSE RIVER BASIN

02086500 FLAT RIVER AT DAM NEAR BAHAMA, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHATE, 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)
OCT												
10...	0.48	0.39	0.70	0.60	0.90	4.0	0.81	0.040	0.09	0.020	0.030	0.020
NOV												
16...	0.38	--	0.60	--	0.70	3.1	--	0.020	0.03	0.020	0.010	0.020
DEC												
12...	0.53	0.73	0.80	1.0	0.90	4.0	1.2	0.040	0.06	0.020	0.020	0.020
JAN												
18...	--	--	0.60	--	--	--	--	0.030	0.12	0.020	0.040	0.030
FEB												
21...	0.70	--	0.80	--	1.2	5.3	--	0.060	0.21	0.080	0.070	0.080
MAR												
28...	--	0.42	0.40	0.60	0.60	2.7	0.90	0.030	<0.03	0.020	<0.010	<0.010
APR												
10...	0.48	0.39	0.60	0.50	1.0	4.4	0.90	0.090	0.15	0.020	0.050	<0.010
MAY												
29...	0.94	0.55	1.0	0.60	1.2	5.3	0.80	0.050	0.06	0.020	0.020	<0.010
JUN												
20...	0.23	0.45	0.30	0.50	0.70	3.1	0.90	0.030	0.06	0.020	0.020	<0.010
JUL												
17...	0.38	0.38	0.50	0.50	--	--	--	0.050	0.06	0.010	0.020	0.060
AUG												
08...	0.43	0.40	0.50	0.50	0.60	2.7	0.70	0.030	<0.03	<0.010	<0.010	<0.010
SEP												
07...	0.36	0.35	0.40	0.40	--	--	--	0.040	0.06	<0.010	0.020	<0.010

DATE	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)
OCT												
10...	0.06	500	<1	<1	<1	2	2	1200	1	330	<0.10	1
NOV												
16...	0.06	--	--	--	--	--	--	--	--	--	--	--
DEC												
12...	0.06	--	--	--	--	--	--	--	--	--	--	--
JAN												
18...	0.09	--	--	--	--	--	--	--	--	--	--	--
FEB												
21...	0.25	--	--	--	--	--	--	--	--	--	--	--
MAR												
28...	<0.03	--	--	--	--	--	--	--	--	--	--	--
APR												
10...	<0.03	3000	<1	<1	3	<1	3	3400	3	70	<0.10	2
MAY												
29...	<0.03	--	--	--	--	--	--	--	--	--	--	--
JUN												
20...	<0.03	710	<1	<1	<1	<1	2	1400	1	260	<0.10	1
JUL												
17...	0.18	--	--	--	--	--	--	--	--	--	--	--
AUG												
08...	<0.03	70	<1	<1	<1	<1	2	620	<1	580	<0.10	<1
SEP												
07...	<0.03	30	<1	<1	<1	<1	4	390	1	500	<0.10	2

NEUSE RIVER BASIN

02086500 FLAT RIVER AT DAM NEAR BAHAMA, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	ALDRIN, TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)
OCT											
10...	<1	<1	<10	8.8	0.07	<0.001	<0.1	<0.001	<0.001	<0.001	<0.01
NOV											
16...	--	--	--	7.0	0.02	--	--	--	--	--	--
DEC											
12...	--	--	--	6.6	0.03	--	--	--	--	--	--
JAN											
18...	--	--	--	6.2	0.03	--	--	--	--	--	--
FEB											
21...	--	--	--	7.2	0.03	--	--	--	--	--	--
MAR											
28...	--	--	--	4.6	0.03	--	--	--	--	--	--
APR											
10...	<1	<1	<10	8.7	0.02	<0.001	<0.1	<0.001	<0.001	<0.001	<0.01
MAY											
29...	--	--	--	7.6	0.04	--	--	--	--	--	--
JUN											
20...	<1	<1	<10	8.2	0.04	--	--	--	--	--	--
JUL											
17...	--	--	--	8.4	0.04	--	--	--	--	--	--
AUG											
08...	<1	<1	<10	5.4	0.03	<0.001	<0.1	<0.001	<0.001	<0.001	<0.01
SEP											
07...	<1	<1	<10	5.3	0.01	--	--	--	--	--	--

DATE	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	PCB, TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)
OCT											
10...	<0.001	<0.001	<0.001	<0.01	<0.1	<0.10	<0.001	<0.001	<0.001	<0.01	<0.01
NOV											
16...	--	--	--	--	--	--	--	--	--	--	--
DEC											
12...	--	--	--	--	--	--	--	--	--	--	--
JAN											
18...	--	--	--	--	--	--	--	--	--	--	--
FEB											
21...	--	--	--	--	--	--	--	--	--	--	--
MAR											
28...	--	--	--	--	--	--	--	--	--	--	--
APR											
10...	<0.001	<0.001	<0.001	<0.01	<0.1	<0.10	<0.001	<0.001	<0.001	<0.01	<0.01
MAY											
29...	--	--	--	--	--	--	--	--	--	--	--
JUN											
20...	--	--	--	--	--	--	--	--	--	--	--
JUL											
17...	--	--	--	--	--	--	--	--	--	--	--
AUG											
08...	<0.001	<0.001	<0.001	<0.01	<0.1	<0.10	<0.001	<0.001	<0.001	<0.01	<0.01
SEP											
07...	--	--	--	--	--	--	--	--	--	--	--

NEUSE RIVER BASIN

02086500 FLAT RIVER AT DAM NEAR BAHAMA, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	METHYL PARA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	BENZENE TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)
OCT 10...	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20
NOV 16...	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--
JAN 18...	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	--	--	--	--	--	--	--	--	--	--	--
MAR 28...	--	--	--	--	--	--	--	--	--	--	--
APR 10...	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20
MAY 29...	--	--	--	--	--	--	--	--	--	--	--
JUN 20...	--	--	--	--	--	--	--	--	--	--	--
JUL 17...	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20
SEP 07...	--	--	--	--	--	--	--	--	--	--	--

DATE	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	STYRENE TOTAL (UG/L)
OCT 10...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
NOV 16...	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--
JAN 18...	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	--	--	--	--	--	--	--	--	--	--	--
MAR 28...	--	--	--	--	--	--	--	--	--	--	--
APR 10...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
MAY 29...	--	--	--	--	--	--	--	--	--	--	--
JUN 20...	--	--	--	--	--	--	--	--	--	--	--
JUL 17...	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
SEP 07...	--	--	--	--	--	--	--	--	--	--	--

NEUSE RIVER BASIN

02086500 FLAT RIVER AT DAM NEAR BAHAMA, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)
OCT 10...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
NOV 16...	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--
JAN 18...	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	--	--	--	--	--	--	--	--	--	--	--
MAR 28...	--	--	--	--	--	--	--	--	--	--	--
APR 10...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
MAY 29...	--	--	--	--	--	--	--	--	--	--	--
JUN 20...	--	--	--	--	--	--	--	--	--	--	--
JUL 17...	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
SEP 07...	--	--	--	--	--	--	--	--	--	--	--

DATE	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 10...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	59	4.3
NOV 16...	--	--	--	--	--	--	--	--	--	6	1.1
DEC 12...	--	--	--	--	--	--	--	--	--	7	10
JAN 18...	--	--	--	--	--	--	--	--	--	10	3.5
FEB 21...	--	--	--	--	--	--	--	--	--	22	24
MAR 28...	--	--	--	--	--	--	--	--	--	4	1.0
APR 10...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	31	18
MAY 29...	--	--	--	--	--	--	--	--	--	10	65
JUN 20...	--	--	--	--	--	--	--	--	--	4	0.69
JUL 17...	--	--	--	--	--	--	--	--	--	12	2.4
AUG 08...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	5	0.00
SEP 07...	--	--	--	--	--	--	--	--	--	6	0.0

NEUSE RIVER BASIN

0208650112 FLAT RIVER TRIBUTARY NEAR WILLARDVILLE, NC

LOCATION.--Lat 36°07'54", long 78°50'00", Durham County, Hydrologic Unit 030200201, on left bank at culvert on Secondary Road 1680.

DRAINAGE AREA.--1.14 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1988 to September 1989 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 270 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Minimum discharge occurs frequently most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	.30	.43	5.0	1.8	1.1	3.1	4.7	.64	.11	0	0
2	10	.71	.42	2.9	1.6	1.0	12	5.2	.54	.15	0	0
3	1.7	1.9	.40	1.6	1.4	2.3	11	3.7	.51	.10	0	0
4	.68	.78	.38	1.3	3.8	1.8	2.8	3.7	.44	.10	0	0
5	.43	.53	.38	1.1	3.7	1.4	1.8	2.4	.37	.08	0	0
6	.35	.41	.38	3.0	2.1	1.2	1.4	1.6	.35	.07	.05	0
7	.29	.38	.37	2.4	1.7	.96	3.7	1.1	.34	.05	.09	0
8	.26	.38	3.3	8.1	1.4	.91	1.9	.88	.30	.07	.05	0
9	.23	2.2	3.2	5.1	1.3	.91	1.4	.75	.27	.07	.05	0
10	.21	.92	1.7	3.5	10	.88	1.3	2.4	.25	.39	.08	0
11	.20	.60	2.7	2.8	5.6	.83	1.2	1.3	.23	.39	.07	0
12	.17	.48	14	2.4	2.8	.78	1.0	.90	.21	.24	.03	0
13	.15	.43	13	1.9	2.0	.75	.92	.78	.21	.14	.03	0
14	e.14	.42	7.2	1.7	1.6	.73	.91	.69	.21	.10	.04	0
15	e.12	.45	6.3	1.5	1.4	.70	2.6	.60	.28	.12	.03	0
16	e.10	.67	6.4	1.4	14	.70	1.5	.56	.28	.13	.04	0
17	e.08	.52	5.1	1.4	9.2	1.2	1.2	.50	.20	.11	.07	0
18	1.4	.42	e4.0	1.3	3.0	2.6	1.0	.45	.18	.10	.05	0
19	17	.37	e3.6	1.3	6.8	1.3	.88	.41	.32	.10	.02	0
20	3.3	.35	e3.2	1.2	3.2	1.1	.83	.38	.18	.09	0	0
21	1.0	.36	e3.0	2.0	2.0	.93	.81	.37	.17	.08	0	0
22	.66	.44	e2.8	.90	2.7	.85	.81	.58	.16	.07	.02	0
23	.50	6.3	e2.6	.57	4.1	.80	.73	.51	.20	.05	.06	0
24	.42	1.8	e2.4	.55	2.2	.77	.67	.41	.17	.05	.10	0
25	.37	1.1	e2.3	3.1	1.5	.75	.61	.38	.15	.03	.07	0
26	.33	.86	e2.2	12	1.3	.75	.54	.38	.15	.03	.10	0
27	.31	.67	e2.2	4.8	1.3	.70	.51	.75	.15	.03	.05	0
28	e.30	.60	e2.0	3.4	1.2	.67	.49	.70	.15	.03	.02	0
29	e.29	.51	e1.8	3.0	---	10	.47	15	.12	.02	.05	0
30	e.28	.47	e1.6	2.8	---	4.7	1.9	1.8	.10	.01	.07	0
31	e.28	---	1.6	2.0	---	7.2	---	.90	---	.01	.02	---
MEAN	1.46	.88	3.26	2.77	3.38	1.65	2.00	1.77	.26	.10	.041	0
MAX	17	6.3	14	12	14	10	12	15	.64	.39	.10	0
MIN	.08	.30	.37	.55	1.2	.67	.47	.37	.10	.01	0	0
IN.	1.47	.86	3.29	2.81	3.09	1.67	1.96	1.79	.26	.10	.04	0

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	.742	.568	1.64	1.62	3.32	2.25	1.66	1.44	.215	.455	.181	.065
MAX	1.46	.878	3.26	2.77	3.38	4.65	2.05	2.20	.332	1.26	.500	.183
(WY)	1990	1990	1990	1990	1990	1989	1989	1989	1989	1989	1989	1989
MIN	.024	.258	.014	.474	3.26	.445	.934	.359	.052	0	.001	0
(WY)	1989	1989	1989	1989	1989	1988	1988	1988	1988	1988	1988	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	1.46		*****	
HIGHEST ANNUAL MEAN			1.46	1990
LOWEST ANNUAL MEAN			1.26	1989
HIGHEST DAILY MEAN	17	Oct 19	30	Feb 21 1989
LOWEST DAILY MEAN	0	Aug 1	0	Jun 22 1988
INSTANTANEOUS PEAK FLOW	82	Apr 2	98	Feb 21 1989
INSTANTANEOUS PEAK STAGE	5.26	Apr 2	5.67	Feb 21 1989
INSTANTANEOUS LOW FLOW	0*	Aug 1	0*	Jun 15 1988
ANNUAL RUNOFF (INCHES)	17.4		*****	
10 PERCENTILE	3.2		2.8	
50 PERCENTILE	.54		.34	
95 PERCENTILE	0		0	

***** Indicates not enough data, therefore statistic is not computed

* See REMARKS.

NEUSE RIVER BASIN

0208650112 FLAT RIVER TRIBUTARY NEAR WILLARDVILLE, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1988 to current year.

REMARKS.--Station operated to define the impacts of various land-use development on surface-water quality in the upper Neuse River basin.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT
NOV												
06...	0815	0.53	78	5.7	10.0	15	756	9.8	7.1	2.8	5.0	26
JAN												
23...	0715	1.3	66	7.1	5.5	25	764	--	5.6	2.2	4.2	28
MAR												
14...	0815	0.65	70	6.0	13.5	8	756	9.9	6.2	2.3	4.4	27
29...	0940	16	47	6.5	10.0	90	763	11.4	3.9	1.4	2.9	28
MAY												
09...	0845	0.70	65	7.1	14.0	25	758	9.4	5.3	2.1	3.8	27
JUN												
28...	0840	0.21	91	6.8	19.0	23	756	9.4	7.8	2.7	5.1	26

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	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)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
NOV												
06...	0.4	0.90	5.0	5.2	<0.10	20	69	<0.100	<0.010	--	--	<0.20
JAN												
23...	0.4	0.50	6.0	3.9	<0.10	15	61	0.100	<0.010	--	--	<0.20
MAR												
14...	0.4	0.60	<1.0	3.5	<0.10	17	55	0.100	0.030	0.04	0.27	0.30
29...	0.3	0.80	6.8	2.7	0.20	10	58	--	--	--	--	--
MAY												
09...	0.4	0.50	3.9	3.6	<0.10	20	59	0.200	0.020	0.03	--	<0.20
JUN												
28...	0.4	0.50	1.6	4.9	0.30	24	56	0.600	0.020	0.03	0.38	0.40

NEUSE RIVER BASIN

0208650112 FLAT RIVER TRIBUTARY NEAR WILLARDVILLE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHATE, TOTAL (MG/L AS PO4)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)
NOV												
06...	--	--	0.020	0.06	0.020	30	<1	--	<1	--	<1	--
JAN												
23...	--	--	<0.010	<0.03	<0.010	260	<1	--	<1	--	<1	--
MAR												
14...	0.40	1.8	0.020	--	<0.010	170	<1	--	<1	--	<1	--
29...	--	--	--	<0.03	--	8000	<1	--	<1	--	7	--
MAY												
09...	--	--	0.020	<0.03	<0.010	170	<1	--	<1	--	<1	--
JUN												
28...	1.0	4.4	0.010	0.03	0.010	60	1	4	<1	<1	<1	4

DATE	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)
NOV												
06...	1	1	--	490	--	1	--	60	--	<0.10	--	1
JAN												
23...	1	2	--	580	--	1	--	70	--	15	--	<1
MAR												
14...	<1	2	--	530	--	1	--	30	--	<0.10	--	1
29...	4	9	--	13000	--	6	--	410	--	<0.10	--	4
MAY												
09...	1	2	--	490	--	1	--	40	--	<0.10	--	<1
JUN												
28...	<1	2	3	710	6700	1	<10	50	120	<0.10	0.01	1

NEUSE RIVER BASIN

0208650112 FLAT RIVER TRIBUTARY NEAR WILLARDVILLE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	ALDRIN, TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)
NOV											
06...	<1	<1	<10	--	2.6	--	--	--	--	--	--
JAN											
23...	<1	<1	<10	--	2.2	--	--	--	--	--	--
MAR											
14...	<1	<1	<10	--	1.6	--	--	--	--	--	--
29...	<2	<1	20	--	--	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01
MAY											
09...	<1	--	<10	--	2.0	--	--	--	--	--	--
JUN											
28...	<1	<1	<10	<10	2.0	--	--	--	--	--	--

DATE	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	PCB, TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)
NOV											
06...	--	--	--	--	--	--	--	--	--	--	--
JAN											
23...	--	--	--	--	--	--	--	--	--	--	--
MAR											
14...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.010	<0.010	<0.010	<0.01	<0.1	<0.10	<0.010	<0.010	<0.010	<0.01	<0.01
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
JUN											
28...	--	--	--	--	--	--	--	--	--	--	--

NEUSE RIVER BASIN

0208650112 FLAT RIVER TRIBUTARY NEAR WILLARDVILLE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	METHYL PARA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	BENZENE TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)
NOV											
06...	--	--	--	--	--	--	--	--	--	--	--
JAN											
23...	--	--	--	--	--	--	--	--	--	--	--
MAR											
14...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
JUN											
28...	--	--	--	--	--	--	--	<0.20	<0.20	<0.20	<0.20

DATE	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	STYRENE TOTAL (UG/L)
NOV											
06...	--	--	--	--	--	--	--	--	--	--	--
JAN											
23...	--	--	--	--	--	--	--	--	--	--	--
MAR											
14...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
JUN											
28...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	<0.2

NEUSE RIVER BASIN

0208650112 FLAT RIVER TRIBUTARY NEAR WILLARDVILLE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)
NOV 06...	--	--	--	--	--	--	--	--	--	--	--
JAN 23...	--	--	--	--	--	--	--	--	--	--	--
MAR 14...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
MAY 09...	--	--	--	--	--	--	--	--	--	--	--
JUN 28...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20

DATE	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
NOV 06...	--	--	--	--	--	--	--	--	--	3	0.00
JAN 23...	--	--	--	--	--	--	--	--	--	11	0.04
MAR 14...	--	--	--	--	--	--	--	--	--	4	0.01
29...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	1520	66
MAY 09...	--	--	--	--	--	--	--	--	--	5	0.01
JUN 28...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0	0.0

02086624 KNAP OF REEDS CREEK NEAR BUTNER, NC

LOCATION.--Lat 36°07'40", long 78°48'55", Granville County, Hydrologic Unit 03020201, on left bank 60 ft downstream of Butner wastewater treatment plant outfall, 1.5 mi downstream from bridge on Secondary Road 1120, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--43.0 mi^2.

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is 255 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges and those below 5 ft^3/s, which are poor. Some diurnal fluctuation at low flow. The town of Butner diverted an average of 2.9 ft^3/s for municipal water supply upstream of station and returned an average of 2.4 ft^3/s as treated effluent upstream of station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	183	13	13	95	38	30	264	180	35	5.6	5.3	4.6
2	959	17	13	102	36	31	209	271	26	7.6	5.2	4.4
3	242	102	14	50	36	87	1260	165	23	6.1	5.3	4.4
4	55	48	13	36	84	97	176	141	20	5.4	5.0	4.9
5	30	29	13	35	172	43	48	90	17	5.4	5.3	5.4
6	23	23	11	72	65	38	17	300	12	5.4	18	5.7
7	17	19	9.2	85	52	36	102	63	13	5.4	19	5.5
8	11	16	78	244	41	31	38	42	10	5.4	5.6	5.3
9	9.9	59	124	248	31	32	18	30	10	5.6	6.0	5.3
10	10	70	61	105	457	32	16	264	12	11	6.2	6.1
11	9.6	35	81	65	330	30	15	184	12	20	4.9	15
12	7.8	23	491	46	107	31	9.6	51	8.4	14	4.4	3.7
13	6.6	20	911	33	64	31	8.8	36	6.9	11	5.6	4.3
14	5.4	19	288	30	45	27	8.8	30	6.7	17	6.5	5.0
15	6.9	16	141	30	38	27	86	23	6.8	6.5	5.1	5.1
16	6.9	27	140	29	335	29	57	19	8.6	6.4	4.9	5.1
17	5.5	27	85	24	689	44	23	19	6.9	6.9	5.7	5.2
18	219	20	62	22	137	183	23	17	6.6	6.3	4.9	4.6
19	981	16	52	21	339	78	14	15	6.6	5.4	4.5	4.4
20	248	13	42	22	186	52	13	12	6.4	6.2	4.7	4.6
21	61	12	35	39	82	37	14	10	6.2	5.1	5.1	4.7
22	34	13	36	44	70	34	19	16	6.5	4.9	5.2	4.2
23	25	278	31	28	148	32	16	20	5.6	5.0	8.2	4.7
24	19	101	e28	24	87	30	14	14	5.0	4.8	9.0	4.3
25	16	44	e25	39	51	30	14	13	5.6	4.8	5.3	4.0
26	15	30	23	555	40	30	14	13	5.4	5.6	9.3	3.9
27	13	28	19	260	40	28	14	29	5.5	5.7	5.6	4.6
28	8.7	26	16	88	38	22	13	30	6.1	5.9	5.9	4.9
29	6.9	20	19	64	---	480	18	925	5.3	5.7	16	4.7
30	10	14	21	77	---	485	393	256	5.4	6.0	9.1	4.8
31	13	---	28	51	---	529	---	57	---	5.2	5.3	---
MEAN	105	39.3	94.3	85.9	137	87.9	97.8	108	10.3	7.14	6.97	5.11
MAX	981	278	911	555	689	529	1260	925	35	20	19	15
MIN	5.4	12	9.2	21	31	22	8.8	10	5.0	4.8	4.4	3.7
IN.	2.82	1.02	2.53	2.30	3.32	2.36	2.54	2.89	.27	.19	.19	.13

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	20.3	31.5	51.0	54.5	109.1	110.5	77.4	54.3	9.81	29.0	26.8	5.63
MAX	105.1	146.6	124.4	108.9	170.4	228.0	147.2	109.1	19.1	166.1	112.6	12.5
(WY)	1990	1986	1984	1987	1983	1983	1989	1989	1987	1989	1989	1989
MIN	3.65	4.59	6.54	6.00	14.8	14.0	6.52	5.33	2.41	2.12	5.23	2.44
(WY)	1985	1985	1989	1989	1988	1988	1985	1986	1986	1985	1988	1984

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	65.1		48.0	
HIGHEST ANNUAL MEAN			78.9	1989
LOWEST ANNUAL MEAN			13.2	1988
HIGHEST DAILY MEAN	1260	Apr 3	2260	Jul 16 1989
LOWEST DAILY MEAN	3.7	Sep 12	1.2	Oct 7 1984
INSTANTANEOUS PEAK FLOW	2190	Apr 3	3210	Mar 6 1984
INSTANTANEOUS PEAK STAGE	7.11	Apr 3	7.59	Mar 6 1984
INSTANTANEOUS LOW FLOW	2.9	Aug 20	.96	Oct 7 1984
ANNUAL RUNOFF (INCHES)	20.6		15.2	
10 PERCENTILE	163		94	
50 PERCENTILE	20		8.9	
95 PERCENTILE	4.4		2.3	

NEUSE RIVER BASIN

0208700780 LITTLE LICK CREEK ABOVE SECONDARY ROAD 1814 NEAR OAK GROVE, NC

LOCATION.--Lat 35°59'11", long 78°47'58", Durham County, Hydrologic Unit 03020201, on right bank 300 ft upstream from bridge on Secondary Road 1814, and 1.3 mi northeast of Oak Grove.

DRAINAGE AREA.--10.1 mi^2.

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is 265 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges and below 2 ft^3/s, which are poor. Slight diurnal fluctuation at low flow. An average of 36.2 ft^3/s was diverted from the Neuse River basin for Durham municipal water supply, of which 18.6 ft^3/s was diverted to the Cape Fear River basin. An average of 0.8 ft^3/s was returned as treated effluent upstream from station. Minimum discharge for period of record, occurs periodically.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e3.0	.73	3.7	22	7.0	4.6	e40	7.3	6.4	.98	2.3	e1.4
2	e390	19	3.5	8.2	6.8	4.7	e30	21	4.5	.85	2.9	e1.1
3	e30	64	3.5	5.8	6.5	33	e25	41	5.5	.95	2.4	e1.4
4	3.7	5.3	3.0	5.2	9.1	23	e16	92	12	1.3	2.8	e1.1
5	1.5	2.2	3.1	5.1	7.3	9.0	8.3	31	3.9	.72	3.4	e.95
6	1.3	1.5	2.9	22	5.4	6.5	5.3	28	2.6	.84	4.3	e.80
7	1.4	1.4	2.7	15	5.6	5.0	50	11	3.3	1.4	9.5	e.70
8	1.1	2.2	105	66	5.0	4.1	13	5.9	3.0	1.0	4.2	e.66
9	.93	62	58	32	4.9	4.9	6.6	3.7	2.6	.90	5.0	e.90
10	.77	12	32	16	192	4.6	5.5	93	1.9	.76	7.3	e.60
11	.96	2.9	52	9.6	46	4.0	5.3	23	1.2	.99	4.1	e.90
12	.93	1.7	112	7.8	20	3.7	4.1	9.0	1.1	.96	2.9	e1.4
13	.80	1.3	164	6.0	10	3.3	3.5	5.3	1.2	2.0	2.3	e1.5
14	.87	1.1	38	5.0	7.7	2.9	3.1	4.1	4.1	1.5	2.2	e1.6
15	.88	5.9	26	4.8	6.4	e3.5	9.6	3.2	5.0	1.4	2.1	e1.4
16	.91	45	23	4.7	192	e2.0	7.3	2.8	3.6	1.2	13	e1.2
17	.73	8.2	11	4.5	124	e7.0	5.1	2.0	1.9	4.0	13	e1.1
18	3.7	2.5	8.3	4.6	23	e12	4.3	1.5	1.5	7.6	2.2	e.95
19	216	1.6	7.7	4.3	67	e10	2.6	1.2	13	2.2	1.3	e.82
20	24	1.3	7.9	4.1	26	e7.0	2.1	1.1	2.5	1.5	1.1	e1.0
21	4.1	1.1	6.6	65	12	e5.0	2.3	1.0	1.5	1.3	.90	e2.0
22	1.8	2.9	5.3	21	13	e3.5	2.5	17	5.5	1.1	.92	e4.5
23	1.3	182	4.1	9.7	28	e2.5	1.9	7.5	5.9	.93	146	e1.9
24	1.0	26	3.8	8.7	17	e1.8	1.6	2.8	2.0	1.0	52	e2.4
25	.90	12	3.6	17	7.4	e1.5	1.3	2.1	1.5	.69	7.5	e1.6
26	.85	8.0	4.1	121	5.6	e1.3	1.1	2.3	1.7	.64	4.8	e3.2
27	.81	6.1	3.9	27	5.3	e1.1	.94	20	1.2	.88	2.8	e1.8
28	.75	5.5	4.0	14	5.0	e1.0	1.1	75	1.2	1.1	1.9	e1.9
29	.71	4.9	4.1	11	---	e5.0	1.3	170	1.0	1.2	3.8	e3.2
30	.67	4.0	4.8	21	---	e25	15	28	1.1	1.6	4.6	e2.5
31	.82	---	6.0	9.4	---	e28	---	12	---	1.9	e2.4	---
MEAN	22.5	16.5	23.1	18.6	30.9	7.44	9.19	23.4	3.45	1.46	10.2	1.55
MAX	390	182	164	121	192	33	50	170	13	7.6	146	4.5
MIN	.67	.73	2.7	4.1	4.9	1.0	.94	1.0	1.0	.64	.90	.60
IN.	2.57	1.82	2.64	2.13	3.19	.85	1.02	2.67	.38	.17	1.16	.17

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	5.85	11.3	14.0	18.2	29.9	25.2	15.5	12.3	4.77	2.27	6.04	2.21
MAX	22.5	38.9	33.9	36.7	46.7	53.6	32.2	23.4	24.9	6.00	23.3	7.88
(WY)	1990	1986	1984	1987	1989	1989	1987	1990	1989	1984	1986	1987
MIN	.517	.707	2.69	4.70	5.51	3.33	1.20	1.35	.505	.759	1.27	.346
(WY)	1987	1985	1989	1986	1986	1988	1985	1987	1985	1983	1983	1984

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	14.0		12.2	
HIGHEST ANNUAL MEAN			18.4	1989
LOWEST ANNUAL MEAN			5.85	1985
HIGHEST DAILY MEAN	390	Oct 2	515	Aug 20 1986
LOWEST DAILY MEAN	.60	Sep 10	.13	Jul 17 1983
INSTANTANEOUS PEAK FLOW	690	Feb 16	1720	Aug 20 1986
INSTANTANEOUS PEAK STAGE	7.47	Feb 16	9.26	Aug 20 1986
INSTANTANEOUS LOW FLOW	NOT DETERMINED		0*	Aug 28 1984
ANNUAL RUNOFF (INCHES)	18.8		16.4	
10 PERCENTILE	29		25	
50 PERCENTILE	3.6		2.0	
95 PERCENTILE	.72		.35	

* See REMARKS.

02087183 NEUSE RIVER NEAR FALLS, NC

LOCATION.--Lat 35°56'24", long 78°34'32", Wake County, Hydrologic Unit 03020201, on left bank, 0.3 mi downstream from bridge on Secondary Road 2000, 0.4 mi northeast of Falls, and 0.5 mi downstream from Falls Dam.

DRAINAGE AREA.--772 mi^2.

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

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 182.62 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated byFalls Lake (station 02087182). June 5, 1980 to May 6, 1981, flows affected by incidental storage in Falls Lake under construction; May 6, 1981 to Jan. 13, 1983, gates closed and Falls Lake partially filled to provide storage for city of Raleigh water supply; Jan. 13, 1983, gates closed and normal pool elevation of 250 ft reached Dec. 7, 1983. The city of Raleigh diverted an average of 55.0 ft^3/s, 1.2 mi upstream from station for municipal water supply, most of which was returned downstream as treated effluent. See diversions for municipal water supply for cities of Durham and Butner (stations 02086500 and 02086624). U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1945 reached a stage of 216.1 ft above National Geodetic Vertical Datum of 1929, discharge, 23,300 ft^3/s at bridge 0.4 mi upstream, from information provided by the U. S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	225	183	177	162	1580	2100	1980	1110	2050	166	160	171
2	503	184	183	523	886	1300	2430	475	1410	167	160	167
3	1290	379	183	1520	499	698	2880	1320	1410	167	160	167
4	1470	708	186	1510	499	516	3110	2310	1410	167	166	167
5	1700	705	186	1230	983	1020	3330	2290	952	167	171	167
6	2050	707	186	871	1470	1480	3320	2500	399	167	174	167
7	2030	707	186	855	1480	962	3090	2860	313	167	176	168
8	1990	511	191	1120	1050	445	3160	3090	250	167	175	170
9	2000	578	193	1900	515	334	3220	3080	250	165	177	169
10	1610	921	191	2420	328	337	3220	2930	250	166	174	167
11	737	925	934	2410	675	336	3240	2730	250	165	173	167
12	181	578	1730	1860	1930	438	2540	2650	181	165	172	167
13	180	367	1820	940	2870	507	1440	2580	136	166	172	168
14	182	373	2270	682	2840	513	1020	2010	136	165	172	165
15	183	376	3330	680	2610	514	986	1210	130	165	169	165
16	184	566	3560	675	1840	392	1490	556	122	165	167	165
17	187	594	3520	472	1570	264	1940	351	119	167	163	165
18	190	364	3500	347	1910	156	1770	355	120	166	160	165
19	201	365	3140	350	2430	537	902	352	159	165	167	163
20	1060	248	2490	350	3230	1030	517	243	219	167	167	164
21	1660	178	2450	359	3720	1040	518	188	184	165	166	162
22	364	185	2020	1000	3100	561	519	185	161	165	165	163
23	1170	505	817	1470	2220	168	519	184	160	165	168	164
24	2010	1070	521	888	2370	177	521	183	160	165	170	162
25	1310	1240	520	516	2300	178	422	183	160	164	175	163
26	715	1200	518	1130	2260	178	361	183	159	163	200	152
27	500	1380	523	2240	2350	178	362	186	163	163	171	152
28	352	1330	525	2360	2400	180	365	194	165	164	170	169
29	233	554	302	2300	---	594	367	529	165	162	171	188
30	179	247	162	2350	---	778	622	1570	165	162	172	188
31	183	---	162	2210	---	1190	---	2320	---	161	172	---
MEAN	865	608	1183	1216	1854	616	1672	1320	397	165	170	167
MAX	2050	1380	3560	2420	3720	2100	3330	3090	2050	167	200	188
MIN	179	178	162	162	328	156	361	183	119	161	160	152
(†)	-34	-4	-26	+19	+55	+442	-343	+164	-269	-162	-47	-271

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD*, BY WATER YEAR (WY)

MEAN	291.1	331.5	706.9	799.5	1400	1855	1353	756.5	379.7	315.2	367.9	189.0
MAX	865.5	1122	1818	2014	2531	3992	2586	1821	735.1	896.8	1099	462.7
(WY)	1990	1986	1986	1984	1985	1989	1984	1989	1984	1989	1989	1989
MIN	72.6	65.2	70.1	210.0	475.4	233.4	141.0	169.6	125.8	61.7	61.0	67.8
(WY)	1984	1984	1988	1986	1986	1988	1985	1985	1987	1983	1983	1985

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD*	
AVERAGE FLOW	846.1	‡ 812	‡ 775.0	
HIGHEST ANNUAL MEAN			1161	1984
LOWEST ANNUAL MEAN			204.9	1988
HIGHEST DAILY MEAN	3720	Feb 21	6810	Mar 6 1987
LOWEST DAILY MEAN	119	Jun 17	60	Jul 11 1983
INSTANTANEOUS PEAK FLOW	3750	Feb 22	6850	Mar 6 1987
INSTANTANEOUS PEAK STAGE	13.20	Feb 22	18.21	Mar 6 1987
INSTANTANEOUS LOW FLOW	29	Sep 25	21	Oct 22 1986
ANNUAL RUNOFF (INCHES)	14.9		12.8	
10 PERCENTILE	2390		2530	
50 PERCENTILE	364		199	
95 PERCENTILE	160		66	

† Change in contents, equivalent in cubic feet per second, in Falls Lake Reservoir; furnished by U. S. Army Corps of Engineers.
‡ Adjusted for change in contents.
* Regulated period only (1983-1990). See REMARKS.

NEUSE RIVER BASIN

0208726005 CRABTREE CREEK AT SECONDARY ROAD 1649 NEAR RALEIGH, NC

LOCATION.--Lat 35°50'43", long 78°43'29", Wake County, Hydrologic Unit 030200201, on downstream-side of bridge on Secondary Road 1649, 0.1 mi upstream from Sycamore Creek, and 6.6 mi northwest of Raleigh.

DRAINAGE AREA.--76 mi^2.

PERIOD OF RECORD.--December 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is 240 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	194	17	41	70	105	72	636	40	120	15	4.3	6.2
2	552	24	35	76	103	57	375	63	76	15	4.3	5.9
3	384	101	33	66	98	119	618	304	59	14	4.4	5.9
4	209	71	27	58	87	172	398	274	58	14	4.2	6.0
5	115	58	23	52	77	129	234	228	45	13	4.2	5.7
6	74	50	20	63	65	100	150	202	37	13	4.7	5.4
7	53	44	19	86	59	80	247	140	33	13	4.8	5.4
8	40	43	105	183	52	65	201	137	30	13	4.9	5.4
9	31	79	355	304	47	62	138	69	28	13	6.9	5.5
10	24	126	294	214	273	58	104	411	27	12	6.7	5.6
11	19	107	274	147	315	53	99	414	26	11	6.2	6.2
12	14	80	397	106	203	57	78	203	25	11	5.7	5.6
13	12	62	773	76	136	48	59	123	24	11	5.4	5.5
14	10	57	518	59	111	37	53	94	23	11	6.2	5.5
15	9.4	62	304	52	99	32	61	66	23	11	7.7	5.5
16	8.3	121	207	47	147	30	63	54	22	10	7.3	5.4
17	9.5	128	147	43	430	36	57	45	22	20	8.6	5.1
18	16	112	112	40	342	87	54	38	21	24	9.4	4.7
19	230	97	93	37	396	82	48	30	21	8.9	8.9	4.7
20	250	101	86	34	350	69	44	27	20	6.7	8.0	4.8
21	160	102	75	211	224	58	42	26	20	8.4	7.7	4.8
22	98	98	65	222	177	51	40	32	26	18	7.3	4.7
23	66	370	e60	165	219	46	38	32	26	9.3	7.3	5.0
24	49	325	e56	132	237	41	36	29	21	6.5	7.3	5.2
25	39	204	e54	96	175	37	35	27	19	5.3	7.6	5.2
26	33	155	e50	250	134	35	33	26	18	4.7	9.4	5.2
27	28	114	e45	251	114	34	31	58	18	4.7	7.8	5.2
28	22	93	e40	165	96	32	31	150	17	4.3	7.4	5.2
29	19	69	e38	126	---	1080	29	563	16	4.3	7.5	5.0
30	18	50	44	130	---	1030	41	312	16	4.4	9.6	5.0
31	18	---	43	110	---	938	---	180	---	4.5	7.3	---
MEAN	90.5	104	143	118	174	156	136	142	31.2	10.8	6.74	5.35
MAX	552	370	773	304	430	1080	636	563	120	24	9.6	6.2
MIN	8.3	17	19	34	47	30	29	26	16	4.3	4.2	4.7
IN.	1.37	1.53	2.17	1.80	2.38	2.36	1.99	2.15	.46	.16	.10	.08

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	65.9	100.0	64.5	96.1	157.0	173.8	109.5	102.3	40.6	36.6	41.3	12.8
MAX	90.5	104.0	143.0	126.8	194.9	340.6	143.4	143.9	74.7	89.8	108.5	17.9
(WY)	1990	1990	1990	1988	1989	1989	1989	1989	1989	1989	1989	1988
MIN	41.3	96.0	16.6	43.1	102.1	25.0	49.3	21.2	15.9	9.15	6.74	5.35
(WY)	1989	1989	1989	1989	1988	1988	1988	1988	1988	1988	1990	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD		
AVERAGE FLOW	92.7		*****		
HIGHEST ANNUAL MEAN			108.6		1989
LOWEST ANNUAL MEAN			92.7		1990
HIGHEST DAILY MEAN	1080	Mar 29	1090	Mar 24	1989
LOWEST DAILY MEAN	4.2	Aug 4	4.2	Aug 4	1990
INSTANTANEOUS PEAK FLOW	2110	Mar 29	2110	Mar 29	1990
INSTANTANEOUS PEAK STAGE	10.11	Mar 29	10.11	Mar 29	1990
INSTANTANEOUS LOW FLOW	2.9	Aug 8	2.9	Aug 8	1990
ANNUAL RUNOFF (INCHES)	16.6		*****		
10 PERCENTILE	239		249		
50 PERCENTILE	45		46		
95 PERCENTILE	4.2		5.0		

***** Indicates not enough data, therefore statistic is not computed

NEUSE RIVER BASIN

0208732885 MARSH CREEK NEAR NEW HOPE, NC

LOCATION.--Lat 35°48'59", long 78°35'37", Wake County, Hydrologic Unit 03020201, on right upstream wingwall, 0.2 mi downstream from US 401, and 2.9 mi southwest of New Hope.

DRAINAGE AREA.--6.84 mi^2.

PERIOD OF RECORD.--January 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is 198 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Recording rain gage at station. Minimum discharge for current water year also occurred Sept. 25-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	2.9	4.9	12	3.0	5.2	15	23	4.0	3.2	1.5	2.3
2	24	46	4.9	4.7	3.0	5.2	21	23	3.7	2.5	1.6	2.1
3	7.2	22	4.9	4.0	3.4	41	33	89	9.0	1.8	1.5	2.0
4	5.0	5.6	4.4	3.8	5.0	9.2	9.6	25	6.8	1.8	1.5	1.9
5	4.3	4.7	5.0	3.6	3.6	6.4	7.9	18	3.9	1.7	1.5	1.9
6	4.1	4.3	4.8	12	2.9	5.5	9.3	14	3.5	1.6	7.7	1.8
7	3.9	4.2	4.7	5.2	4.0	4.9	41	7.8	3.3	1.5	13	3.1
8	3.7	12	62	33	3.0	4.7	9.8	6.2	3.2	1.5	13	6.0
9	3.4	9.1	13	7.0	4.3	6.0	8.0	5.3	3.2	1.5	66	2.2
10	3.4	5.0	18	4.5	83	5.1	7.6	71	3.1	25	11	2.4
11	3.4	4.1	23	3.9	9.2	4.8	7.5	15	2.8	12	5.2	2.3
12	3.3	3.9	30	3.6	6.9	4.7	6.6	7.3	2.5	5.0	4.1	1.8
13	3.3	3.7	47	3.3	6.2	4.6	6.3	15	2.7	54	3.8	1.8
14	3.3	3.7	9.5	3.2	6.1	4.5	8.0	7.6	2.7	21	20	1.9
15	3.3	19	6.5	3.2	5.8	4.4	16	6.0	6.7	4.8	10	1.8
16	3.1	16	5.5	3.2	31	4.5	9.8	5.6	3.5	2.9	31	1.6
17	3.9	5.5	4.7	3.2	12	29	8.0	5.2	2.9	24	12	1.4
18	18	4.4	4.5	3.1	6.9	28	11	4.8	2.4	14	3.2	1.4
19	76	3.8	6.7	3.0	35	6.6	7.1	4.4	2.6	3.4	2.3	1.4
20	10	3.9	6.1	3.0	8.3	5.5	7.1	6.2	2.3	2.6	1.9	1.4
21	4.8	3.7	4.6	53	6.4	4.9	7.6	5.6	2.2	8.3	1.8	1.3
22	3.6	8.4	3.9	5.1	13	4.7	8.1	34	52	6.2	1.8	2.0
23	3.3	52	3.9	3.6	16	4.6	7.5	12	16	2.5	2.6	1.5
24	3.2	7.9	4.0	3.3	11	4.5	7.2	6.4	4.1	2.1	2.6	1.2
25	3.1	6.1	4.0	16	6.4	4.4	6.5	5.6	2.7	1.9	6.6	1.2
26	3.0	5.7	3.9	36	5.6	4.4	6.0	5.4	2.6	1.8	28	1.2
27	2.9	5.4	3.8	5.2	5.5	4.5	6.0	40	2.5	1.7	3.0	1.2
28	2.8	5.4	3.8	3.7	5.3	4.4	5.7	98	2.3	2.4	1.8	1.2
29	2.9	5.2	3.7	6.3	---	220	7.3	60	2.2	1.9	19	1.2
30	2.9	4.9	4.8	6.4	---	25	32	7.3	2.1	1.8	7.1	1.3
31	3.0	---	5.3	3.4	---	72	---	4.7	---	1.7	2.8	---
MEAN	10.1	9.62	10.3	8.53	11.1	17.5	11.4	20.6	5.45	7.04	9.32	1.86
MAX	92	52	62	53	83	220	41	98	52	54	66	6.0
MIN	2.8	2.9	3.7	3.0	2.9	4.4	5.7	4.4	2.1	1.5	1.5	1.2
IN.	1.71	1.57	1.73	1.44	1.70	2.95	1.87	3.47	.89	1.19	1.57	.30

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	4.94	7.60	6.24	10.6	14.2	12.3	10.3	12.3	7.69	7.76	10.2	5.10
MAX	10.1	14.9	10.3	20.7	20.7	21.3	19.2	25.9	20.3	17.5	38.0	14.4
(WY)	1990	1989	1990	1987	1989	1989	1989	1984	1989	1984	1986	1989
MIN	1.95	2.51	4.22	3.77	4.83	3.71	2.08	3.63	4.15	2.44	2.91	1.14
(WY)	1987	1987	1986	1986	1986	1985	1985	1985	1985	1987	1988	1985

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	10.3		8.71	
HIGHEST ANNUAL MEAN			14.2	1989
LOWEST ANNUAL MEAN			5.17	1985
HIGHEST DAILY MEAN	220	Mar 29	397	May 29 1984
LOWEST DAILY MEAN	1.2	Sep 24	.62	Jul 18 1988
INSTANTANEOUS PEAK FLOW	489	Mar 29	1320	May 29 1984
INSTANTANEOUS PEAK STAGE	8.69	Mar 29	10.54	May 29 1984
INSTANTANEOUS LOW FLOW	1.1*	Sep 24	.56	Jul 18 1989
ANNUAL RUNOFF (INCHES)	20.4		17.3	
10 PERCENTILE	24		18	
50 PERCENTILE	4.6		3.4	
95 PERCENTILE	1.4		1.1	

* See REMARKS.

NEUSE RIVER BASIN

02087500 NEUSE RIVER NEAR CLAYTON, NC

LOCATION.--Lat 35°38'50", long 78°24'22", Johnston County, Hydrologic Unit 03020201, on left bank at downstream side of bridge on State Highway 42, 2.3 mi upstream from Mill Creek, and 3 mi east of Clayton.

DRAINAGE AREA.--1,150 mi^2.

PERIOD OF RECORD.--July 1927 to current year.

REVISED RECORDS.--WSP 1032: 1930, 1935(M). WSP 1333: 1935. WSP 1503: 1949. WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 128.41 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 18, 1942, at site 1,100 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Falls Lake (station 02087182) since Dec. 7, 1983. Diversions for municipal water supply for cities of Durham and Butner (stations 02086500 and 02086624). The City of Raleigh diverted from the Neuse River upstream from station an average of 55.0 ft^3/s, most of which was returned as treated effluent upstream from station. Satellite data transmitter at station. Prior to regulation, maximum discharge, 22,900 ft^3/s Sept. 19, 1945, gage height, 22.12 ft; minimum, 44 ft^3/s Sept. 15, 1932, gage height, 0.28 ft, site then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 23, 1919, reached a stage of 21.15 ft, from floodmark at former site, discharge, 21,200 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	758	405	528	627	2460	2730	3890	1220	2620	299	252	315
2	2260	417	480	608	1800	2190	3450	1710	2040	308	244	e300
3	1960	1240	469	1300	1110	2010	4370	1810	1690	315	246	e290
4	2010	1040	447	1810	916	1450	4420	3010	1740	295	243	e280
5	1880	1020	446	1790	937	1180	3980	3110	1660	290	242	e270
6	2120	966	441	1390	1640	e2000	3900	2990	880	285	252	277
7	2210	941	435	1330	1830	e1800	4180	2990	639	283	351	283
8	2160	994	824	1640	1820	1070	3950	3230	511	274	322	294
9	2120	902	1790	2350	1070	811	3710	3330	470	278	1320	294
10	2090	1210	1320	2860	1960	739	3620	3650	459	278	730	298
11	1570	1290	1280	2900	1580	704	3610	4290	442	451	409	313
12	662	1220	2610	2780	1770	692	3560	3350	434	336	340	296
13	390	739	3880	1910	2870	821	2680	3020	362	331	312	282
14	374	632	3550	1120	3210	823	1650	2960	328	539	354	277
15	372	654	3450	1020	3170	815	1500	2090	328	367	624	281
16	368	1060	3880	995	2880	812	1510	1330	406	315	379	273
17	354	1280	3940	970	2590	697	2150	741	349	326	1010	266
18	416	869	3840	707	2640	1450	2320	636	327	798	619	261
19	1850	715	3790	632	3070	837	1970	604	359	469	376	260
20	1610	685	3400	654	3640	1270	1040	585	373	351	329	257
21	2150	565	2870	1350	3880	1440	858	497	395	317	309	263
22	1570	515	2770	1470	4110	1390	856	505	376	402	306	258
23	628	1120	1890	1960	3640	702	840	e700	681	333	393	259
24	1890	1670	943	1930	3210	530	830	e550	467	295	507	259
25	2120	1800	819	1090	2970	515	818	e500	384	278	403	254
26	1160	1690	836	1670	2750	505	683	e450	353	268	577	260
27	897	1620	831	2580	2680	506	650	e600	334	266	481	252
28	616	1850	824	2900	2750	489	628	e1000	330	273	356	252
29	549	1450	818	2820	---	2420	624	e1600	324	263	320	255
30	441	750	578	2870	---	6300	800	e1900	310	260	498	282
31	401	---	530	2810	---	3840	---	2480	---	258	375	---
MEAN	1289	1044	1758	1705	2463	1404	2302	1853	679	336	435	275
MAX	2260	1850	3940	2900	4110	6300	4420	4290	2620	798	1320	315
MIN	354	405	435	608	916	489	624	450	310	258	242	252

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD *, BY WATER YEAR (WY)

MEAN	456.1	568.6	1042	1274	2034	2510	1908	1211	655.0	574.0	677.5	344.5
MAX	1289	1305	2013	2821	3188	4906	3211	2864	1165	1356	1539	661.4
(WY)	1990	1986	1986	1984	1985	1989	1984	1989	1989	1989	1989	1989
MIN	212.2	240.1	288.9	419.0	741.0	482.9	290.0	320.2	314.3	234.3	204.0	136.2
(WY)	1984	1987	1989	1986	1986	1988	1986	1985	1987	1983	1983	1985

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD*	
AVERAGE FLOW	1288		1100	
HIGHEST ANNUAL MEAN			1653	1984
LOWEST ANNUAL MEAN			458.1	1988
HIGHEST DAILY MEAN	6300	Mar 30	8350	Mar 1 1987
LOWEST DAILY MEAN	242	Aug 5	105	Sep 16 1985
INSTANTANEOUS PEAK FLOW	6820	Mar 30	8790	Mar 1 1987
INSTANTANEOUS PEAK STAGE	10.70	Mar 30	12.74	Mar 1 1987
INSTANTANEOUS LOW FLOW	215	Jul 29	78	Sep 18 1985
ANNUAL RUNOFF (INCHES)	15.2		13.0	
10 PERCENTILE	3080		3350	
50 PERCENTILE	804		441	
95 PERCENTILE	261		196	

* Regulated period only (1984-1990). See REMARKS.

NEUSE RIVER BASIN

02087570 NEUSE RIVER AT SMITHFIELD, NC

LOCATION.--Lat 35°30'46", long 78°21'00", Johnston County, Hydrologic Unit 03020201, on left bank 10 ft downstream from bridge on U.S. Highway 70, at Smithfield, 2.1 mi upstream from Swift Creek, and 178 mi upstream from mouth.

DRAINAGE AREA.--1,206 mi^2.

WATER-DISCHARGE RECORDS

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.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 99.26 ft above 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. U.S. Army Corps of Engineers satellite data transmitter at station.

REMARKS.--Records good except those for period Jan. to July due to unreliable gage-height, which are fair. Diversions for municipal water supply for cities of Durham and Butner (station 02087183). Flow regulated by Falls Lake (station 02087182) since Dec. 7, 1983. The city of Smithfield diverted an average of 4.8 ft^3/s 0.2 mi upstream from station for municipal water supply, most of which was returned downstream as sewage effluent. Prior to regulation, maximum discharge, 15,300 ft^3/s Feb. 5, 1973 and Mar. 21, 1975, gage height, 23.65 ft; minimum, 61 ft^3/s July 29, 1977, gage height, 2.47 ft. Minimum gage height observed, 2.38 ft Sept. 26, 1968. Minimum discharge for current water year also occurred on Aug. 3,4,5.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1908 reached a stage of 27.1 ft, discharge, 19,900 ft^3/s; July 24, 1919, 26.8 ft, discharge, 19,400 ft^3/s; Oct. 3, 1929, 26.4 ft, discharge, 18,700 ft^3/s; Sept. 20, 1945, 25.9 ft, discharge, 17,900 ft^3/s, from stage information provided by National Weather Service and U.S. Army Corps of Engineers, and discharges determined from ratings developed since 1959.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	772	518	804	790	3040	2950	6370	944	2450	308	271	388
2	2300	549	628	905	2500	2810	5810	1450	2450	287	266	348
3	2680	1440	618	1080	1780	2440	5500	1650	1790	294	261	330
4	2590	1510	577	2010	1190	2630	5810	2280	1640	301	263	323
5	2360	1360	564	2060	1090	1980	5350	2970	1640	298	261	314
6	2220	1210	562	1810	1290	1790	4890	3310	1350	298	265	310
7	2380	1160	559	1640	1810	2090	4640	3400	712	292	318	311
8	2350	1160	825	1770	1900	1820	4840	3320	613	291	392	311
9	2290	1220	2440	2720	1670	1190	4500	3370	499	288	1280	333
10	2260	1360	2490	3140	1530	980	4240	3430	482	288	1710	322
11	1970	1570	2370	3480	2410	909	4030	4000	475	314	647	340
12	1270	1470	2960	3360	2030	870	3940	4180	461	402	440	335
13	594	1100	4250	2850	2440	876	3540	3670	446	353	370	313
14	545	804	5110	1750	3250	964	2280	3310	374	395	350	302
15	499	860	4740	1280	3440	962	1560	2870	357	481	565	309
16	475	1190	4820	1200	3400	949	1560	1890	374	371	577	303
17	465	1500	4890	1170	3250	904	1830	1160	390	336	869	291
18	647	1350	4730	1010	2930	1380	2280	725	354	502	968	284
19	2010	943	4550	787	3060	1680	2250	656	342	637	511	286
20	3140	861	4380	745	3820	1270	1440	623	383	477	393	280
21	2690	780	3700	937	4310	1540	920	613	402	387	356	285
22	2710	657	3290	1860	4620	1560	901	530	405	338	345	284
23	1240	989	2750	1870	4800	1330	883	632	484	368	356	284
24	1510	1910	1490	2230	4160	750	861	662	565	326	1180	280
25	2340	2040	1070	1860	3830	637	852	531	447	297	586	277
26	1880	1990	1080	1500	3440	628	804	497	388	288	493	279
27	1280	1840	1080	2340	3090	623	671	504	359	285	693	277
28	1100	1940	1060	3040	2950	613	655	680	346	305	447	271
29	823	1990	1050	3250	---	1330	633	1240	342	300	380	269
30	690	1240	904	3190	---	5740	644	2120	334	273	500	291
31	523	---	731	3190	---	6890	---	2140	---	277	488	---
MEAN	1632	1284	2293	1962	2822	1712	2816	1915	722	344	542	304
MAX	3140	2040	5110	3480	4800	6890	6370	4180	2450	637	1710	388
MIN	465	518	559	745	1090	613	633	497	334	273	261	269

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD *, BY WATER YEAR (WY)

MEAN	520.4	636.7	1216	1488	2400	3164	2395	1477	777.0	743.6	803.5	407.6
MAX	1632	1309	2329	3327	3632	6804	4098	4062	1476	2029	1967	806.0
(WY)	1990	1986	1986	1984	1985	1989	1984	1989	1989	1989	1989	1989
MIN	251.5	250.6	316.5	444.5	819.5	564.5	351.7	327.7	325.1	271.7	210.4	137.9
(WY)	1984	1987	1989	1986	1986	1988	1986	1985	1986	1983	1983	1985

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD *	
AVERAGE FLOW	1521		1331	
HIGHEST ANNUAL MEAN			2043	1984
LOWEST ANNUAL MEAN			507.1	1988
HIGHEST DAILY MEAN	6890	Mar 31	11400	Mar 2 1987
LOWEST DAILY MEAN	261	Aug 3	103	Sep 19 1985
INSTANTANEOUS PEAK FLOW	7270	Mar 31	11700	Mar 2 1987
INSTANTANEOUS PEAK STAGE	17.45	Mar 31	20.58	Mar 2 1987
INSTANTANEOUS LOW FLOW	254*	Jul 30	94	Sep 19 1985
ANNUAL RUNOFF (INCHES)	17.1		15.0	
10 PERCENTILE	3470		4000	
50 PERCENTILE	1020		529	
95 PERCENTILE	283		209	

* Regulated period only (1984-1990). See REMARKS.

NEUSE RIVER BASIN

02087570 NEUSE RIVER AT SMITHFIELD, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955, 1959-67, October 1988 to current year.

REMARKS.--Station operated to define water quality as part of a six-county regional surface water-quality assessment.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT
OCT												
12...	1530	1310	105	7.1	19.0	25	761	7.4	6.0	2.2	11	47
NOV												
28...	1215	1970	105	7.2	12.0	30	756	9.2	5.7	2.1	10	45
DEC												
18...	0955	4740	88	7.2	5.0	40	767	12.5	5.4	2.1	8.2	41
JAN												
10...	1230	3160	107	7.1	5.5	55	756	11.7	6.0	2.2	11	47
FEB												
20...	1500	4160	109	7.2	12.0	60	770	9.6	5.6	2.1	8.4	42
MAR												
22...	0945	1680	118	6.2	12.0	55	769	9.9	5.6	2.2	13	52
APR												
04...	1100	6110	75	6.8	14.0	80	750	8.8	4.6	1.7	6.9	41
MAY												
22...	0900	749	199	7.3	21.5	25	754	12.6	7.0	2.4	19	57
JUN												
12...	0900	461	171	6.6	22.5	25	760	7.7	7.3	2.6	23	60
JUL												
26...	0915	319	223	6.9	26.0	27	763	6.2	7.9	3.0	31	64
AUG												
14...	1000	354	220	6.8	25.5	27	759	6.6	8.0	2.9	30	63
SEP												
05...	1000	317	255	6.7	25.5	22	762	--	8.7	3.1	33	64

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	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)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)
OCT												
12...	1	2.6	13	7.6	0.20	8.6	58	--	<0.010	0.500	0.030	0.04
NOV												
28...	0.9	2.5	13	7.2	--	8.6	90	0.580	0.020	0.600	0.070	0.09
DEC												
18...	0.8	2.5	11	6.6	0.10	8.1	78	0.390	0.010	0.400	0.160	0.21
JAN												
10...	1	2.6	13	7.9	0.10	9.7	83	0.580	0.020	0.600	0.120	0.16
FEB												
20...	0.8	2.3	11	7.0	0.10	9.4	82	0.590	0.010	0.600	0.040	0.05
MAR												
22...	1	2.5	16	8.5	<0.10	10	84	--	<0.010	0.900	0.030	0.04
APR												
04...	0.7	2.1	9.5	4.6	<0.10	8.9	63	--	<0.010	0.400	0.040	0.05
MAY												
22...	2	2.8	19	11	0.10	10	169	--	<0.010	1.30	0.010	0.01
JUN												
12...	2	3.1	26	12	0.20	11	111	1.28	0.020	1.30	0.030	0.04
JUL												
26...	2	4.2	29	13	0.30	10	144	1.68	0.020	1.70	0.080	0.10
AUG												
14...	2	4.5	35	17	0.20	13	143	1.49	0.010	1.50	0.040	0.05
SEP												
05...	2	4.5	39	17	0.10	12	165	2.29	0.010	2.30	0.040	0.05

NEUSE RIVER BASIN

02087570 NEUSE RIVER AT SMITHFIELD, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHATE, 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)
OCT 12...	0.57	0.38	0.60	0.40	1.1	4.9	0.93	0.120	0.28	0.060	0.090	0.030
NOV 28...	0.63	0.93	0.70	1.0	1.3	5.8	1.4	0.130	0.18	0.060	0.060	0.060
DEC 18...	0.84	0.56	1.0	0.70	1.4	6.2	1.1	0.090	0.15	0.020	0.050	0.020
JAN 10...	--	--	0.80	--	--	--	--	0.130	0.18	0.060	0.060	0.060
FEB 20...	0.66	0.66	0.70	0.70	1.3	5.8	1.3	0.100	0.15	0.020	0.050	0.030
MAR 22...	0.67	0.67	0.70	0.70	1.6	7.1	1.6	0.140	0.21	0.060	0.070	0.060
APR 04...	0.66	0.45	0.70	0.50	1.1	4.9	0.90	0.030	<0.03	0.060	<0.010	0.050
MAY 22...	0.79	0.28	0.80	0.30	2.1	9.3	1.6	0.180	0.31	0.090	0.100	0.080
JUN 12...	0.57	0.28	0.60	0.30	1.9	8.4	1.6	0.150	0.31	0.090	0.100	0.070
JUL 26...	0.62	0.51	0.70	0.60	2.4	11	2.3	0.270	0.61	0.200	0.200	0.180
AUG 14...	0.66	0.35	0.70	0.40	2.2	9.7	1.9	0.140	0.40	0.150	0.130	0.130
SEP 05...	0.76	0.83	0.80	0.90	3.1	14	3.3	0.170	0.46	0.170	0.150	0.160

DATE	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)
OCT 12...	0.09	380	<1	<1	<1	1	1	890	2	240	<0.10	2
NOV 28...	0.18	--	--	--	--	--	--	--	--	--	--	--
DEC 18...	0.06	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	0.18	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	0.09	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	0.18	--	--	--	--	--	--	--	--	--	--	--
APR 04...	0.15	4100	<1	<1	6	2	5	460	6	40	0.10	2
MAY 22...	0.25	--	--	--	--	--	--	--	--	--	--	--
JUN 12...	0.21	860	<1	<1	2	1	10	1200	1	150	<0.10	2
JUL 26...	0.55	--	--	--	--	--	--	--	--	--	--	--
AUG 14...	0.40	750	1	<1	5	1	71	1100	13	120	<0.10	4
SEP 05...	0.49	850	<1	6	48	1	11	1400	14	150	<0.10	2

NEUSE RIVER BASIN

02087570 NEUSE RIVER AT SMITHFIELD, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	ALDRIN, TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)
OCT												
12...	<1	<1	<10	6.6	0.07	<0.001	<0.1	<0.001	<0.001	<0.001	<0.01	<0.001
NOV												
28...	--	--	--	7.7	0.06	--	--	--	--	--	--	--
DEC												
18...	--	--	--	8.8	0.04	--	--	--	--	--	--	--
JAN												
10...	--	--	--	7.0	0.04	--	--	--	--	--	--	--
FEB												
20...	--	--	--	6.9	0.05	--	--	--	--	--	--	--
MAR												
22...	--	--	--	7.1	0.04	--	--	--	--	--	--	--
APR												
04...	<1	<1	10	8.8	0.06	<0.001	<0.1	<0.001	<0.001	<0.001	0.01	0.001
MAY												
22...	--	--	--	6.3	0.04	--	--	--	--	--	--	--
JUN												
12...	<1	<1	<10	6.5	0.06	--	--	--	--	--	--	--
JUL												
26...	--	--	--	6.4	0.07	--	--	--	--	--	--	--
AUG												
14...	<1	<1	20	6.5	0.06	<0.001	<0.1	<0.001	<0.001	<0.001	<0.01	0.001
SEP												
05...	<1	<1	20	6.0	0.04	--	--	--	--	--	--	--

DATE	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	PCB, TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)
OCT												
12...	<0.001	<0.001	<0.01	<0.1	<0.10	<0.001	<0.001	0.001	<0.01	<0.01	<0.01	<0.01
NOV												
28...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
18...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
10...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
20...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
22...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
04...	<0.001	<0.001	<0.01	<0.1	<0.10	<0.001	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01
MAY												
22...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
12...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
26...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
14...	<0.001	<0.001	<0.01	<0.1	<0.10	<0.001	<0.001	0.004	<0.01	<0.01	<0.01	<0.01
SEP												
05...	--	--	--	--	--	--	--	--	--	--	--	--

NEUSE RIVER BASIN

02087570 NEUSE RIVER AT SMITHFIELD, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	MIREX, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	BENZENE TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)
OCT 12...	<0.01	<0.01	<0.1	<1	<0.01	--	--	--	--	--	--	--
NOV 28...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 18...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--	--
APR 04...	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
MAY 22...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 12...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 14...	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20
SEP 05...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	METHYL-CHLO-RIDE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)
OCT 12...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 28...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 18...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--	--
APR 04...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.2
MAY 22...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 12...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 14...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.2
SEP 05...	--	--	--	--	--	--	--	--	--	--	--	--

NEUSE RIVER BASIN

02087570 NEUSE RIVER AT SMITHFIELD, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPENE TOTAL (UG/L)
OCT 12...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 28...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 18...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--	--
APR 04...	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<5.0	<0.20	<0.20	<0.20
MAY 22...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 12...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 14...	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
SEP 05...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	ACE-NAPHTH-ENE TOTAL (UG/L)	ACE-NAPHTH-YLENE TOTAL (UG/L)	ANTHRA-CENE TOTAL (UG/L)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE TOTAL (UG/L)	BENZO-A-PYRENE TOTAL (UG/L)	BENZO B FLUOR-AN-THENE TOTAL (UG/L)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE TOTAL (UG/L)	BENZO K FLUOR-AN-THENE TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)
OCT 12...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 28...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 18...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--	--
APR 04...	<0.20	<0.20	<5.0	<5.0	<5.0	<10.0	<10.0	<10.0	<10.0	<10.0	<5.0	<30.0
MAY 22...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 12...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 14...	<0.20	<0.20	--	--	--	--	--	--	--	--	--	--
SEP 05...	--	--	--	--	--	--	--	--	--	--	--	--

NEUSE RIVER BASIN

02087570 NEUSE RIVER AT SMITHFIELD, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	CHRY-SENE TOTAL (UG/L)	DI-N-BUTYL PHTHAL-ATE TOTAL (UG/L)	DI-N-OCTYL PHTHAL-ATE TOTAL (UG/L)	1,2,5,6 -DIBENZ -ANTHRA -CENE TOTAL (UG/L)	DIETHYL PHTHAL-ATE TOTAL (UG/L)	DI-METHYL PHTHAL-ATE TOTAL (UG/L)	4,6-DINITRO -ORTHO-CRESOL TOTAL (UG/L)	FLUOR-ANTHENE TOTAL (UG/L)	FLUOR-ENE TOTAL (UG/L)	HEXA-CHLORO-BENZENE TOTAL (UG/L)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L)	HEXA-CHLORO-CYCLO-PENT-ADIENE TOTAL (UG/L)
OCT 12...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 28...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 18...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--	--
APR 04...	<10.0	<5.0	<10.0	<10.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<5.0	<5.0
MAY 22...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 12...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 14...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 05...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	HEXA-CHLORO-ETHANE TOTAL (UG/L)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L)	ISO-PHORONE TOTAL (UG/L)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L)	N-NITRO -SODI-PHENY-LAMINE TOTAL (UG/L)	NAPHTH-ALENE TOTAL (UG/L)	NITRO-BENZENE TOTAL (UG/L)	N-NITRO -SODI-METHY-LAMINE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	PHENAN-THRENE TOTAL (UG/L)	PHENOL (C6H-5OH) TOTAL (UG/L)
OCT 12...	--	--	--	--	--	--	--	--	--	--	--
NOV 28...	--	--	--	--	--	--	--	--	--	--	--
DEC 18...	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--
APR 04...	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<30.0	<5.0	<5.0
MAY 22...	--	--	--	--	--	--	--	--	--	--	--
JUN 12...	--	--	--	--	--	--	--	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--	--	--
AUG 14...	--	--	--	--	--	--	--	--	--	--	--
SEP 05...	--	--	--	--	--	--	--	--	--	--	--

NEUSE RIVER BASIN

02087570 NEUSE RIVER AT SMITHFIELD, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	PYRENE TOTAL (UG/L)	1,2,4-TRI-CHLORO-BENZENE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	BIS (2-CHLORO-ETHOXY) METHANE TOTAL (UG/L)	BIS 2-CHLORO-ETHYL ETHER TOTAL (UG/L)	BIS (2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L)	2-CHLORO-NAPH-THALENE TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	BIS(2-ETHYL HEXYL) PHTHAL-ATE TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)
OCT 12...	--	--	--	--	--	--	--	--	--	--	--
NOV 28...	--	--	--	--	--	--	--	--	--	--	--
DEC 18...	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--
APR 04...	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
MAY 22...	--	--	--	--	--	--	--	--	--	--	--
JUN 12...	--	--	--	--	--	--	--	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--	--	--
AUG 14...	--	--	<0.20	<0.20	--	--	--	--	--	--	--
SEP 05...	--	--	--	--	--	--	--	--	--	--	--

DATE	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L)	4-BROMO-PHENYL PHENYL ETHER TOTAL (UG/L)	4-CHLORO-PHENYL PHENYL ETHER TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 12...	--	--	--	--	--	--	--	--	--	24	85
NOV 28...	--	--	--	--	--	--	--	--	--	27	144
DEC 18...	--	--	--	--	--	--	--	--	--	59	755
JAN 10...	--	--	--	--	--	--	--	--	--	72	614
FEB 20...	--	--	--	--	--	--	--	--	--	89	1000
MAR 22...	--	--	--	--	--	--	--	--	--	48	218
APR 04...	<5.0	<5.0	<20.0	<5.0	<20.0	<5.0	<5.0	<5.0	<30.0	98	1620
MAY 22...	--	--	--	--	--	--	--	--	--	30	61
JUN 12...	--	--	--	--	--	--	--	--	--	20	25
JUL 26...	--	--	--	--	--	--	--	--	--	38	33
AUG 14...	--	--	--	--	--	--	--	--	--	39	37
SEP 05...	--	--	--	--	--	--	--	--	--	38	33

NEUSE RIVER BASIN

0208758850 SWIFT CREEK NEAR MCCULLARS CROSSROADS, NC

LOCATION.--Lat 35°41'33", long 78°41'34", Wake County, Hydrologic Unit 03020201, 0.1 mi downstream Secondary Road 1375, 0.1 mi downstream from Lake Wheeler and 2.0 mi north of McCullars Crossroads.

DRAINAGE AREA.--35.8 mi^2.

PERIOD OF RECORD.--December 1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 258 ft above National Geodetic Vertical Datum of 1929, from topgraphic map.

REMARKS.--Record good except those for estimated daily discharges, which are fair. Minimum discharge for period of record also occurred on Sept. 29, 1990.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	9.0	17	39	31	25	199	14	18	5.3	e1.1	.37
2	278	15	16	36	29	24	89	34	13	3.5	e1.0	.36
3	123	82	17	28	26	95	115	125	11	3.3	e1.0	.30
4	51	50	10	24	28	102	68	210	8.9	3.9	e.90	.17
5	30	27	7.5	22	30	56	40	112	6.0	3.2	e.90	.15
6	23	19	8.5	30	26	39	31	67	5.8	2.5	e.90	.13
7	18	15	9.5	41	27	30	91	38	5.0	2.5	e1.5	.13
8	15	23	92	94	27	25	75	24	3.9	2.6	e2.5	.11
9	12	37	237	125	25	28	42	17	4.1	2.4	e10	.10
10	11	31	121	69	295	27	31	121	3.2	2.6	e25	.10
11	11	21	96	43	165	26	29	150	2.4	3.3	e15	.09
12	10	16	114	35	70	24	23	49	1.6	4.0	e10	.08
13	9.7	14	207	26	43	23	19	28	1.4	3.4	e5.0	.08
14	9.9	13	131	22	33	21	18	30	1.3	6.5	e4.0	.10
15	10	22	70	21	28	19	28	20	1.5	7.3	e4.5	.09
16	10	84	48	20	34	19	35	16	2.5	5.5	e12	.10
17	10	54	35	20	97	28	29	13	3.0	8.9	e200	.08
18	15	32	29	21	57	96	22	9.4	2.7	21	e90	.08
19	150	22	30	20	119	61	17	7.1	44	14	e50	.07
20	99	14	35	19	105	39	15	7.9	35	9.8	e18	.06
21	37	8.0	32	150	56	25	16	11	20	7.7	e10	.07
22	20	8.5	28	130	44	21	13	13	22	6.3	e5.0	.07
23	14	89	23	60	94	19	13	20	44	4.7	e6.0	.06
24	11	87	21	40	88	17	12	15	29	3.2	e5.0	.06
25	10	44	19	37	50	16	11	11	16	2.6	e4.5	.06
26	9.7	30	19	122	32	16	11	11	11	2.2	e2.5	.06
27	9.0	23	19	99	27	15	9.6	13	8.7	1.8	e1.5	.06
28	8.1	24	20	55	26	14	9.5	30	7.3	1.8	e1.0	.05
29	8.2	29	19	42	---	472	9.2	177	7.0	1.7	e.70	.04
30	8.5	23	21	43	---	660	9.5	70	5.9	e1.2	e.50	.05
31	9.2	---	25	38	---	321	---	30	---	e1.2	.37	---
MEAN	35.6	32.2	50.9	50.7	61.1	77.5	37.7	48.2	11.5	4.84	15.8	.11
MAX	278	89	237	150	295	660	199	210	44	21	200	.37
MIN	8.1	8.0	7.5	19	25	14	9.2	7.1	1.3	1.2	.37	.04
IN.	1.15	1.00	1.64	1.63	1.78	2.50	1.17	1.55	.36	.16	.51	.00

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	23.2	31.9	23.5	35.0	54.5	70.9	37.6	44.3	21.8	19.2	33.1	7.79
MAX	35.6	32.2	50.9	50.7	75.2	120.1	56.8	75.7	38.7	51.5	81.4	18.6
(WY)	1990	1990	1990	1990	1989	1989	1989	1989	1989	1989	1989	1989
MIN	10.8	31.7	7.81	19.7	27.2	15.1	18.3	9.05	11.5	1.16	2.04	.111
(WY)	1989	1989	1989	1989	1988	1988	1988	1988	1990	1988	1988	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	35.5		*****	
HIGHEST ANNUAL MEAN			48.9	1989
LOWEST ANNUAL MEAN			35.5	1990
HIGHEST DAILY MEAN	660	Mar 30	893	Mar 24 1989
LOWEST DAILY MEAN	.04	Sep 29	.04	Sep 29 1990
INSTANTANEOUS PEAK FLOW	1150	Mar 29	1170	Aug 18 1989
INSTANTANEOUS PEAK STAGE	10.09	Mar 29	10.14	Aug 18 1989
INSTANTANEOUS LOW FLOW	.04	Sep 29	.04*	Aug 28 1988
ANNUAL RUNOFF (INCHES)	13.5		*****	
10 PERCENTILE	98		99	
50 PERCENTILE	19		20	
95 PERCENTILE	.09		.61	

***** Indicates not enough data, therefore statistic is not computed

* See REMARKS.

NEUSE RIVER BASIN

02088000 MIDDLE CREEK NEAR CLAYTON, NC

LOCATION.--Lat 35°34'10", long 78°35'30", Johnston County, Hydrologic Unit 03020201, on right bank 300 ft downstream from bridge on State Highway 50, 0.5 mi upstream from Buffalo Branch, 3.7 mi downstream from Wake-Johnston County line, and 9.5 mi southwest of Clayton.

DRAINAGE AREA.--83.5 mi^2.

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

REVISED RECORDS.--WSP 952: 1940(M), 1941. WSP 1233: 1943(M), 1945, 1949. WDR NC-81-1: Drainage area.

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

REMARKS.--No estimated daily discharges. Records good. Maximum discharge for period of record, result of dam failure. No flow also occurred on Oct. 12-13, 1954 and July 13-28, 1986. Minimum discharge for current water year also occurred on Sept. 20, 28, 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	41	101	112	107	94	537	43	41	15	5.7	7.1
2	333	51	81	110	97	89	406	69	33	14	5.3	5.8
3	376	213	75	86	95	297	294	172	30	14	5.4	4.8
4	129	175	67	78	93	406	205	185	27	12	5.4	4.4
5	67	91	65	76	94	217	149	148	23	11	5.1	3.5
6	50	69	63	85	84	146	126	136	19	9.5	5.0	3.2
7	42	62	61	117	79	119	196	96	18	8.6	7.1	3.0
8	40	59	157	205	85	101	234	68	17	8.1	12	4.3
9	41	125	441	340	78	105	142	54	16	8.2	17	3.8
10	36	182	489	209	272	109	114	92	15	7.5	36	3.7
11	33	98	321	142	498	99	109	232	13	28	25	5.3
12	31	72	311	117	280	91	100	103	12	15	17	6.2
13	30	62	394	96	143	84	87	66	10	13	13	4.7
14	29	60	447	84	114	78	82	56	9.7	16	10	3.9
15	30	63	267	80	104	74	98	48	10	27	18	4.3
16	29	208	184	78	109	73	144	45	84	18	27	4.2
17	26	244	144	75	194	84	113	40	63	14	366	3.5
18	68	125	128	75	149	310	85	36	38	64	180	2.8
19	291	89	121	73	210	239	72	31	121	44	61	2.5
20	479	76	131	69	299	128	67	28	131	23	34	2.4
21	182	72	123	187	171	95	65	33	54	18	24	2.5
22	91	67	110	363	134	83	64	36	39	16	20	2.9
23	65	146	89	186	186	77	61	45	158	14	19	3.1
24	56	218	88	126	237	72	55	42	99	12	23	3.4
25	52	125	104	107	170	68	51	35	59	9.4	20	4.0
26	47	95	87	255	117	67	49	33	38	7.6	17	3.4
27	43	84	86	308	103	65	44	34	30	6.9	16	2.8
28	40	78	83	170	99	62	41	44	24	6.8	15	2.7
29	39	179	84	133	---	283	40	118	21	7.1	12	3.1
30	38	150	85	152	---	859	40	114	18	7.0	10	4.1
31	41	---	91	131	---	848	---	62	---	6.2	8.5	---
MEAN	94.4	113	164	143	157	178	129	75.6	42.4	15.5	33.5	3.85
MAX	479	244	489	363	498	859	537	232	158	64	366	7.1
MIN	26	41	61	69	78	62	40	28	9.7	6.2	5.0	2.4
IN.	1.30	1.51	2.26	1.97	1.96	2.46	1.72	1.04	.57	.21	.46	.05

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	46.4	62.3	86.7	131.4	166.5	165.9	118.4	74.0	49.2	56.3	59.0	48.8
MAX	275.0	226.4	254.5	355.7	450.2	352.1	319.0	329.5	181.4	472.3	340.4	436.2
(WY)	1960	1958	1973	1954	1973	1989	1959	1958	1957	1965	1949	1955
MIN	.768	4.67	19.7	31.6	46.2	45.1	16.1	11.4	2.15	.227	1.75	.497
(WY)	1987	1974	1952	1942	1941	1981	1986	1981	1986	1986	1983	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	95.5		88.4	
HIGHEST ANNUAL MEAN			161.4	1965
LOWEST ANNUAL MEAN			30.0	1981
HIGHEST DAILY MEAN	859	Mar 30	4870	Feb 3 1973
LOWEST DAILY MEAN	2.4	Sep 20	0	Oct 11 1954
INSTANTANEOUS PEAK FLOW	978	Mar 30	8510*	Feb 3 1973
INSTANTANEOUS PEAK STAGE	8.14	Mar 30	13.42*	Feb 3 1973
INSTANTANEOUS LOW FLOW	2.2*	Sep 19	0*	Oct 11 1954
ANNUAL RUNOFF (INCHES)	15.5		14.4	
10 PERCENTILE	222		207	
50 PERCENTILE	68		46	
95 PERCENTILE	3.4		3.5	

* See REMARKS.

NEUSE RIVER BASIN

02088500 LITTLE RIVER NEAR PRINCETON, NC

LOCATION.--Lat 35°30'40", long 78°09'38", Johnston County, Hydrologic Unit 03020201, on left bank 600 ft downstream from bridge on Secondary Road 2320, 0.8 mi upstream from Little Creek, and 3 mi north of Princeton.

DRAINAGE AREA.--232 mi^2.

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

REVISED RECORD.--WSP 1233: 1935(M). WDR NC-81-1: Drainage area.

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

REMARKS.--No estimated daily discharges. Records good except those for June to August, which are fair due to regulation from unknown source. Slight diurnal fluctuation and occasional regulation for short periods, caused by mills above station. Minimum discharge for period of record occurred frequently in June 1986 due to regulation from unknown source.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	181	126	360	293	287	207	1710	105	275	7.6	1.8	162
2	500	138	274	345	253	175	1830	177	228	7.7	2.2	105
3	638	520	236	308	236	366	1680	423	137	8.7	.70	81
4	552	734	211	268	216	903	1230	714	101	15	.52	69
5	524	611	193	244	209	810	949	926	116	2.6	.51	54
6	484	468	181	240	194	536	874	969	119	16	.38	47
7	319	383	173	278	169	362	821	842	94	16	.61	39
8	195	299	276	400	157	254	577	488	82	8.5	.82	34
9	155	341	836	661	145	199	455	277	70	4.9	41	27
10	133	521	1330	726	298	178	402	203	63	2.6	651	28
11	112	449	1460	620	697	166	347	224	55	1.8	2080	34
12	101	362	1420	519	675	144	299	239	49	1.7	2700	31
13	97	286	1370	406	574	127	260	227	39	26	1710	25
14	85	242	1350	296	476	109	229	239	33	14	371	30
15	82	337	1310	242	317	95	211	196	22	14	379	28
16	80	620	1200	219	246	84	208	144	31	15	177	25
17	79	611	1040	198	359	96	218	128	30	12	107	22
18	139	425	785	185	369	567	199	112	30	29	83	22
19	592	327	572	174	451	819	182	96	31	124	71	17
20	1100	289	503	164	713	625	167	85	31	257	62	11
21	1270	262	471	186	651	439	151	81	8.9	81	61	14
22	1140	228	421	371	497	298	144	90	9.9	35	52	11
23	772	284	330	460	456	200	137	128	20	26	44	11
24	450	465	263	438	518	144	131	133	38	24	99	11
25	258	467	312	393	499	111	122	123	54	14	595	12
26	197	424	286	386	400	96	113	105	73	7.7	733	12
27	166	404	261	567	314	87	104	104	61	5.9	414	13
28	146	337	243	558	253	71	95	127	40	11	207	12
29	135	409	239	474	---	339	93	263	28	4.9	165	13
30	125	484	240	430	---	1270	92	276	21	3.9	171	13
31	128	---	251	358	---	1590	---	243	---	2.3	172	---
MEAN	353	395	593	368	380	370	468	274	66.3	25.8	360	33.8
MAX	1270	734	1460	726	713	1590	1830	969	275	257	2700	162
MIN	79	126	173	164	145	71	92	81	8.9	1.7	.38	11
IN.	1.75	1.90	2.95	1.83	1.70	1.84	2.25	1.36	.32	.13	1.79	.16

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	133.1	142.0	235.2	381.0	481.3	473.2	336.4	199.4	151.5	185.4	187.0	129.9
MAX	1202	645.3	716.8	999.4	1285	1204	969.5	834.9	573.3	826.0	782.5	905.2
(WY)	1965	1948	1937	1954	1948	1989	1959	1989	1953	1959	1931	1955
MIN	6.00	13.0	16.0	24.1	49.6	119.6	53.3	17.3	14.1	21.9	5.65	2.83
(WY)	1934	1934	1934	1934	1934	1981	1986	1986	1986	1952	1980	1980

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	307.3		252.9	
HIGHEST ANNUAL MEAN			511.1	1960
LOWEST ANNUAL MEAN			91.8	1951
HIGHEST DAILY MEAN	2700	Aug 12	6790	Oct 6 1964
LOWEST DAILY MEAN	.38	Aug 6	.08	Jun 16 1986
INSTANTANEOUS PEAK FLOW	2910	Aug 12	7150	Oct 6 1964
INSTANTANEOUS PEAK STAGE	11.90	Aug 12	13.94	Oct 6 1964
INSTANTANEOUS LOW FLOW	.20	Aug 6	.08*	Jun 1 1986
ANNUAL RUNOFF (INCHES)	18.0		14.8	
10 PERCENTILE	713		649	
50 PERCENTILE	198		120	
95 PERCENTILE	7.3		14	

* See REMARKS.

NEUSE RIVER BASIN

02089000 NEUSE RIVER NEAR GOLDSBORO, NC

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 upstream from Stony Creek, 1.5 mi downstream from Seaboard Coast Line Railroad bridge, 3.2 mi south of Wayne County courthouse in Goldsboro, 4.3 mi downstream from Little River, and 135 mi upstream from mouth.

DRAINAGE AREA.--2,399 mi^2.

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

REVISED RECORDS.--WSP 1333: 1931, 1935. WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 42.95 ft above National Geodetic Vertical Datum of 1929. Prior to July 24, 1931, nonrecording gage at railroad bridge, 1.5 mi upstream at datum 2.00 ft higher. July 24, 1931 to Aug. 31, 1948, water-stage recorder at site 2.3 mi upstream at datum 1.71 ft higher than present datum. National Weather Service gage height telemeter at station.

REMARKS.--Records good. Flow regulated by Falls Lake (station 02087182). Diversions for municipal water supply for cities of Durham and Butner (station 02087183). National Weather Service gage height telemeter at station. Prior to regulation, maximum discharge, 30,700 ft^3/s Sept. 27, 1945, gage height, 26.72 ft, site and datum then in use; minimum discharge, 76 ft^3/s Sept. 26, 1968. Minimum discharge during regulation also occurred Oct. 3, 1985.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of June 1866 and July 1919, reached stages of about 29 ft and 28 ft, respectively, at site 2.3 mi upstream at present datum, from flood profiles of U. S. Army Corps of Engineers. Flood of Oct. 5, 1929, reached a stage of 27.3 ft at railroad bridge at present datum, discharge, 38,600 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1630	1200	3120	2590	4560	5500	5880	1250	5570	608	407	1090
2	2550	1220	2490	2640	4590	5030	6980	1600	5090	571	397	1030
3	3870	1710	2000	2790	4490	4790	8050	2260	4450	530	390	846
4	4450	2910	1770	2820	4170	4860	8940	2850	3540	517	379	722
5	4860	3580	1650	3270	3220	4960	9470	3430	2950	515	372	636
6	4840	3640	1570	3540	2820	5140	9530	4010	2580	484	362	593
7	4460	3220	1500	3550	2790	5100	9190	4370	2240	473	384	542
8	3970	2770	1730	3660	3130	4630	8690	4690	1550	485	450	522
9	3560	2620	2830	4010	3240	4090	8130	4820	1240	478	631	502
10	3280	2850	4700	4600	3150	3070	7500	4590	1050	546	1180	500
11	3100	2870	5480	5100	3020	2600	6920	4360	942	628	2440	501
12	2890	3100	6280	5320	3700	2360	6460	4240	876	561	2260	490
13	2120	2980	6820	5350	4070	2200	6040	4250	816	638	1980	511
14	1410	2590	7070	5250	4190	2090	5640	4370	782	620	2550	487
15	1100	2120	7110	4980	4240	2090	5320	4490	717	596	2730	462
16	1000	2170	7150	3680	4300	2020	4760	4410	699	761	1660	442
17	966	2670	7260	3000	4420	2000	3470	4040	680	666	1420	423
18	941	3260	7360	2660	4580	2520	3150	2520	747	622	1280	402
19	1140	3390	7370	2450	4940	3650	3270	1610	778	703	1800	390
20	2680	2840	7250	2180	5130	4190	3350	1310	710	1090	1920	377
21	3910	2390	6960	2100	5210	4290	2870	1230	711	1070	1330	373
22	4350	2140	6640	2260	5400	4040	2180	1220	870	826	1060	362
23	4880	2120	6310	3100	5700	3590	1850	1160	912	632	957	358
24	5010	2320	5870	3510	5920	2850	1770	1290	959	614	850	346
25	3780	3170	4940	3740	6080	2200	1700	1390	1150	568	1710	337
26	3390	3620	3510	3760	6190	1820	1620	1240	1030	498	2080	330
27	3090	3670	2870	3440	6150	1670	1510	1150	885	463	1910	321
28	2180	3480	2640	3740	5910	1580	1320	2780	801	471	1800	440
29	1770	3300	2590	4120	---	1990	1230	5000	723	491	1320	517
30	1450	3340	2600	4280	---	3550	1220	5210	652	481	1160	498
31	1330	---	2600	4430	---	5060	---	5620	---	452	1000	---
MEAN	2902	2775	4517	3610	4475	3404	4934	3121	1557	602	1296	512
MAX	5010	3670	7370	5350	6190	5500	9530	5620	5570	1090	2730	1090
MIN	941	1200	1500	2100	2790	1580	1220	1150	652	452	362	321

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD *, BY WATER YEAR (WY)

MEAN	843.8	1068	2156	2953	4238	5644	4633	2574	1489	1488	1429	901.2
MAX	2902	2775	4517	5726	7006	10290	7850	7276	3081	4668	3601	2468
(WY)	1990	1990	1990	1987	1983	1989	1989	1989	1989	1989	1989	1984
MIN	310.5	326.0	622.0	883.9	1517	1575	630.6	433.3	342.1	393.8	263.9	246.4
(WY)	1984	1988	1988	1986	1986	1988	1986	1986	1986	1987	1983	1985

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD *	
AVERAGE FLOW	2799		2442	
HIGHEST ANNUAL MEAN			3786	1989
LOWEST ANNUAL MEAN			1042	1988
HIGHEST DAILY MEAN	9530	Apr 6	17800	Mar 6 1987
LOWEST DAILY MEAN	321	Sep 27	162	Sep 10 1983
INSTANTANEOUS PEAK FLOW	9600	Apr 6	18000	Mar 6 1987
INSTANTANEOUS PEAK STAGE	18.32	Apr 6	22.93	Mar 6 1987
INSTANTANEOUS LOW FLOW	316	Sep 27	157*	Sep 19 1985
ANNUAL RUNOFF (INCHES)	15.8		13.8	
10 PERCENTILE	5490		7000	
50 PERCENTILE	2570		1180	
95 PERCENTILE	438		289	

* Regulated period only (1983-1990). See REMARKS.

NEUSE RIVER BASIN

0208925200 BEAR CREEK AT MAYS STORE, NC

LOCATION.--Lat 35°16'28", long 77°47'40", Lenoir County, Hydrologic Unit 03020202, at downstream side of bridge on Secondary Road 1318, 1.0 mi downstream from Secondary Road 1002, and 0.7 mi west of Mays Store.

DRAINAGE AREA.--57.7 mi^2.

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 50 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Minimum discharge for current water year also occurred on Sept. 27-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	36	53	124	59	64	156	30	275	34	19	33
2	232	41	51	129	57	60	159	54	240	33	20	30
3	209	115	49	107	55	80	145	53	216	31	20	28
4	136	91	47	93	55	93	118	47	190	30	20	27
5	106	67	47	83	70	83	100	42	175	28	19	26
6	88	57	46	90	61	70	79	39	167	33	20	25
7	69	52	45	101	58	63	82	35	161	32	26	24
8	62	49	86	167	54	57	70	32	134	30	37	23
9	58	51	206	212	53	56	62	30	105	28	50	23
10	53	65	345	164	57	55	58	30	90	26	46	22
11	50	55	259	129	56	52	60	30	81	36	36	22
12	47	50	207	113	52	50	57	28	75	28	31	21
13	44	47	175	91	49	48	52	26	69	26	27	22
14	45	45	160	80	47	46	49	27	64	27	26	20
15	44	61	147	75	46	44	49	26	62	30	25	20
16	43	108	147	71	45	42	47	25	58	29	25	19
17	42	91	139	68	55	44	45	25	52	34	111	18
18	40	71	131	64	50	113	42	27	48	35	74	17
19	43	63	127	61	86	110	39	24	56	29	62	17
20	45	58	121	59	113	85	38	23	49	28	54	17
21	44	56	105	60	86	68	37	57	44	26	41	17
22	40	52	97	60	78	60	36	47	47	25	40	18
23	39	87	83	56	146	54	35	59	72	24	48	17
24	38	103	75	55	131	49	33	45	53	23	42	16
25	38	88	69	e53	110	46	32	37	46	22	37	15
26	37	75	68	e55	92	44	30	34	41	21	34	15
27	36	63	69	e65	78	43	29	34	39	21	31	15
28	35	61	67	e80	69	41	28	303	37	22	30	15
29	35	58	69	e60	---	90	28	1060	35	21	29	14
30	35	55	77	66	---	217	29	857	33	21	48	14
31	35	---	90	63	---	176	---	361	---	20	38	---
MEAN	62.8	65.7	112	88.8	70.3	71.1	60.8	114	93.8	27.5	37.6	20.3
MAX	232	115	345	212	146	217	159	1060	275	36	111	33
MIN	35	36	45	53	45	41	28	23	33	20	19	14
IN.	1.26	1.27	2.23	1.78	1.27	1.42	1.18	2.29	1.81	.55	.75	.39

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	38.0	38.1	55.2	59.6	54.5	85.0	85.6	120.8	60.7	47.0	55.1	34.6
MAX	62.8	65.7	111.5	88.8	70.3	148.5	150.0	216.0	93.8	98.5	105.7	47.8
(WY)	1990	1990	1990	1990	1990	1989	1989	1989	1990	1989	1989	1989
MIN	18.1	21.1	23.2	32.4	45.0	35.3	45.9	32.1	22.4	14.9	22.1	20.3
(WY)	1988	1988	1989	1989	1988	1988	1988	1988	1988	1988	1988	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	68.8		*****	
HIGHEST ANNUAL MEAN			83.5	1989
LOWEST ANNUAL MEAN			31.7	1988
HIGHEST DAILY MEAN	1060	May 29	1060	May 29 1990
LOWEST DAILY MEAN	14	Sep 29	10	Jul 19 1988
INSTANTANEOUS PEAK FLOW	1220	May 29	1220	May 29 1990
INSTANTANEOUS PEAK STAGE	9.25	May 29	9.25	May 29 1990
INSTANTANEOUS LOW FLOW	14*	Sep 26	9.7	Jul 20 1988
ANNUAL RUNOFF (INCHES)	16.2		*****	
10 PERCENTILE	125		128	
50 PERCENTILE	51		39	
95 PERCENTILE	20		17	

***** Indicates not enough data, therefore statistic is not computed

* See REMARKS.

NEUSE RIVER BASIN

02089500 NEUSE RIVER AT KINSTON, NC

LOCATION.--Lat 35°15'29", long 77°35'09", Lenoir County, Hydrologic Unit 03020202, on left bank at Kinston, 600 ft downstream from bridge on State Highway 11, and 90 mi upstream from mouth.

DRAINAGE AREA.--2,692 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1333: 1931-32. WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 10.90 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 25, 1934, nonrecording gage at highway bridge 1 mi downstream at datum 0.80 ft lower. The National Weather Service has telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Falls Lake (station 02087182). Diversions for municipal water supply for cities of Durham and Butner (station 02087183). Prior to regulation, maximum discharge 26,000 Oct. 13, 1964, gage height, 22.86 ft, site and datum then in use; minimum discharge 124 ft^3/s Sept. 26, 1932 site then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1919 reached a stage of 25.0 ft, present site and datum, discharge, about 39,000 ft^3/s, from information provided by North Carolina State Highway Commission. Flood in October 1924 reached a stage of 24.7 ft, present site and datum, discharge, 36,000 ft^3/s, from information provided by North Carolina State Highway Commission. Flood of Sept. 25-26, 1928, reached a stage of 24.2 ft, present site and datum, discharge, 34,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2210	1630	3560	3260	4640	6540	4570	1490	6570	729	466	1180
2	2620	1510	3460	3370	4800	6430	5300	1570	6460	682	425	1140
3	3420	1600	3080	3350	4910	6240	6170	1870	6300	638	398	1120
4	3820	2020	2550	3310	4970	5930	6910	2320	5970	599	387	985
5	4290	2690	2190	3310	4980	5620	7660	2760	5360	573	375	844
6	4730	3200	2000	3490	4630	5460	8470	3170	4220	561	365	743
7	5060	3570	1870	3810	3700	5420	9240	3580	3340	539	413	681
8	5200	3600	1960	4140	3340	5460	9650	3970	2730	585	772	634
9	5060	3300	2640	4380	3290	5420	9690	4310	2040	590	1000	597
10	4660	3010	3200	4620	3410	5170	9420	4610	1600	521	876	586
11	4170	3000	4040	4840	3440	4600	9050	4800	1310	536	1100	597
12	3740	3030	4910	5140	3330	3470	8480	4780	1140	610	2080	587
13	3410	3140	5680	5430	3510	2990	7870	4650	1050	573	2270	570
14	2780	3180	6320	5650	3870	2650	7310	4530	966	576	2070	580
15	2020	3000	6810	5750	4170	2470	6840	4490	961	654	2280	582
16	1570	2700	7170	5740	4360	2400	6420	4530	1150	633	2590	553
17	1340	2570	7390	5490	4480	2350	6000	4620	1010	715	2560	528
18	1260	2740	7490	4450	4590	2520	5370	4570	868	750	2030	507
19	1210	3110	7570	3550	4830	2840	4210	3770	870	741	1650	493
20	1310	3400	7690	3150	5050	3280	3800	2380	901	685	1860	477
21	2310	3300	7760	2770	5270	3810	3600	1770	840	949	2100	463
22	3230	2890	7740	2570	5460	4250	3460	1600	793	1030	1800	456
23	3680	2640	7580	2570	5770	4410	2740	1570	902	901	1750	452
24	4180	2590	7390	2970	6080	4250	2350	1480	1000	705	1600	442
25	4620	2650	7100	3410	6240	3780	2110	1460	984	625	1260	433
26	4820	3030	6980	3800	6340	2810	2000	1560	1120	601	1410	427
27	4450	3460	6260	4040	6440	2370	1900	1470	1100	543	2060	419
28	3840	3720	5110	4020	6520	2060	1780	1660	974	500	2080	414
29	2870	3770	4000	3960	---	2100	1600	3970	878	486	1940	460
30	2200	3670	3360	4140	---	2890	1500	6070	805	484	1690	580
31	1860	---	3150	4420	---	3690	---	6510	---	489	1430	---
MEAN	3288	2924	5097	4029	4729	3990	5516	3287	2140	639	1454	618
MAX	5200	3770	7760	5750	6520	6540	9690	6510	6570	1030	2590	1180
MIN	1210	1510	1870	2570	3290	2060	1500	1460	793	484	365	414

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD *, BY WATER YEAR (WY)

MEAN	1011	1207	2464	3192	4623	6288	5397	3076	1857	1672	1694	1145
MAX	3288	2924	5097	5465	7673	10720	9582	8773	3513	5223	4068	3248
(WY)	1990	1990	1990	1987	1983	1989	1989	1989	1983	1989	1989	1984
MIN	365.9	429.6	760.1	1181	1767	1673	877.6	563.1	459.5	467.7	314.4	357.3
(WY)	1984	1988	1988	1986	1986	1988	1986	1986	1986	1987	1983	1985

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD *	
AVERAGE FLOW	3133		2792	
HIGHEST ANNUAL MEAN			4216	1989
LOWEST ANNUAL MEAN			1204	1988
HIGHEST DAILY MEAN	9690	Apr 9	18500	Mar 9 1987
LOWEST DAILY MEAN	365	Aug 6	200	Sep 20 1985
INSTANTANEOUS PEAK FLOW	9740	Apr 8	18600	Mar 9 1987
INSTANTANEOUS PEAK STAGE	15.90	Apr 8	22.03	Mar 9 1987
INSTANTANEOUS LOW FLOW	355	Aug 7	196	Sep 20 1985
ANNUAL RUNOFF (INCHES)	15.8		14.1	
10 PERCENTILE	6170		7640	
50 PERCENTILE	2940		1450	
95 PERCENTILE	483		365	

* Regulated period only (1983-1990). See REMARKS.

NEUSE RIVER BASIN

02089500 NEUSE RIVER AT KINSTON, NC--Continued

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 September 1986.
WATER TEMPERATURE: October 1949 to September 1950, January 1955 to September 1956, July 1973 to September 1986.

INSTRUMENTATION.--Water-quality monitor from October 1981 to September 1986.

REMARKS.--Station operated as part of NASQAN network from October 1974 to present. Daily records of specific conductance for January 1955 to September 1956 are available in the files of the district office in Raleigh, NC.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 242 microsiemens Sept. 21, 1983; minimum daily, 43 microsiemens Mar. 28, 1975.
WATER TEMPERATURE: Maximum recorded, 36.0°C July 13, 14, 19, 20, 1986; minimum daily, 0.0°C Feb. 7, 1978, Jan. 13, 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
NOV 28...	1215	3730	105	7.0	10.0	15	760	9.9	190	220	5.2	2.0
JAN 31...	1200	4420	102	6.0	10.0	16	770	10.7	K85	220	5.3	2.1
MAR 27...	1130	2360	105	6.1	15.0	13	773	8.4	K30	K8	5.3	2.3
MAY 17...	1100	4610	89	5.9	23.0	8.6	760	6.7	96	170	6.0	2.4
AUG 08...	1330	651	205	6.9	27.5	7.2	763	6.7	--	--	8.3	2.6
SEP 05...	1330	834	144	6.8	27.0	12	765	6.8	K68	120	7.7	2.5

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	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)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)
NOV 28...	9.0	44	0.9	2.9	10	8	11	8.8	0.10	8.9	66	--
JAN 31...	7.9	41	0.7	2.6	10	8	10	8.3	0.10	8.0	75	--
MAR 27...	9.4	44	0.9	2.7	12	10	11	8.9	<0.10	8.2	63	0.690
MAY 17...	8.4	40	0.7	2.1	26	21	9.1	6.7	<0.10	7.7	62	--
AUG 08...	26	61	2	3.6	24	20	31	16	<0.10	7.7	122	0.990
SEP 05...	14	47	1	3.7	17	14	19	11	0.10	11	95	0.790

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)
NOV 28...	<0.010	0.560	0.050	0.050	0.06	0.06	0.45	0.50	0.080	0.040	0.030	0.09
JAN 31...	<0.010	0.680	0.050	0.070	0.06	0.09	0.45	0.50	0.080	0.040	0.030	0.09
MAR 27...	0.010	0.700	0.150	0.060	0.19	0.08	0.45	0.60	0.100	0.040	0.020	0.06
MAY 17...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	0.010	1.00	0.070	0.070	0.09	0.09	0.53	0.60	0.140	0.080	0.070	0.21
SEP 05...	0.010	0.800	0.060	0.050	0.08	0.06	0.34	0.40	0.150	0.100	0.090	0.28

NEUSE RIVER BASIN

02089500 NEUSE RIVER AT KINSTON, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV 28...	150	<1	23	<0.5	<1.0	<1	<3	3	520	1	<4	26
JAN 31...	130	<1	24	<0.5	1.0	<5	<3	<10	310	<10	<4	20
MAR 27...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 17...	40	<1	22	0.7	<1.0	<1	<3	2	300	1	4	14
AUG 08...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 05...	70	<1	30	<0.5	<1.0	<1	<3	2	570	1	21	75

DATE	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 28...	<0.1	<10	1	<1	<1.0	36	<6	10	20	201	81
JAN 31...	<0.1	<10	<10	<1	<1.0	37	<6	16	30	358	67
MAR 27...	--	--	--	--	--	--	--	--	19	121	91
MAY 17...	<0.1	<10	2	<1	<1.0	45	<6	72	19	236	84
AUG 08...	--	--	--	--	--	--	--	--	164	288	60
SEP 05...	<0.1	<10	2	<1	<1.0	52	<6	45	20	45	70

02090380 CONTENTNEA CREEK NEAR LUCAMA, NC

LOCATION.--Lat 35°41'29", long 78°06'38", Wilson County, Hydrologic Unit 03020203, on right bank 250 ft upstream from bridge on State Highway 581, 1.0 mi downstream from Buckhorn Reservoir, 1.0 mi upstream from Buckhorn Branch, and 6.5 mi northwest of Lucama.

DRAINAGE AREA.--161 mi^2.

PERIOD OF RECORD.--September 1964 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 117.43 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since September 1976, some regulation at low flow by Buckhorn Reservoir 1 mile upstream (station 02090370). Minimum discharge for period of record also occurred on Sept. 10-14, 1976, due to regulation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	59	154	220	224	193	132	120	145	8.9	9.7	155
2	285	79	129	226	195	183	137	305	93	12	9.7	91
3	401	281	157	211	185	394	148	555	65	11	9.5	70
4	409	445	108	188	195	651	133	690	114	14	9.4	54
5	286	386	98	174	189	522	111	580	359	15	9.4	43
6	156	281	91	170	178	347	105	529	234	14	9.6	36
7	90	183	86	201	169	238	107	382	117	12	9.8	34
8	65	143	188	286	158	187	99	218	71	11	9.8	30
9	52	210	656	475	176	173	89	137	51	11	36	27
10	47	311	1020	527	369	170	82	127	41	12	1850	27
11	41	345	981	415	620	176	77	177	31	10	2690	26
12	33	286	920	307	555	153	69	187	23	11	1530	23
13	30	192	977	229	380	135	e66	160	21	10	385	21
14	29	152	1120	192	267	178	e80	116	19	10	132	21
15	29	222	1040	166	219	428	e120	87	19	11	75	22
16	28	338	750	155	201	1800	e110	71	22	10	52	19
17	27	322	452	159	253	2260	e100	61	20	11	47	17
18	57	258	329	145	280	1860	e94	53	17	12	47	15
19	363	205	289	131	326	1140	e92	41	17	80	41	14
20	947	173	274	134	488	718	e88	38	12	131	34	14
21	862	149	266	225	452	821	e86	41	12	66	27	13
22	694	114	251	442	336	640	e80	67	12	38	23	14
23	362	202	219	463	321	395	e78	123	21	24	25	15
24	181	362	188	364	419	308	e72	165	32	16	412	13
25	123	381	150	258	425	315	e70	138	24	12	1480	11
26	98	310	163	322	327	284	e68	86	19	11	1110	11
27	80	224	174	464	242	233	e64	67	16	9.8	453	11
28	72	207	178	441	206	202	58	72	14	10	228	11
29	65	248	174	337	---	178	59	174	12	10	143	11
30	59	205	166	269	---	154	68	264	10	9.7	191	11
31	60	---	170	264	---	132	---	234	---	9.9	244	---
MEAN	198	242	384	276	298	502	91.4	196	55.4	20.4	366	29.3
MAX	947	445	1120	527	620	2260	148	690	359	131	2690	155
MIN	27	59	86	131	158	132	58	38	10	8.9	9.4	11
IN.	1.41	1.68	2.75	1.98	1.93	3.60	.63	1.40	.38	.15	2.62	.20

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	75.0	83.0	141.1	249.5	321.0	341.2	216.3	139.6	95.5	90.2	108.6	48.0
MAX	643.6	287.4	404.5	689.9	533.1	803.2	701.1	537.3	359.4	623.7	511.6	231.4
(WY)	1965	1973	1973	1987	1983	1989	1987	1989	1965	1984	1986	1979
MIN	2.05	2.76	21.2	39.4	87.5	67.7	24.7	8.08	10.4	3.96	3.18	2.52
(WY)	1981	1974	1966	1981	1986	1981	1986	1981	1970	1981	1980	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	222.2		158.4	
HIGHEST ANNUAL MEAN			277.5	1984
LOWEST ANNUAL MEAN			35.5	1981
HIGHEST DAILY MEAN	2690	Aug 11	5500	Oct 6 1964
LOWEST DAILY MEAN	8.9	Jul 1	.04	Sep 9 1976
INSTANTANEOUS PEAK FLOW	3120	Aug 10	5860	Oct 6 1964
INSTANTANEOUS PEAK STAGE	13.70	Aug 10	16.28	Oct 6 1964
INSTANTANEOUS LOW FLOW	6.2	Jul 1	.04*	Sep 9 1976
ANNUAL RUNOFF (INCHES)	18.7		13.4	
10 PERCENTILE	470		396	
50 PERCENTILE	141		70	
95 PERCENTILE	11		4.2	

* See REMARKS.

NEUSE RIVER BASIN

0209096970 MOCCASIN RUN NEAR PATETOWN, NC

LOCATION.--Lat 35°28'46", long 77°54'37", Wayne County, Hydrologic Unit 03020203, on left bank at downstream side of bridge on State Highway 111, and 1.5 mi northeast of Patetown, NC.

DRAINAGE AREA.--1.89 mi^2.

PERIOD OF RECORD.--April 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 90 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Minimum discharge for period of record, also occurred on July 12, 17, 18, 19 and Aug., 20, 1988.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.9	1.7	1.7	7.9	2.5	2.7	8.2	1.4	2.0	.34	.25	.27
2	20	2.8	1.6	5.5	2.5	2.7	9.4	2.3	1.8	.35	.24	.27
3	7.6	4.6	1.7	4.5	2.5	8.6	6.5	2.5	1.5	.36	.24	.21
4	4.0	2.0	1.6	4.1	3.7	5.4	4.9	2.3	1.4	.32	.24	.21
5	2.8	1.6	1.6	3.9	3.8	3.7	4.5	1.8	1.2	.30	.24	.21
6	2.3	1.5	1.5	5.2	2.7	3.2	4.1	2.1	1.0	.27	.24	.22
7	2.0	1.4	1.5	4.9	2.8	2.8	4.0	1.4	.90	.26	.38	.21
8	1.8	1.6	6.6	14	2.4	2.6	3.5	1.1	.81	.28	.89	.22
9	1.6	5.6	14	11	2.4	2.6	3.0	.97	.75	.30	4.0	.27
10	1.4	5.8	30	6.5	3.4	2.6	2.7	1.4	.69	.26	1.7	.51
11	1.3	2.6	20	5.2	3.0	2.5	2.8	1.1	.64	.25	.81	.51
12	1.2	2.0	13	4.6	2.5	2.4	2.5	.89	.59	.24	.59	.34
13	1.2	1.8	11	3.9	2.3	2.3	2.4	.91	.56	.48	.49	.30
14	1.2	1.9	8.8	3.5	2.3	2.2	2.3	.90	.56	.48	.54	.31
15	1.1	2.7	7.0	3.4	2.2	2.2	2.3	.81	.61	.57	.67	.32
16	1.1	3.7	5.9	3.2	2.6	2.2	2.2	.77	.68	.67	.64	.28
17	1.1	2.7	5.1	3.2	3.4	3.1	2.1	.73	.63	1.6	.94	.22
18	1.4	2.1	4.6	3.1	2.4	8.9	1.9	.71	.82	1.1	.76	.21
19	2.9	1.9	4.7	3.0	14	4.3	1.8	.67	1.7	.66	2.3	.19
20	2.1	1.9	5.0	2.8	7.4	3.3	1.7	.78	.72	.59	4.7	.21
21	1.6	1.9	4.7	5.0	4.4	2.8	1.7	1.2	.60	.50	1.0	.22
22	1.3	1.8	4.2	3.9	4.0	2.6	1.8	2.0	.59	.44	.86	.24
23	1.3	6.4	3.7	3.2	5.3	2.4	1.7	1.7	.75	.36	.90	.25
24	1.2	3.8	3.6	3.0	5.4	2.3	1.5	.97	.59	.32	.79	.23
25	1.2	2.6	3.8	2.9	3.8	2.2	1.5	.79	.49	.31	.60	.20
26	1.2	2.4	3.8	4.3	3.1	2.2	1.4	.77	.44	.28	.45	.20
27	1.2	2.1	3.9	3.4	2.9	2.1	1.4	.74	.48	.30	.35	.22
28	1.2	2.0	3.8	2.9	2.9	2.1	1.3	8.9	.47	.34	.30	.23
29	1.3	1.9	3.9	2.9	---	19	1.3	20	.42	.35	.28	.23
30	1.5	1.7	4.2	2.8	---	19	1.5	4.3	.37	.32	.38	.24
31	1.8	---	4.2	2.6	---	10	---	2.6	---	.28	.31	---
MEAN	2.67	2.62	6.15	4.53	3.66	4.42	2.93	2.24	.83	.43	.87	.26
MAX	20	6.4	30	14	14	19	9.4	20	2.0	1.6	4.7	.51
MIN	1.1	1.4	1.5	2.6	2.2	2.1	1.3	.67	.37	.24	.24	.19
IN.	1.63	1.55	3.75	2.76	2.02	2.70	1.73	1.37	.49	.27	.53	.15

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	1.64	2.82	3.67	3.07	3.49	6.94	5.29	3.44	1.65	2.76	2.49	.959
MAX	2.67	3.02	6.15	4.53	3.66	9.45	11.2	7.12	3.59	7.57	5.83	1.60
(WY)	1990	1989	1990	1990	1990	1989	1989	1989	1989	1989	1989	1989
MIN	.607	2.62	1.20	1.61	3.33	4.42	1.73	.969	.522	.267	.767	.258
(WY)	1989	1990	1989	1989	1989	1990	1988	1988	1988	1988	1988	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	2.64		*****	
HIGHEST ANNUAL MEAN			4.69	1989
LOWEST ANNUAL MEAN			2.64	1990
HIGHEST DAILY MEAN	30	Dec 10	53	Apr 30 1989
LOWEST DAILY MEAN	.19	Sep 19	.14	Jul 18 1988
INSTANTANEOUS PEAK FLOW	37	Mar 29	79	Aug 16 1989
INSTANTANEOUS PEAK STAGE	2.92	Mar 29	4.23	Aug 16 1989
INSTANTANEOUS LOW FLOW	.17	Sep 25	.12*	Jul 18 1988
ANNUAL RUNOFF (INCHES)	19.0		*****	
10 PERCENTILE	4.9		8.1	
50 PERCENTILE	1.8		1.6	
95 PERCENTILE	.22		.28	

***** Indicates not enough data, therefore statistic is not computed

* See REMARKS.

NEUSE RIVER BASIN

02091000 NAHUNTA SWAMP NEAR SHINE, NC

LOCATION.--Lat 35°29'20", long 77°48'22", Greene County, Hydrologic Unit 03020203, on right bank 10 ft downstream from bridge on Secondary Road 1058, 2 mi upstream from Appletree Swamp, 3.5 mi north of Shine, and 8 mi northwest of Snow Hill.

DRAINAGE AREA.--80.4 mi^2.

PERIOD OF RECORD.--April 1954 to current year. Monthly discharges only for some periods, published in WSP 1723.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 50.74 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 1, 1955, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records fair. Minimum discharge for period of record also occurred Oct. 8, 1954.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	39	55	151	79	84	299	35	75	10	4.4	8.5
2	359	44	51	159	77	80	253	52	56	9.4	4.0	12
3	262	122	51	122	78	148	208	59	46	9.1	3.7	9.1
4	139	87	48	107	86	205	153	71	41	8.6	3.4	7.4
5	88	65	47	102	121	140	118	83	35	7.6	3.3	6.6
6	70	56	46	113	89	109	98	70	32	6.5	3.3	6.2
7	61	52	45	131	82	93	96	57	30	6.0	3.4	5.9
8	55	51	101	208	78	81	94	43	28	5.5	6.0	5.5
9	52	72	254	279	74	78	81	36	26	5.9	23	5.4
10	47	137	414	214	96	78	73	36	24	5.7	41	6.0
11	45	80	412	164	101	73	73	38	22	4.7	18	9.7
12	42	64	376	139	88	69	66	31	20	4.7	12	6.9
13	40	57	327	116	77	65	59	28	19	4.5	9.3	6.0
14	39	53	269	101	72	61	55	28	18	6.0	7.6	6.0
15	38	66	207	96	69	58	55	25	18	6.7	14	5.7
16	37	104	169	93	70	55	55	23	18	8.4	12	5.0
17	35	92	138	91	107	60	53	21	17	8.1	28	4.4
18	35	72	120	92	90	216	48	19	16	15	16	3.9
19	67	62	113	89	180	175	44	17	27	10	11	3.7
20	71	57	125	84	225	117	42	17	22	10	64	3.7
21	57	54	118	98	148	89	42	29	17	7.3	24	3.6
22	48	50	107	109	127	76	43	34	17	5.9	14	3.7
23	43	110	93	92	195	68	41	58	21	5.1	16	4.1
24	40	115	88	85	177	62	38	41	17	4.8	15	4.1
25	39	83	96	82	138	57	35	31	15	4.6	13	3.8
26	38	72	92	109	106	55	32	27	13	4.1	12	3.4
27	36	67	95	114	94	57	30	25	13	3.9	11	3.2
28	34	62	91	95	89	50	28	141	12	7.3	9.9	2.7
29	34	63	95	90	---	168	27	453	12	7.1	9.1	2.8
30	34	59	104	90	---	374	31	288	11	5.9	9.1	2.8
31	38	---	107	85	---	341	---	121	---	4.8	9.0	---
MEAN	69.2	72.2	144	119	108	111	79.0	65.7	24.6	6.88	13.9	5.39
MAX	359	137	414	279	225	374	299	453	75	15	64	12
MIN	34	39	45	82	69	50	27	17	11	3.9	3.3	2.7
IN.	.99	1.00	2.06	1.71	1.39	1.59	1.10	.94	.34	.10	.20	.07

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	47.8	54.7	70.3	114.8	147.0	148.1	108.4	62.4	52.3	62.8	67.8	58.3
MAX	472.6	253.4	184.3	253.5	307.4	311.2	252.5	277.1	190.1	395.1	360.2	396.3
(WY)	1965	1978	1958	1978	1983	1983	1974	1989	1969	1965	1974	1955
MIN	2.26	11.2	22.3	31.1	34.6	33.7	19.1	10.8	5.35	3.10	4.71	2.58
(WY)	1955	1955	1988	1955	1988	1986	1986	1986	1986	1987	1954	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD		
AVERAGE FLOW	68.1		83.1		
HIGHEST ANNUAL MEAN			149.6		1965
LOWEST ANNUAL MEAN			22.9		1986
HIGHEST DAILY MEAN	453	May 29	4560	Oct 6	1964
LOWEST DAILY MEAN	2.7	Sep 28	1.0	Oct 7	1954
INSTANTANEOUS PEAK FLOW	481	May 29	5470	Oct 6	1964
INSTANTANEOUS PEAK STAGE	8.38	May 29	14.14	Oct 6	1964
INSTANTANEOUS LOW FLOW	2.6	Sep 28	1.0*	Oct 7	1954
ANNUAL RUNOFF (INCHES)	11.5		14.0		
10 PERCENTILE	138		180		
50 PERCENTILE	51		44		
95 PERCENTILE	3.7		6.9		

* See REMARKS.

NEUSE RIVER BASIN

02091500 CONTENTNEA CREEK AT HOOKERTON, NC
(National stream-quality accounting network station)

LOCATION.--(Revised) Lat 35°25'44", long 77°34'59", Greene County, Hydrologic Unit 03020203, on left bank at bridge on State Highway 123, at Hookerton, and 2.2 mi upstream from Wheat Swamp Creek.

DRAINAGE AREA.--733 mi^2 (revised).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1333: 1903-35. WSP 1383: Drainage area. WSP 1503: 1951. WSP 1723: 1932.

GAGE.--Water-stage recorder. Datum of gage is 14.85 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Nov. 26, 1934, nonrecording gage at site 1,400 ft upstream and Nov. 27, 1934 to Sept. 30, 1987, water-stage recorder at site 0.3 mi upstream at present datum.

REMARKS.--No estimated daily discharges. Records good except those for period April 6 - 30, which are fair. Flow regulated by Buckhorn Reservoir since Sept. 1976 (station 02090370).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of September 1928 reached a stage of 23.3 ft, from floodmark; high water of autumn 1924 was about 0.1 ft lower, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	570	452	1200	1140	1230	1690	1650	303	1540	137	80	1300
2	752	425	1170	1170	1230	1570	2190	329	1370	128	74	1240
3	1070	494	1140	1190	1200	1480	2710	372	1250	121	71	960
4	1380	605	1100	1200	1130	1380	3300	455	1100	117	68	682
5	1690	711	1030	1190	1070	1340	3650	621	792	124	67	484
6	1980	818	918	1190	1020	1360	3740	744	592	121	65	380
7	2100	932	794	1200	956	1460	3670	896	535	110	67	297
8	2020	1030	748	1270	882	1600	3530	1050	534	104	74	244
9	1790	1120	958	1380	825	1740	3190	1200	562	100	91	207
10	1420	1150	1330	1480	785	1780	2840	1350	539	97	102	181
11	1040	1140	1590	1550	761	1700	2190	1410	448	120	141	160
12	732	1130	1910	1640	773	1520	1870	1330	349	101	183	148
13	542	1110	2300	1720	832	1300	1640	1030	285	90	169	141
14	461	1110	2750	1790	940	1090	1400	740	246	87	258	132
15	397	1110	3170	1820	1060	929	1160	586	222	92	499	125
16	360	1110	3410	1790	1210	808	980	497	203	112	1060	118
17	333	1080	3430	1700	1320	725	840	452	189	123	1270	112
18	315	1040	3350	1530	1340	787	709	402	181	131	1360	106
19	304	1010	3200	1330	1330	915	633	347	192	118	1370	100
20	413	1040	3030	1140	1320	1020	590	309	189	113	1510	95
21	634	1110	2800	1000	1370	1110	550	308	196	113	1050	90
22	816	1160	2540	917	1470	1250	530	307	214	112	917	87
23	956	1180	2270	884	1690	1450	500	341	214	107	1000	84
24	1130	1150	2020	879	1880	1580	470	395	193	121	816	79
25	1330	1120	1820	905	1980	1560	450	442	172	138	565	76
26	1480	1100	1630	983	1980	1420	420	456	170	132	485	72
27	1510	1120	1460	1080	1910	1190	390	456	170	117	487	68
28	1380	1160	1320	1170	1800	894	350	934	161	106	585	66
29	1020	1200	1200	1230	---	846	330	1860	158	96	792	64
30	698	1220	1140	1240	---	1100	310	1940	150	91	1020	62
31	514	---	1120	1240	---	1350	---	1770	---	85	1180	---
MEAN	1004	1005	1866	1289	1260	1289	1559	762	437	112	564	265
MAX	2100	1220	3430	1820	1980	1780	3740	1940	1540	138	1510	1300
MIN	304	425	748	879	761	725	310	303	150	85	65	62
IN.	1.58	1.53	2.94	2.03	1.79	2.03	2.37	1.20	.67	.18	.89	.40

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	454.5	451.5	672.1	1081	1374	1449	1051	607.9	462.3	575.6	632.0	512.4
MAX	4183	2150	2349	2610	4316	3491	2752	3363	1708	2203	2422	3675
(WY)	1965	1948	1949	1987	1948	1989	1989	1989	1989	1929	1960	1955
MIN	20.3	41.1	64.7	92.5	238.5	382.3	201.9	82.9	38.5	63.3	37.2	24.9
(WY)	1955	1955	1934	1934	1934	1981	1986	1986	1986	1952	1954	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	950.0		765.8	
HIGHEST ANNUAL MEAN			1422	1960
LOWEST ANNUAL MEAN			242.1	1951
HIGHEST DAILY MEAN	3740	Apr 6	16000	Oct 7 1964
LOWEST DAILY MEAN	62	Sep 30	15	Oct 28 1933
INSTANTANEOUS PEAK FLOW	3740	Apr 5	17200	Oct 7 1964
INSTANTANEOUS PEAK STAGE	13.62	Apr 5	22.11	Oct 8 1964
INSTANTANEOUS LOW FLOW	61	Sep 30	15	Oct 28 1933
ANNUAL RUNOFF (INCHES)	17.6		14.2	
10 PERCENTILE	1820		1900	
50 PERCENTILE	926		438	
95 PERCENTILE	89		58	

02091500 CONTENTNEA CREEK AT HOOKERTON, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950, 1969-72, 1979 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1979 to September 1984.
WATER TEMPERATURE: October 1949 to September 1950, March 1979 to September 1984.

INSTRUMENTATION.--Water-quality monitor from October 1981 to September 1984.

REMARKS.--Station operated as part of NASQAN network from March 1979 to present. Miscellaneous chemical data published for water years 1945, 1947-49, 1955-67.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 218 microsiemens Nov. 1, 10, 1983; minimum daily, 41 microsiemens June 11, 1979.
WATER TEMPERATURE: Maximum, 29.5°C Aug. 23, 1983; minimum daily, 1.0°C Jan. 13, 14, 1981, Jan. 18, 1982.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
NOV 28...	1400	1170	84	7.2	9.5	5.3	760	9.0	K60	100	4.5	2.0
JAN 31...	1430	1240	96	6.6	11.0	7.2	769	9.6	K52	K17	4.5	1.9
MAR 27...	1300	1180	85	6.3	14.5	3.5	772	7.7	K28	K8	4.3	2.0
MAY 17...	1300	452	79	6.0	23.0	8.3	759	6.5	180	120	4.4	2.0
AUG 08...	1130	74	115	6.4	25.5	4.5	763	5.3	480	220	5.2	2.4
SEP 05...	1100	522	76	6.1	25.0	6.5	765	4.7	220	K64	4.3	1.9

DATE	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)
NOV 28...	6.7	38	0.7	3.3	19	16	7.0	10	0.10	8.7	76	0.620
JAN 31...	6.4	38	0.6	2.8	7	6	7.0	10	0.10	6.0	68	0.800
MAR 27...	6.4	38	0.6	2.6	10	8	5.9	9.5	0.10	5.7	63	--
MAY 17...	7.3	41	0.7	2.7	15	12	5.7	8.7	<0.10	6.7	69	--
AUG 08...	11	46	1	3.9	17	14	13	15	<0.10	6.7	78	0.890
SEP 05...	5.9	36	0.6	3.4	15	12	7.4	6.6	0.10	8.1	68	0.490

DATE	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)
NOV 28...	0.010	0.630	0.090	0.090	0.12	0.12	0.51	0.60	0.090	0.060	0.060	0.18
JAN 31...	0.020	0.820	0.080	0.090	0.10	0.12	0.42	0.50	0.090	0.060	0.060	0.18
MAR 27...	<0.010	0.500	0.090	0.020	0.12	0.03	0.51	0.60	0.130	0.080	0.030	0.09
MAY 17...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	0.010	0.900	0.150	0.130	0.19	0.17	0.65	0.80	0.320	0.240	0.200	0.61
SEP 05...	0.010	0.500	0.130	0.120	0.17	0.15	0.57	0.70	0.230	0.150	0.130	0.40

NEUSE RIVER BASIN

02091500 CONTENTNEA CREEK AT HOOKERTON, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV 28...	190	<1	30	<0.5	<1.0	<1	<3	2	810	<1	<4	15
JAN 31...	160	<1	32	<0.5	<1.0	<5	<3	<10	520	<10	<4	20
MAR 27...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 17...	80	<1	27	<0.5	1.0	<1	3	1	700	1	<4	50
AUG 08...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 05...	130	<1	33	<0.5	1.0	<1	<3	3	660	2	<4	140

DATE	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 28...	<0.1	<10	1	<1	<1.0	26	<6	3	21	66	51
JAN 31...	<0.1	<10	<10	<1	<1.0	29	<6	<3	3	10	51
MAR 27...	--	--	--	--	--	--	--	--	5	16	66
MAY 17...	<0.1	<10	1	<1	<1.0	26	<6	6	91	111	36
AUG 08...	--	--	--	--	--	--	--	--	135	27	30
SEP 05...	0.1	<10	3	<1	<1.0	26	<6	13	10	14	62

NEUSE RIVER BASIN

02092162 NEUSE RIVER AT NEW BERN, NC

LOCATION.--Lat 35°06'42", long 77°01'37", Craven County, Hydrologic Unit 03020204, at bridge U.S. Highway 17 at New Bern and 0.9 miles upstream from Trent River.

TIDAL-ELEVATION RECORDS

PERIOD OF RECORD.--March 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 10 ft above National Geodetic Vertical Datum of 1929, gage readings have been reduced to elevations NGVD.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 4.29 ft April 13, 1988; minimum, 2.27 ft below NGVD, January 4, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 3.14 ft December 9; minimum, 1.80 ft below NGVD, November 21.

ELEVATION, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.53	1.31	.35	---	---	1.00	1.20	.70	1.13	.28	1.16	1.59
2	1.14	1.81	.33	---	---	.55	1.02	.95	.89	1.01	1.30	1.16
3	1.22	1.27	-1.07	---	---	.57	.87	.93	.40	1.15	1.17	.98
4	1.44	1.70	-.16	---	---	1.15	.43	.51	.15	.49	.97	1.76
5	1.20	1.55	-.13	---	---	1.06	.73	-.56	1.31	-.14	.70	1.40
6	.50	1.02	.07	---	---	.65	.48	.16	.78	.50	.52	1.03
7	.77	.88	.65	---	---	2.17	.75	.73	.15	1.19	.48	.72
8	1.60	.84	2.04	---	---	1.37	1.18	.13	.39	.81	.88	1.35
9	1.15	.60	2.37	---	---	.26	1.09	.13	-.02	.24	.85	1.65
10	1.30	.69	1.64	---	---	.51	.47	-.19	-.12	-.23	.93	1.09
11	1.01	1.22	1.00	---	---	.37	.26	-.02	.57	-.16	.77	1.45
12	1.02	.68	1.18	---	---	.30	.73	.73	1.20	-.64	.71	1.40
13	.89	1.08	1.14	---	---	.33	1.15	.12	1.23	-.20	.73	1.24
14	.93	.85	1.09	---	---	.37	1.04	.79	.94	.39	.48	1.14
15	.98	.65	---	---	---	.47	.61	.91	1.16	.05	.65	.68
16	.90	-.05	---	---	---	.36	.89	.40	1.58	.21	.74	1.26
17	.75	.54	---	---	---	.02	.38	-.11	1.25	.52	.94	1.45
18	.77	.20	---	---	---	.17	1.45	.03	.96	.52	.87	1.47
19	.85	.48	---	---	---	.62	1.62	.26	.42	.46	.77	1.03
20	.43	-.56	---	---	---	.26	.52	.04	.95	.18	.68	.90
21	.31	-.58	---	---	---	.36	-.22	-.11	.69	-.06	1.09	1.66
22	.45	.84	---	---	---	.37	.55	1.97	.79	.11	1.23	.93
23	1.12	.36	---	---	---	.09	.30	1.79	.04	.35	1.33	.92
24	1.44	.70	---	---	---	1.08	.11	.99	.67	.84	1.19	1.09
25	1.59	.47	---	---	---	1.05	.13	.92	1.19	1.18	1.27	.81
26	1.51	.20	---	---	---	.94	.36	.22	1.18	1.41	1.08	.44
27	1.34	.67	---	---	---	1.43	.46	.69	.92	1.19	1.07	.69
28	1.41	.26	---	---	.43	1.50	.36	1.74	.79	1.53	.98	1.05
29	1.53	.84	---	---	---	1.62	.39	1.03	.37	1.36	.60	.95
30	1.40	.31	---	---	---	.74	.60	1.22	.06	1.24	.92	.78
31	1.20	---	---	---	---	1.09	---	1.36	---	.76	1.64	---
TOTAL	33.68	20.83	---	---	---	22.83	19.91	18.46	22.02	16.54	28.70	34.07
MEAN	1.09	.69	---	---	---	.74	.66	.60	.73	.53	.93	1.14
MAX	1.60	1.81	---	---	---	2.17	1.62	1.97	1.58	1.53	1.64	1.76
MIN	.31	-.58	---	---	---	.02	-.22	-.56	-.12	-.64	.48	.44

NEUSE RIVER BASIN

02092500 TRENT RIVER NEAR TRENTON, NC

LOCATION.--Lat 35°03'54", long 77°27'24", Jones County, Hydrologic Unit 03020204, on left bank 50 ft downstream from Free Bridge on Secondary Road 1129, 800 ft downstream from Little Chinquapin Branch, 1.5 mi southwest of Phillips Crossroads, and 6 mi west of Trenton.

DRAINAGE AREA.--168 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 19.15 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 21, 1951, nonrecording gage on bridge 50 ft upstream at same datum.

REMARKS.--Records good except for period of estimated daily discharges, which are fair. Minimum discharge for period of record, also occurred on Oct. 24, 25, and 26, 1974. Satellite data transmitter at the station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1928 reached a stage of 17.3 ft, discharge, 7,600 ft^3/s, from information provided by North Carolina State Highway Commission.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	199	29	70	472	178	210	845	58	315	4.7	6.9	72
2	307	30	71	588	164	171	927	80	268	4.7	5.4	59
3	431	41	78	713	152	169	957	86	167	4.4	4.3	48
4	532	52	72	736	142	217	914	94	110	4.0	3.5	42
5	621	61	62	659	149	241	813	97	76	4.1	3.0	34
6	598	61	54	562	151	232	678	84	55	4.2	2.8	27
7	496	57	45	491	146	202	541	64	42	4.4	3.0	21
8	342	57	76	474	136	167	419	48	34	4.9	4.3	18
9	249	59	323	504	124	147	316	37	28	16	16	15
10	187	61	616	547	113	125	241	34	24	12	39	13
11	155	60	922	572	103	112	194	105	20	8.2	55	11
12	130	56	1100	541	95	102	167	107	17	6.1	67	e10
13	110	51	1060	470	91	92	152	83	15	5.1	66	e9.0
14	93	47	886	387	82	84	142	108	14	4.4	53	e8.0
15	81	44	704	306	74	77	127	92	12	4.3	34	e7.6
16	71	44	563	249	70	73	114	69	11	4.5	21	e7.0
17	63	52	451	213	68	72	105	51	10	4.8	49	e6.8
18	56	61	362	187	64	123	91	38	10	5.5	88	e6.2
19	52	50	302	166	79	240	77	30	9.8	5.4	88	5.9
20	55	45	299	151	136	291	67	24	9.1	6.1	56	5.6
21	60	41	312	142	179	304	59	27	8.5	8.8	40	5.2
22	60	38	324	135	193	272	53	53	8.0	17	74	5.2
23	58	42	316	127	239	214	48	161	7.7	16	239	5.1
24	58	69	266	119	299	159	44	212	7.9	12	238	4.4
25	54	100	233	113	335	127	38	204	7.0	8.6	291	3.9
26	48	111	244	127	344	108	34	162	6.4	6.4	320	3.7
27	43	107	249	189	317	92	30	125	6.3	7.0	340	3.5
28	37	104	248	220	263	84	26	91	5.9	11	277	3.3
29	33	101	255	209	---	119	25	130	5.4	11	158	3.2
30	30	86	283	197	---	486	35	261	5.1	8.3	102	3.2
31	30	---	353	189	---	679	---	306	---	7.5	77	---
MEAN	172	60.6	361	347	160	187	276	101	43.8	7.46	91.0	15.6
MAX	621	111	1100	736	344	679	957	306	315	17	340	72
MIN	30	29	45	113	64	72	25	24	5.1	4.0	2.8	3.2
IN.	1.18	.40	2.48	2.38	.99	1.28	1.83	.69	.29	.05	.62	.10

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	95.3	90.1	168.4	295.3	328.8	348.0	222.9	129.0	125.5	157.7	173.2	128.9
MAX	864.1	295.5	551.4	703.2	746.2	962.5	684.5	435.2	767.8	1381	1587	1577
(WY)	1972	1963	1958	1978	1973	1983	1973	1978	1961	1962	1955	1955
MIN	1.58	1.80	6.65	17.2	31.8	36.5	23.1	10.2	2.77	5.33	4.97	4.56
(WY)	1955	1955	1955	1955	1955	1955	1955	1985	1985	1985	1957	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	152.4		190.4	
HIGHEST ANNUAL MEAN			316.0	1960
LOWEST ANNUAL MEAN			79.8	1985
HIGHEST DAILY MEAN	1100	Dec 12	8580	Sep 21 1955
LOWEST DAILY MEAN	2.8	Aug 6	.34	Oct 23 1973
INSTANTANEOUS PEAK FLOW	1120	Dec 12	9100	Sep 21 1955
INSTANTANEOUS PEAK STAGE	11.98	Dec 12	17.84	Sep 21 1955
INSTANTANEOUS LOW FLOW	2.4	Aug 7	.30*	Oct 23 1974
ANNUAL RUNOFF (INCHES)	12.3		15.4	
10 PERCENTILE	395		483	
50 PERCENTILE	77		83	
95 PERCENTILE	4.0		4.5	

* See REMARKS.

NEUSE RIVER BASIN

0209257120 W. P. BRICE CREEK AT SR 1101 NEAR RIVERDALE, NC

LOCATION.--Lat 34°58'09", long 77°02'55", Craven County, Hydrologic Unit 03020204, on left bank at downstream side of bridge on road 170, 2.7 mi from Secondary Road 1101 and 4.2 mi southwest of Riverdale.

DRAINAGE AREA.--7.53 mi^2.

PERIOD OF RECORD.--April 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 25 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Minimum discharge for period of record, also occurred several days in Aug. and Sept. 1990. Minimum discharge for current water year also occurred serveral days in Aug. and Sept..

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	17	8.5	62	19	13	72	31	17	3.5	0	.23
2	137	17	8.0	66	18	13	69	33	16	3.3	0	.21
3	121	21	7.6	58	17	15	64	33	14	3.2	0	.24
4	79	21	7.2	52	17	16	49	30	12	2.9	0	.36
5	55	20	7.0	47	17	15	40	26	12	2.6	0	.33
6	42	18	6.6	48	16	14	34	22	11	2.5	0	.31
7	35	17	6.3	52	15	13	31	20	10	2.9	0	.29
8	38	15	33	70	15	13	28	18	9.4	2.8	0	.26
9	43	15	89	74	14	12	25	17	8.4	2.6	0	.23
10	38	15	152	63	15	12	23	16	7.3	2.0	2.0	.22
11	33	13	116	55	15	11	25	15	6.4	1.3	2.6	.19
12	29	12	89	49	15	11	28	14	5.9	.97	2.9	.16
13	26	11	74	44	14	10	27	15	6.6	.89	3.0	.13
14	24	11	64	40	13	10	25	18	6.0	.73	3.1	.13
15	22	12	57	37	13	9.6	23	16	5.4	.78	3.0	.14
16	20	13	51	35	13	9.4	22	15	5.1	.93	2.8	.12
17	19	13	46	32	13	9.4	20	14	5.0	.91	3.1	.09
18	19	12	43	31	12	11	19	14	4.8	.86	3.1	.07
19	20	11	44	29	16	11	18	12	5.1	.76	2.8	.05
20	19	10	53	28	17	10	17	11	5.1	.64	2.7	.03
21	18	9.3	53	27	16	10	15	12	5.1	.60	3.3	.02
22	16	8.6	48	25	15	9.6	15	14	4.8	.59	3.4	0
23	14	12	45	24	18	9.2	14	16	4.6	.44	4.5	0
24	13	13	45	22	18	8.8	13	15	4.5	.33	5.2	0
25	12	12	45	21	17	8.6	12	14	4.4	.25	4.7	0
26	11	12	45	22	16	8.3	11	13	4.2	.17	2.3	0
27	9.8	11	46	22	15	8.6	10	12	4.3	.11	.88	0
28	8.9	10	45	21	14	8.4	9.6	12	4.2	.07	.32	0
29	8.4	9.7	42	20	---	30	14	19	3.9	.05	.24	0
30	8.9	9.1	44	21	---	104	25	22	3.7	.03	.25	0
31	17	---	51	20	---	79	---	19	---	.01	.25	---
MEAN	32.5	13.4	47.5	39.3	15.5	16.9	26.6	18.0	7.21	1.28	1.82	.13
MAX	137	21	152	74	19	104	72	33	17	3.5	5.2	.36
MIN	8.4	8.6	6.3	20	12	8.3	9.6	11	3.7	.01	0	0
IN.	4.97	1.98	7.27	6.01	2.14	2.58	3.94	2.76	1.07	.20	.28	.02

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	10.3	8.12	20.9	33.4	23.0	30.6	27.4	18.3	9.23	6.81	30.5	10.3
MAX	32.5	13.4	47.5	40.7	34.0	41.7	47.4	32.6	18.3	21.7	73.2	16.6
(WY)	1990	1990	1990	1987	1987	1987	1989	1989	1988	1989	1986	1987
MIN	2.11	5.43	7.03	14.7	12.9	16.9	12.0	2.42	.923	1.28	1.82	.127
(WY)	1988	1988	1989	1989	1989	1990	1986	1986	1986	1990	1990	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	18.4		*****	
HIGHEST ANNUAL MEAN			19.7	1989
LOWEST ANNUAL MEAN			18.4	1990
HIGHEST DAILY MEAN	152	Dec 10	470	Aug 19 1986
LOWEST DAILY MEAN	0	Aug 1	0	Aug 1 1990
INSTANTANEOUS PEAK FLOW	164	Dec 10	781	Aug 19 1986
INSTANTANEOUS PEAK STAGE	3.35	Dec 10	4.48	Aug 19 1986
INSTANTANEOUS LOW FLOW	0*	Aug 1	0*	Aug 1 1990
ANNUAL RUNOFF (INCHES)	33.2		*****	
10 PERCENTILE	49		45	
50 PERCENTILE	13		14	
95 PERCENTILE	.01		.45	

***** Indicates not enough data, therefore statistic is not computed

* See REMARKS.

NEUSE RIVER BASIN

0209259278 UPPER BROAD CREEK NEAR FAIRFIELD HARBOUR, NC

LOCATION.--Lat 35°03'24", long 76°57'23", Craven County, Hydrologic Unit 03020204, at mouth and 1.5 miles southeast of Fairfield Harbour.

TIDAL-ELEVATION RECORDS

PERIOD OF RECORD.--March 1988 to September 1990 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 10 ft above National Geodetic Vertical Datum of 1929, gage readings have been reduced to elevations NGVD.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 4.36 ft April 13, 1988; minimum, 1.75 ft below NGVD, November 21, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 3.18 ft December 9; minimum, 1.75 ft below NGVD, November 21.

ELEVATION, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.46	1.23	.25	-.19	.44	.87	1.13	.60	1.02	.25	1.13	---
2	1.26	1.72	.19	.29	.14	.42	.93	.86	.77	1.00	1.24	---
3	1.29	1.21	-1.00	.07	.31	.44	.84	.82	.28	1.08	1.09	---
4	1.42	1.61	-.24	-.04	-.24	1.02	.41	.38	.09	.44	.91	---
5	1.27	1.45	-.24	.00	1.02	.92	.66	-.68	1.23	-.16	.63	---
6	.75	.93	-.06	.09	.41	.52	.37	.11	.66	.47	.44	---
7	.87	.79	.51	.34	.22	2.05	.77	.62	.08	1.12	.44	.67
8	1.35	.75	1.93	.06	.59	1.23	1.12	.01	.30	.75	.82	1.30
9	1.13	.50	2.31	.39	.28	.15	.98	-.01	-.10	.18	.79	1.58
10	1.23	.62	1.55	-.09	-.33	.38	.37	-.35	-.17	-.27	.89	1.03
11	1.06	1.12	.87	.04	1.12	.23	.24	-.10	.56	-.21	.73	1.41
12	1.06	.60	1.03	-.02	.39	.17	.69	.57	1.16	-.70	.66	1.36
13	.96	.96	1.06	.09	.40	.21	1.10	-.02	1.16	-.24	.66	1.19
14	1.00	.74	.93	.38	.04	.23	.97	.66	.86	.30	.43	1.09
15	1.05	.55	.75	.25	.08	.32	.57	.76	1.07	-.01	.60	.65
16	1.01	-.14	.53	.21	-.43	.19	.84	.26	1.51	.17	.69	1.22
17	.92	.46	.87	.23	.40	-.16	.33	-.22	1.18	.46	.89	1.43
18	.80	.12	.83	.03	1.38	.09	1.44	-.05	.88	.46	.82	1.42
19	.77	.42	.78	.60	.39	.49	1.54	.15	.37	.40	.72	.98
20	.37	-.64	.66	.25	1.10	.25	.45	-.08	.91	.14	.63	.86
21	.25	-.58	.47	-.26	1.06	.27	-.27	-.21	.65	-.11	1.05	1.60
22	.42	.74	1.04	.02	.14	.24	.50	1.88	.73	.07	1.18	.88
23	1.05	.37	1.26	.24	-.30	.00	.24	1.68	-.01	.31	1.27	.93
24	1.37	.62	---	.28	-.95	.95	.05	.87	.66	.80	1.14	1.06
25	1.53	.36	---	.08	-.31	.97	.08	.81	1.14	1.14	1.22	.75
26	1.43	.10	---	-.50	.77	.87	.30	.12	1.12	1.37	1.03	.40
27	1.26	.55	.26	.36	.30	1.34	.38	.61	---	1.13	1.02	.67
28	1.34	.15	.09	.22	.29	1.40	.27	1.62	.72	1.46	.93	1.01
29	1.44	.75	.10	.27	---	1.49	.31	.94	.30	1.32	.56	.89
30	1.32	.22	.05	.06	---	.69	.52	1.17	.02	1.20	.89	.73
31	1.12	---	.03	.64	---	1.00	---	1.25	---	.72	---	---
TOTAL	33.56	18.28	---	4.39	8.71	19.24	18.13	15.03	---	15.04	---	---
MEAN	1.08	.61	---	.14	.31	.62	.60	.48	---	.49	---	---
MAX	1.53	1.72	---	.64	1.38	2.05	1.54	1.88	---	1.46	---	---
MIN	.25	-.64	---	-.50	-.95	-.16	-.27	-.68	---	-.70	---	---

NEUSE RIVER BASIN

0209265800 NEUSE RIVER AT MINNESOTT BEACH, NC

LOCATION.--Lat 34°57'58", long 76°48'20", Pamlico County, Hydrologic Unit 03020204, at end of NC 306 and 0.3 miles southeast of Minnesott Beach.

TIDAL-ELEVATION RECORDS

PERIOD OF RECORD.--March 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 10 ft above National Geodetic Vertical Datum of 1929, gage readings have been reduced to elevations NGVD.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 3.59 ft December 9, 1989; minimum, 1.66 ft below NGVD, June 13, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 3.59 ft December 9; minimum, 1.30 ft below NGVD, November 21.

ELEVATION, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.48	1.40	.43	.08	.46	1.02	1.20	.66	1.24	.38	---	1.58
2	1.15	1.85	.31	.42	.16	.59	.98	.91	.89	.91	---	1.14
3	1.31	1.46	-.40	.19	.29	.65	1.04	.92	.52	1.18	---	1.00
4	1.56	1.77	.00	.07	-.19	1.20	.61	.41	.03	.65	---	1.74
5	1.26	1.56	-.09	.11	1.09	1.09	.73	-.62	1.05	-.11	---	1.37
6	.56	1.08	.06	.23	.44	.68	.43	.34	.94	.39	---	1.02
7	.83	.93	.61	.45	.35	2.17	.96	.77	.16	1.04	---	.73
8	1.65	.90	2.09	.29	.66	1.30	1.25	.11	.40	.88	---	1.35
9	1.31	.66	2.55	.49	.34	.29	1.00	.05	.02	.31	---	1.58
10	1.32	.87	1.77	.12	-.21	.47	.37	-.35	-.22	-.25	---	1.08
11	1.06	1.24	1.03	.13	1.19	.32	.29	.11	.65	-.14	.82	1.44
12	1.03	.84	1.12	.23	.61	.27	.78	.62	1.13	-.59	.70	1.40
13	.91	1.09	1.32	.36	.45	.31	1.08	.02	1.25	-.38	.68	1.25
14	.95	.89	1.05	.47	.17	.31	.95	.73	1.02	.23	.46	1.17
15	.98	.69	.83	.35	.16	.37	.60	.83	1.03	-.05	.62	.79
16	.90	.08	.84	.31	-.35	.21	.84	.33	1.45	.18	.74	1.32
17	.73	.71	1.00	.31	.60	-.23	.38	-.16	1.27	.47	.94	1.51
18	.77	.34	.96	.11	1.44	.23	1.50	.15	1.12	.47	.86	1.47
19	.85	.62	.94	.63	.54	.52	1.53	.21	.47	.42	.75	1.04
20	.62	-.41	.86	.33	1.27	.50	.48	.09	.93	.16	.67	.88
21	.39	-.22	.60	-.18	1.15	.41	-.25	-.27	.87	-.08	1.15	1.57
22	.58	.88	1.25	.12	.10	.29	.55	1.36	.82	.12	1.24	.97
23	1.15	.73	1.60	.31	-.19	.09	.29	2.08	.34	.35	1.29	1.13
24	1.51	.81	1.53	.33	-.56	.96	.11	1.16	.57	.88	1.16	1.19
25	1.67	.52	---	.07	.11	1.04	.16	.84	1.08	---	1.26	.77
26	1.56	.26	---	-.29	.93	.95	.38	.66	1.18	---	1.10	.44
27	1.39	.67	.41	.39	.45	1.37	.46	.01	.88	---	1.13	.73
28	1.49	.31	.21	.26	.45	1.42	.32	1.74	.82	---	1.09	1.01
29	1.56	.94	.21	.25	---	1.52	.38	1.21	.50	---	.65	.90
30	1.46	.43	.16	.14	---	.81	.58	1.28	.02	---	.92	.75
31	1.28	---	.11	.67	---	1.04	---	1.40	---	---	1.63	---
TOTAL	35.27	23.90	---	7.75	11.91	22.17	19.98	17.60	22.43	---	---	34.32
MEAN	1.14	.80	---	.25	.43	.72	.67	.57	.75	---	---	1.14
MAX	1.67	1.85	---	.67	1.44	2.17	1.53	2.08	1.45	---	---	1.74
MIN	.39	-.41	---	-.29	-.56	-.23	-.25	-.62	-.22	---	---	.44

NEUSE RIVER BASIN

0209267800 BIG CREEK AT SOUTH RIVER, NC

LOCATION.--Lat 34°57'12", long 76°35'02", Craven County, Hydrologic Unit 03020204, at mouth and 0.8 miles southeast of South River.

TIDAL-ELEVATION RECORDS

PERIOD OF RECORD.--March 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 10 ft above National Geodetic Vertical Datum of 1929, gage readings have been reduced to elevations NGVD.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 4.90 ft April 13, 1988; minimum, 1.52 ft below NGVD, June 9, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 3.54 ft December 9; minimum, 1.16 ft below NGVD, November 21.

ELEVATION, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	1.17	.29	.03	.26	.71	1.06	.52	1.07	.28	1.06	1.42
2	---	1.54	.13	.24	-.03	.35	.83	.75	.72	.75	1.08	.98
3	---	1.27	-.23	.00	.08	.42	.97	.78	.39	.99	.91	.87
4	---	1.51	-.06	-.11	-.31	.93	.62	.31	-.02	.54	.78	1.55
5	---	1.31	-.18	-.07	.95	.79	.60	-.66	.92	-.15	.50	1.23
6	---	.86	-.06	.07	.27	.49	.35	.29	.76	.28	.28	.88
7	---	.72	.39	.22	.19	1.92	.77	.63	.07	.79	.36	.59
8	---	.69	1.86	.20	.45	1.09	1.09	.05	.29	.70	.65	1.14
9	---	.45	2.48	.28	.15	.25	.81	-.06	-.04	.21	.67	1.38
10	---	.68	1.74	.05	-.29	.34	.29	-.47	-.27	-.29	.82	.95
11	---	.97	.93	-.02	.90	.20	.10	.09	.56	-.21	.66	1.28
12	---	.65	.95	.14	.50	.15	.68	.46	1.01	-.70	.57	1.27
13	---	.82	1.23	.29	.25	.21	.87	-.08	1.08	-.49	.54	1.11
14	---	.64	.93	.27	-.01	.20	.70	.55	.86	.08	.36	1.01
15	---	.43	.68	.15	-.02	.23	.45	.66	.81	-.17	.51	.70
16	---	-.02	.83	.13	-.46	.06	.66	.22	1.21	.06	.62	1.15
17	---	.53	.88	.12	.38	-.37	.27	-.20	1.06	.33	.77	1.41
18	---	.16	.82	-.07	1.05	.16	1.33	.10	.92	.34	.71	1.34
19	.67	.42	.80	.37	.37	.37	1.21	.14	.34	.29	.60	.87
20	.55	-.54	.76	.14	.97	.48	.31	-.02	.78	.06	.53	.77
21	.34	-.27	.48	-.35	.83	.36	-.34	-.31	.63	-.13	.99	1.33
22	.49	.59	1.15	-.04	-.18	.16	.36	1.13	.66	.05	1.07	.79
23	.96	.63	1.59	.12	-.37	-.03	.17	2.00	.13	.26	1.11	1.01
24	1.32	.61	---	.12	-.54	.71	.01	1.01	.42	.72	1.01	1.06
25	1.47	.31	---	-.11	.09	.90	.08	.71	.91	1.05	1.12	.65
26	1.35	.08	---	-.29	.67	.80	.28	.53	.99	1.31	.94	.36
27	1.18	.42	---	.19	.22	1.07	.34	.02	.73	.98	.97	.64
28	1.26	.13	---	.07	.21	1.15	.21	1.45	.68	1.17	.89	.86
29	1.28	.75	.02	.02	---	1.23	.27	1.06	.38	1.24	.53	.76
30	1.20	.32	-.01	.02	---	.73	.45	1.15	-.03	1.12	.80	.64
31	1.09	---	-.07	.46	---	.89	---	1.26	---	.68	1.46	---
TOTAL	---	17.83	---	2.64	6.58	16.95	15.80	14.07	18.02	12.14	23.87	30.00
MEAN	---	.59	---	.09	.23	.55	.53	.45	.60	.39	.77	1.00
MAX	---	1.54	---	.46	1.05	1.92	1.33	2.00	1.21	1.31	1.46	1.55
MIN	---	-.54	---	-.35	-.54	-.37	-.34	-.66	-.27	-.70	.28	.36

02093000 NEW RIVER NEAR GUM BRANCH, NC

LOCATION.--Lat 34°50'56", long 77°31'11", Onslow County, Hydrologic Unit 03030001, on right bank 5 ft downstream from Secondary Road 1314, 0.7 mile downstream from Jenkins Swamp, 1.8 miles southwest of town of Gum Branch, and 3.8 miles southeast of Richlands.

DRAINAGE AREA.--94 mi^2.

PERIOD OF RECORD.--August 1949 to September 1973. July 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Aug. 19, 1949, to Mar. 22, 1950, nonrecording gage and Mar. 23, 1950 to Mar. 25, 1969, water-stage recorder at site 0.2 mile upstream at datum 2.52 ft higher. Mar. 26, 1969 to Sept. 1973 water-stage recorder at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Maximum discharge for period of record, from floodmark, site and datum then in use. Minimum discharge for current water year also occurred on Sept. 29.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1908 reached a stage of about 18 ft, at former site and datum, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	125	35	28	474	88	81	e1000	46	106	11	13	35
2	273	34	26	430	82	77	e1100	48	80	10	13	30
3	360	81	26	292	78	108	e700	58	64	11	13	28
4	227	61	25	223	80	119	e300	55	53	12	12	25
5	156	50	24	185	144	99	e200	48	49	9.9	11	22
6	125	43	25	186	109	86	e160	41	43	8.3	12	23
7	102	39	24	217	96	75	e200	36	37	12	15	22
8	111	38	208	363	84	68	e150	32	31	236	109	17
9	113	41	642	374	77	66	e120	29	27	89	77	18
10	96	39	1020	278	75	64	e200	35	24	32	48	20
11	86	35	1060	212	69	60	e150	71	21	21	e34	17
12	75	33	598	173	63	56	e140	42	18	17	e70	14
13	67	31	344	140	57	51	e120	54	19	15	e48	13
14	61	30	269	121	54	48	e110	96	19	15	e36	15
15	58	32	221	112	52	45	e100	71	20	15	e30	19
16	54	38	187	105	52	44	e90	55	20	15	e26	20
17	51	38	154	99	50	45	79	43	19	19	e36	17
18	48	31	135	93	45	245	71	36	18	21	e26	14
19	59	30	137	87	92	179	64	30	17	28	e24	14
20	56	29	190	82	110	132	61	27	16	36	e20	15
21	50	29	174	82	84	103	57	30	15	18	e40	13
22	44	27	153	80	79	84	54	153	18	17	e60	11
23	40	55	129	74	225	76	50	183	30	15	e80	6.7
24	37	67	112	70	202	67	46	108	18	15	e50	4.5
25	36	49	124	74	149	61	43	77	16	15	e36	4.5
26	37	44	129	127	112	56	39	62	15	13	e32	4.2
27	35	39	130	124	97	57	37	51	14	16	e30	3.8
28	32	35	127	95	89	54	34	82	12	36	e28	3.4
29	31	33	146	89	---	293	36	353	11	20	e26	3.6
30	36	30	197	102	---	1210	43	275	16	20	e80	4.3
31	42	---	326	95	---	e800	---	158	---	18	47	---
MEAN	87.8	39.9	229	170	92.6	149	185	80.2	28.9	27.0	38.1	15.2
MAX	360	81	1060	474	225	1210	1100	353	106	236	109	35
MIN	31	27	24	70	45	44	34	27	11	8.3	11	3.4
IN.	1.36	.60	3.54	2.63	1.30	2.30	2.77	1.24	.43	.42	.59	.23

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	74.3	62.7	90.5	141.2	171.2	174.6	122.5	78.8	94.5	134.6	103.2	93.5
MAX	553.1	189.8	277.5	299.4	403.2	417.8	377.3	187.9	423.2	717.2	733.7	887.4
(WY)	1972	1970	1958	1963	1973	1959	1973	1969	1961	1962	1955	1955
MIN	2.01	4.30	13.3	32.4	33.1	27.7	21.0	16.4	11.3	8.82	6.25	4.25
(WY)	1955	1955	1955	1955	1955	1955	1955	1957	1970	1970	1954	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	95.5		112.1	
HIGHEST ANNUAL MEAN			207.6	1972
LOWEST ANNUAL MEAN			59.9	1953
HIGHEST DAILY MEAN	1210	Mar 30	6490	Sep 20 1955
LOWEST DAILY MEAN	3.4	Sep 28	1.9	Oct 6 1954
INSTANTANEOUS PEAK FLOW	1340	Mar 30	7900*	Sep 20 1955
INSTANTANEOUS PEAK STAGE	10.93	Mar 30	19.99*	Sep 20 1955
INSTANTANEOUS LOW FLOW	3.3*	Sep 28	1.8	Oct 07 1954
ANNUAL RUNOFF (INCHES)	17.4		20.4	
10 PERCENTILE	196		245	
50 PERCENTILE	51		53	
95 PERCENTILE	12		7.2	

* See REMARKS.

HEWLETTS CREEK BASIN

02093229 HEWLETTS CREEK AT SECONDARY ROAD 1102 NEAR WILMINGTON, NC

LOCATION.--Lat 34°11'28", long 77°53'32", New Hanover County, Hydrologic Unit 03030001, on right bank 50 ft upstream from culvert on Secondary Road 1102, and 3.8 mi southeast of Wilmington.

DRAINAGE AREA.--1.98 mi^2.

PERIOD OF RECORD.--November 1976 to September 1990 (discontinued).

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Elevation gage is 20 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Several measurements of water temperature were made during the year. Maximum discharge for period of record, from rating curve extended above 150 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	4.8	1.6	5.7	2.3	2.1	2.8	1.5	2.2	1.4	1.3	1.4
2	18	5.0	1.7	4.3	3.1	1.9	7.1	1.6	2.1	1.3	1.4	1.3
3	8.7	4.8	1.8	3.5	2.5	2.7	3.1	1.3	1.9	1.1	1.3	1.5
4	6.6	3.6	2.2	3.1	2.8	1.7	2.6	1.4	1.7	1.1	1.2	1.4
5	5.3	3.1	2.3	2.5	2.5	1.6	2.2	1.7	1.6	1.1	1.1	1.1
6	4.4	3.0	2.3	2.6	2.3	1.6	1.9	1.4	1.5	1.0	1.2	1.1
7	4.1	2.9	2.4	3.7	2.3	1.8	1.8	1.3	1.4	1.0	1.7	1.1
8	8.8	2.7	7.2	10	2.1	2.1	1.7	1.3	1.4	37	29	1.1
9	4.6	3.3	24	5.1	2.9	1.7	1.7	1.3	1.4	3.0	48	.95
10	3.8	2.5	25	4.0	3.1	1.6	1.6	1.5	1.4	2.3	10	.91
11	3.4	2.3	9.5	3.4	2.4	1.5	4.0	1.3	1.5	2.0	7.5	.86
12	3.2	2.3	7.4	2.6	2.2	1.5	1.7	1.2	1.3	1.6	6.2	.86
13	3.1	2.0	6.5	2.3	2.6	1.4	1.6	1.2	1.3	1.7	4.9	.86
14	2.9	2.1	5.1	2.0	2.4	1.5	1.5	1.2	1.3	1.9	4.2	.86
15	3.3	2.0	4.4	2.1	2.2	1.3	1.5	1.2	3.4	1.9	3.5	.86
16	3.1	2.5	4.0	3.2	1.7	1.4	1.4	1.1	2.1	2.4	3.1	.89
17	3.1	1.8	3.5	3.8	1.9	1.5	1.3	1.3	1.5	2.2	3.1	.88
18	3.8	1.7	3.4	3.3	2.3	1.8	1.3	1.1	1.4	1.7	3.0	.86
19	3.6	1.6	6.4	3.6	4.4	1.5	1.3	1.0	2.6	1.6	2.7	.86
20	2.7	1.6	5.6	3.9	2.4	1.5	1.3	.94	1.5	1.6	6.0	.77
21	2.3	1.5	4.0	3.0	2.1	1.5	1.3	1.0	1.5	2.0	14	.84
22	2.3	1.5	3.3	2.6	2.1	1.4	1.2	29	2.5	1.6	5.8	.85
23	2.2	2.3	3.2	2.4	2.6	1.6	1.2	7.9	1.7	1.5	4.4	.79
24	2.1	1.6	3.2	2.3	2.2	1.2	1.2	3.8	1.3	1.4	3.7	.73
25	2.0	1.5	3.1	2.3	2.0	1.3	1.3	2.8	1.3	1.4	3.0	.64
26	2.0	1.6	3.4	2.4	2.1	1.3	1.2	2.5	1.3	1.3	2.7	.63
27	2.0	1.5	3.5	2.3	2.3	1.2	1.4	4.2	1.3	1.3	2.9	.61
28	2.0	1.6	4.4	2.2	2.4	1.2	1.2	8.5	1.3	1.3	1.7	.63
29	2.0	1.6	4.9	3.0	---	2.9	1.6	5.9	1.2	1.3	1.5	.68
30	17	1.5	6.1	2.4	---	1.8	1.3	3.4	1.2	1.2	1.4	.71
31	7.2	---	7.6	2.3	---	4.8	---	2.6	---	1.3	1.5	---
MEAN	4.72	2.39	5.58	3.29	2.44	1.74	1.88	3.14	1.64	2.73	5.90	.92
MAX	18	5.0	25	10	4.4	4.8	7.1	29	3.4	37	48	1.5
MIN	2.0	1.5	1.6	2.0	1.7	1.2	1.2	.94	1.2	1.0	1.1	.61
IN.	2.75	1.35	3.25	1.91	1.28	1.01	1.06	1.83	.92	1.59	3.44	.52

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	2.28	2.66	3.91	4.75	5.04	5.08	3.22	2.67	2.04	3.91	5.14	6.00
MAX	4.72	5.70	7.20	8.11	14.2	9.55	7.51	5.14	3.57	12.2	14.8	29.0
(WY)	1990	1978	1987	1978	1983	1983	1989	1988	1982	1988	1981	1984
MIN	.955	1.16	1.98	1.50	2.10	1.74	1.29	1.23	.801	.277	1.04	.918
(WY)	1979	1979	1986	1985	1986	1990	1985	1985	1980	1977	1979	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	3.05		3.98	
HIGHEST ANNUAL MEAN			5.60	1988
LOWEST ANNUAL MEAN			2.61	1985
HIGHEST DAILY MEAN	48	Aug 9	383	Sep 13 1984
LOWEST DAILY MEAN	.61	Sep 27	.07	Jul 15 1977
INSTANTANEOUS PEAK FLOW	308	Jul 8	847*	Jul 24 1982
INSTANTANEOUS PEAK STAGE	3.69	Jul 8	5.77	Jul 24 1982
INSTANTANEOUS LOW FLOW	.50	Sep 25	0	Jul 26 1977
ANNUAL RUNOFF (INCHES)	20.9		27.3	
10 PERCENTILE	4.5		6.7	
50 PERCENTILE	1.9		1.9	
95 PERCENTILE	0.8		0.7	

* See REMARKS.

CAPE FEAR RIVER BASIN

0209330990 BROOKS LAKE TRIBUTARY NEAR BROWNS SUMMIT, NC

LOCATION.--Lat 36°13'40", long 79°43'20", Guilford County, Hydrologic Unit 03030002, on left bank, 0.2 mi upstream from mouth, on General Green Scout Reservation, and 1.1 mi northwest of Browns Summit.

DRAINAGE AREA.--0.06 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1984 to February 1990 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 750 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except those below 0.02 ft^3/s, which are poor. Minimum, .01 ft^3/s, occurs frequently most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.86	.03	.01	.46	.08	---	---	---	---	---	---	---
2	.38	.04	.01	.11	.08	---	---	---	---	---	---	---
3	.13	.05	.01	.07	.08	---	---	---	---	---	---	---
4	.06	.04	.01	.07	.46	---	---	---	---	---	---	---
5	.05	.04	.01	.06	.17	---	---	---	---	---	---	---
6	.05	.05	.02	.15	.11	---	---	---	---	---	---	---
7	.05	.05	.02	.10	.09	---	---	---	---	---	---	---
8	.06	.06	.02	.45	.08	---	---	---	---	---	---	---
9	.06	.06	.02	.17	.08	---	---	---	---	---	---	---
10	.06	.07	.02	.09	.32	---	---	---	---	---	---	---
11	.05	.06	.02	.07	.18	---	---	---	---	---	---	---
12	.04	.06	.44	.05	.12	---	---	---	---	---	---	---
13	.04	.07	.22	.04	.11	---	---	---	---	---	---	---
14	.05	.07	.10	.04	.10	---	---	---	---	---	---	---
15	.05	.06	.08	.04	.10	---	---	---	---	---	---	---
16	.06	.07	.08	.04	.59	---	---	---	---	---	---	---
17	.06	.02	.04	.06	.29	---	---	---	---	---	---	---
18	.12	.01	.04	.05	.18	---	---	---	---	---	---	---
19	.63	.01	.03	.05	.34	---	---	---	---	---	---	---
20	.30	.02	.02	.05	.18	---	---	---	---	---	---	---
21	.25	.02	.02	.06	.13	---	---	---	---	---	---	---
22	.22	.02	.02	.05	.17	---	---	---	---	---	---	---
23	.20	.03	.02	.05	.16	---	---	---	---	---	---	---
24	.17	.02	.02	.05	.10	---	---	---	---	---	---	---
25	.15	.02	.02	.20	.07	---	---	---	---	---	---	---
26	.13	.02	.02	.39	.06	---	---	---	---	---	---	---
27	.11	.02	.02	.12	.06	---	---	---	---	---	---	---
28	.09	.02	.03	.08	.05	---	---	---	---	---	---	---
29	.08	.01	.04	.09	---	---	---	---	---	---	---	---
30	.07	.01	.04	.12	---	---	---	---	---	---	---	---
31	.05	---	.10	.09	---	---	---	---	---	---	---	---
MEAN	.15	.038	.051	.11	.16	---	---	---	---	---	---	---
MAX	.86	.07	.44	.46	.59	---	---	---	---	---	---	---
MIN	.04	.01	.01	.04	.05	---	---	---	---	---	---	---
IN.	2.90	.70	.97	2.18	2.81	---	---	---	---	---	---	---

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	.048	.048	.051	.070	.120	.115	.112	.050	.038	.028	.027	.022
MAX	.151	.090	.073	.119	.169	.223	.405	.120	.057	.048	.051	.029
(WY)	1990	1986	1986	1985	1987	1987	1987	1989	1989	1985	1985	1985
MIN	.013	.027	.015	.016	.042	.039	.020	.025	.021	.018	.012	.013
(WY)	1989	1987	1989	1989	1988	1988	1986	1986	1988	1988	1988	1988

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	*****		*****	
HIGHEST ANNUAL MEAN			.09	1987
LOWEST ANNUAL MEAN			.03	1988
HIGHEST DAILY MEAN	.86	Oct 1	6.2	Apr 16 1987
LOWEST DAILY MEAN	.01	Nov 18	.01	Jun 26 1986
INSTANTANEOUS PEAK FLOW	5.1	Oct 1	76.0	Apr 15 1987
INSTANTANEOUS PEAK STAGE	2.15	Oct 1	3.47	Apr 15 1987
INSTANTANEOUS LOW FLOW	.01*	Nov 19	.01*	Jun 25 1986
ANNUAL RUNOFF (INCHES)	*****		*****	

***** Indicates not enough data, therefore statistic is not computed

*See REMARKS.

CAPE FEAR RIVER BASIN

0209330990 BROOKS LAKE TRIBUTARY NEAR BROWNS SUMMIT, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1985 to February 1990 (discontinued).

REMARKS.--Station operated as part of a monitoring network for defining effects of land-management practices on water chemistry of Piedmont streams. Miscellaneous organic analyses are available in files of the District office in Raleigh, NC.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	POTAS-SIUM, TOTAL RECOV-ERABLE (MG/L AS K)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
OCT											
01...	1230	0.55	38	6.5	--	--	--	--	--	<0.100	0.040
NOV											
01...	1150	0.03	49	6.0	16.0	744	8.5	1.7	54	--	--
JAN											
08...	0715	0.22	40	5.6	--	--	--	--	--	0.200	0.220
08...	0730	0.25	39	5.4	--	--	--	--	--	0.100	0.110
08...	0830	0.39	39	5.4	--	--	--	--	--	<0.100	0.050
08...	0930	0.70	38	5.4	--	--	--	--	--	<0.100	0.070
08...	1030	0.97	39	5.4	--	--	--	--	--	0.100	0.110
08...	1200	0.89	40	5.4	--	--	--	--	--	<0.100	0.040

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHATE, TOTAL (MG/L AS PO4)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT										
01...	0.05	0.96	1.0	--	--	0.220	0.58	0.190	222	0.33
NOV										
01...	--	--	--	--	--	--	--	--	5	0.00
JAN										
08...	0.28	0.48	0.70	0.90	4.0	0.060	0.12	0.040	59	0.03
08...	0.14	0.29	0.40	0.50	2.2	0.050	0.18	0.060	39	0.03
08...	0.06	0.55	0.60	--	--	0.070	0.12	0.040	68	0.07
08...	0.09	0.73	0.80	--	--	0.100	0.25	0.080	--	--
08...	0.14	1.1	1.2	1.3	5.8	0.120	0.28	0.090	--	--
08...	0.05	0.56	0.60	--	--	0.070	0.28	0.090	63	0.15

CAPE FEAR RIVER BASIN

0209331325 CANDY CREEK AT SECONDARY ROAD 2700 NEAR MONTICELLO, NC

LOCATION.--Lat 36°14'02", long 79°39'43", Guilford County, Hydrologic Unit 03030002, on right bank 70 ft upstream from bridge on Secondary Road 2700, and 1.2 mi northeast of Monticello.

DRAINAGE AREA.--1.10 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1984 to September 1990 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 730 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated discharges. Records fair. Minimum discharge for period of record occurred many days in 1986 and 1987.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	.63	.68	6.9	1.1	1.2	1.7	1.4	1.2	.26	.18	.30
2	14	.64	.67	1.9	1.0	1.2	1.4	3.4	1.0	.23	.18	.30
3	3.8	.69	.66	1.4	1.0	2.3	1.2	3.4	1.0	.20	.15	.30
4	1.8	.62	.66	1.4	8.3	1.7	1.1	3.4	.93	.18	.14	.30
5	1.3	.58	.65	1.4	2.8	1.2	.97	3.4	.83	.15	.15	.28
6	1.0	.61	.64	3.3	1.7	1.1	.91	2.9	.75	.15	.21	.24
7	.89	.62	.54	2.0	1.4	.94	2.3	2.2	.70	.12	.17	.21
8	.77	.61	1.3	8.6	1.2	.94	1.3	1.8	.68	.12	.14	.19
9	.70	.67	1.0	3.2	1.1	.94	1.2	2.0	.64	.09	.12	.19
10	.65	.58	.89	1.7	8.6	.90	.94	4.2	.65	.82	.11	.19
11	.64	.55	1.2	1.3	3.7	.90	.95	2.3	.58	.31	.09	.19
12	.58	.52	12	1.2	1.9	.90	.90	1.7	.49	.14	.08	.19
13	.55	.50	6.1	1.1	1.5	.87	.85	1.5	.47	.30	.08	.17
14	.54	.62	2.6	.99	1.3	.96	.80	1.3	.48	.37	.06	.15
15	.50	.67	2.2	.95	1.3	.84	7.8	1.2	.49	.77	.04	.15
16	.46	3.8	2.1	.92	11	1.2	1.9	1.0	.50	.26	1.3	.15
17	.49	1.3	1.5	.95	5.1	2.1	1.2	.97	.47	.76	.14	.14
18	1.6	.97	1.3	.95	2.3	1.8	1.0	.92	.40	.49	.12	.13
19	17	.85	1.2	.91	6.9	1.2	.86	.86	.34	.38	.10	.13
20	3.4	.78	1.1	.91	2.7	1.1	.83	.81	.31	.32	.08	.13
21	1.7	.69	1.0	1.7	1.7	.99	.80	.72	.29	.31	.06	.10
22	1.3	1.1	.92	1.1	2.7	.93	.86	1.1	.28	.30	4.3	.09
23	1.1	2.6	.90	.98	2.9	.90	.82	.96	.28	.29	.78	.09
24	.94	1.3	.90	1.0	1.8	.91	.73	.80	.28	.24	.31	.09
25	.87	1.1	.90	6.2	1.5	.88	.73	.70	.30	.24	1.7	.08
26	.80	.88	.86	8.4	1.3	.86	.70	.70	.28	.20	.95	.07
27	.76	.79	.78	2.4	1.3	.83	.65	1.0	.34	.17	.56	.07
28	.71	.76	.75	1.6	1.2	.78	.61	2.8	.31	.18	.41	.08
29	.68	.71	.70	1.7	---	2.2	.60	7.3	.30	.20	.37	.08
30	.67	.74	.80	1.7	---	1.6	.76	2.2	.28	.18	.31	.08
31	.67	---	1.8	1.2	---	2.7	---	1.5	---	.16	.30	---
MEAN	2.74	.92	1.59	2.26	2.87	1.22	1.25	1.95	.53	.29	.44	.16
MAX	24	3.8	12	8.6	11	2.7	7.8	7.3	1.2	.82	4.3	.30
MIN	.46	.50	.54	.91	1.0	.78	.60	.70	.28	.09	.04	.07
IN.	2.87	.93	1.67	2.37	2.72	1.28	1.26	2.04	.54	.30	.46	.16

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	.653	.956	.972	1.26	2.15	1.72	1.44	.948	.482	.387	.665	.471
MAX	2.74	2.42	1.59	2.26	3.77	3.70	4.82	1.95	1.49	.760	1.60	1.39
(WY)	1990	1986	1990	1990	1987	1987	1987	1990	1989	1985	1985	1989
MIN	.173	.423	.338	.516	.900	.605	.475	.330	.102	.137	.044	.162
(WY)	1988	1988	1989	1989	1986	1988	1985	1986	1986	1986	1987	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	1.34		1.00	
HIGHEST ANNUAL MEAN			1.45	1987
LOWEST ANNUAL MEAN			.53	1988
HIGHEST DAILY MEAN	24	Oct 1	57	Mar 1 1987
LOWEST DAILY MEAN	.04	Aug 15	.02	Jul 19 1986
INSTANTANEOUS PEAK FLOW	136	Oct 1	356	Apr 16 1987
INSTANTANEOUS PEAK STAGE	4.87	Oct 1	6.77	Apr 16 1987
INSTANTANEOUS LOW FLOW	.03	Aug 15	.02*	Jun 28 1986
ANNUAL RUNOFF (INCHES)	16.5		12.3	
10 PERCENTILE	1.6		2.3	
50 PERCENTILE	0.5		0.8	
95 PERCENTILE	0.1		0.1	

*See REMARKS.

CAPE FEAR RIVER BASIN

0209331325 CANDY CREEK AT SECONDARY ROAD 2700 NEAR MONTICELLO, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1985 to current year (discontinued).

REMARKS.--Station operated as part of a monitoring network for defining effects of land-management practices on water chemistry of Piedmont streams. Miscellaneous organic analyses are available in the files of the District office in Raleigh, NC.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	POTAS-SIUM, TOTAL RECOV-ERABLE (MG/L AS K)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
OCT									
01...	1145	9.8	64	7.4	--	--	--	--	--
NOV									
01...	1230	0.62	70	6.3	15.0	744	9.7	2.7	52
JAN									
06...	0815	5.2	69	5.3	--	--	--	--	--
06...	0830	5.5	--	--	--	--	--	--	--
06...	0915	5.5	67	5.3	--	--	--	--	--
08...	0715	5.6	67	5.4	--	--	--	--	--
08...	0745	6.8	66	5.4	--	--	--	--	--
08...	0815	8.6	71	5.4	--	--	--	--	--
08...	1235	16	62	5.5	--	--	--	--	--
MAR									
13...	1245	0.86	68	7.3	20.0	747	9.2	1.8	37
APR									
15...	0318	3.9	65	5.6	--	--	--	--	--
15...	0345	5.6	60	5.8	--	--	--	--	--
15...	0415	8.8	58	5.6	--	--	--	--	--
15...	0445	14	50	5.7	--	--	--	--	--
15...	0515	21	46	5.6	--	--	--	--	--
MAY									
02...	2045	4.6	46	5.1	--	--	--	--	--
02...	2100	12	45	5.1	--	--	--	--	--
02...	2115	22	41	5.1	--	--	--	--	--
02...	2215	19	40	5.2	--	--	--	--	--
02...	2245	16	40	5.2	--	--	--	--	--
31...	1430	1.5	65	5.8	19.0	746	9.1	--	54
JUL									
10...	1850	0.58	83	5.2	--	--	--	--	--
10...	1900	1.5	82	5.1	--	--	--	--	--
10...	1930	9.6	67	5.1	--	--	--	--	--
10...	2030	4.7	64	5.0	--	--	--	--	--

DATE	NITRO-GEN, NO2+NO3 TOTAL (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,NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO-GEN, TOTAL (MG/L AS N)
OCT									
01...	0.300	--	0.060	--	0.08	1.1	1.2	--	1.5
NOV									
01...	0.800	--	0.020	--	0.03	0.38	0.40	--	1.2
JAN									
06...	1.00	--	0.400	--	0.52	1.6	2.0	--	3.0
06...	--	--	--	--	--	--	--	--	--
06...	0.900	--	0.200	--	0.26	1.1	1.3	--	2.2
08...	0.800	--	0.150	--	0.19	1.1	1.3	--	2.1
08...	0.800	--	0.170	--	0.22	0.93	1.1	--	1.9
08...	0.900	--	0.290	--	0.37	1.1	1.4	--	2.3
08...	0.800	--	0.150	--	0.19	1.1	1.3	--	2.1
MAR									
13...	0.800	--	0.060	--	0.08	0.44	0.50	--	1.3
APR									
15...	0.800	--	0.530	--	0.68	3.8	4.3	--	5.1
15...	0.600	--	0.510	--	0.66	2.7	3.2	--	3.8
15...	0.500	--	0.440	--	0.57	3.9	4.3	--	4.8
15...	0.400	--	0.390	--	0.50	4.0	4.4	--	4.8
15...	0.500	--	0.380	--	0.49	4.5	4.9	--	5.4
MAY									
02...	0.500	--	0.090	--	0.12	5.4	5.5	--	6.0
02...	0.500	--	0.100	--	0.13	3.8	3.9	--	4.4
02...	0.500	--	0.120	--	0.15	0.38	0.50	--	1.0
02...	0.500	--	0.100	--	0.13	0.90	1.0	--	1.5
02...	0.500	--	0.080	--	0.10	3.9	4.0	--	4.5
31...	0.700	<2.0	0.090	0.5	0.12	0.81	0.90	20	1.6
JUL									
10...	0.800	--	0.080	--	0.10	4.5	4.6	--	5.4
10...	0.100	--	0.040	--	0.05	2.1	2.1	--	2.2
10...	0.500	--	0.030	--	0.04	2.6	2.6	--	3.1
10...	1.30	--	0.030	--	0.04	1.5	1.5	--	2.8

0209331325 CANDY CREEK AT SECONDARY ROAD 2700 NEAR MONTICELLO, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHATE, TOTAL (MG/L AS PO4)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	PHOS-PHORUS TOTAL IN BOT. MAT. (MG/KG AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT								
01...	6.6	0.300	0.86	--	0.280	--	546	14
NOV								
01...	5.3	0.040	0.12	0.040	0.040	--	9	0.02
JAN								
06...	13	0.400	0.49	--	0.160	--	--	--
06...	--	--	--	--	--	--	309	4.6
06...	9.7	0.310	0.67	--	0.220	--	291	4.3
08...	9.3	0.260	0.58	--	0.190	--	172	2.6
08...	8.4	0.270	0.67	--	0.220	--	138	2.5
08...	10	0.250	0.46	--	0.150	--	267	6.2
08...	9.3	0.320	0.74	--	0.240	--	325	14
MAR								
13...	5.8	0.050	0.12	<0.010	0.040	--	25	0.06
APR								
15...	23	0.920	0.06	--	0.020	--	1030	11
15...	17	0.760	0.09	--	0.030	--	752	11
15...	21	0.890	0.06	--	0.020	--	1190	28
15...	21	1.20	0.06	--	0.020	--	1780	67
15...	24	1.20	0.06	--	0.020	--	1850	105
MAY								
02...	27	1.00	0.09	--	0.030	--	1490	18
02...	19	0.810	0.12	--	0.040	--	981	32
02...	4.4	4.20	0.15	--	0.050	--	5370	319
02...	6.6	3.30	0.12	--	0.040	--	3960	203
02...	20	2.00	0.12	--	0.040	--	2740	118
31...	7.1	0.090	0.15	0.020	0.050	60	41	0.17
JUL								
10...	24	0.530	0.09	--	0.030	--	2370	3.7
10...	9.7	0.650	0.03	--	0.010	--	2890	12
10...	14	0.750	0.03	--	0.010	--	3300	85
10...	12	0.640	0.09	--	0.030	--	2290	29

CAPE FEAR RIVER BASIN

02093800 REEDY FORK NEAR OAK RIDGE, NC

LOCATION.--Lat 36°10'22", long 79°57'12", Guilford County, Hydrologic Unit 03030002, on left bank at downstream side of bridge on Secondary Road 2128, 0.8 mi downstream from Beaver Creek, and 2 mi east of Oak Ridge.

DRAINAGE AREA.--20.6 mi^2.

PERIOD OF RECORD.--October 1955 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 771.30 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 13, 1955, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Some diurnal fluctuation at medium and low flows caused by mill upstream. Maximum discharge, 3,950 ft^3/s, from rating curve extended above 1,500 ft^3/s on basis of contracted-opening measurement at gage height 10.94 ft. Minimum discharge for current water year also occurred on Sept. 8, 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	228	18	20	201	31	30	36	23	23	9.2	6.2	5.3
2	602	18	21	61	30	30	39	44	22	9.3	6.1	5.2
3	121	19	20	36	28	66	30	103	22	8.8	6.1	5.1
4	44	18	19	37	142	48	27	80	21	8.5	6.0	5.0
5	32	18	20	36	71	35	25	74	19	8.4	5.9	5.0
6	29	18	19	52	40	32	25	107	19	8.2	12	4.9
7	26	19	19	42	34	29	56	50	18	8.0	11	4.8
8	23	20	29	120	31	28	32	31	17	7.9	7.8	4.5
9	21	26	27	85	30	28	28	27	17	8.3	7.4	5.9
10	19	22	23	43	128	27	29	e100	16	7.9	7.2	5.9
11	19	20	27	34	81	26	35	e45	15	15	7.0	5.8
12	18	18	143	30	42	26	28	31	15	9.6	6.4	6.4
13	17	18	166	28	34	26	25	27	13	13	6.1	11
14	17	18	61	26	31	25	26	24	14	11	5.9	8.9
15	17	19	39	27	29	26	139	23	14	30	5.9	7.1
16	17	144	36	26	174	30	56	21	14	16	9.6	6.2
17	17	47	30	25	178	41	36	20	14	11	16	5.6
18	24	31	28	25	59	44	29	19	13	13	8.4	5.3
19	134	26	27	25	108	30	27	18	13	11	7.2	5.3
20	44	24	25	24	61	31	25	18	12	9.8	6.7	5.6
21	34	23	24	38	41	28	25	18	12	9.1	6.5	5.4
22	29	24	22	29	54	26	24	43	12	8.4	7.2	5.9
23	25	55	e24	26	87	25	23	29	11	8.1	8.9	6.0
24	23	32	22	26	47	24	23	22	11	7.7	8.2	5.3
25	22	28	e24	110	36	24	22	21	10	7.4	8.6	5.1
26	21	26	21	160	32	24	21	20	10	7.2	8.7	5.1
27	20	24	21	57	32	23	20	20	10	7.0	7.3	4.9
28	19	23	21	37	31	23	20	58	10	7.0	6.5	4.7
29	19	22	21	36	---	39	24	127	9.9	6.9	6.1	4.7
30	19	21	23	55	---	34	25	53	9.4	6.8	5.9	4.8
31	19	---	35	35	---	44	---	28	---	6.7	5.5	---
MEAN	55.5	28.0	34.1	51.4	61.5	31.4	32.7	42.7	14.5	9.88	7.56	5.69
MAX	602	144	166	201	178	66	139	127	23	30	16	11
MIN	17	18	19	24	28	23	20	18	9.4	6.7	5.5	4.5
IN.	3.10	1.52	1.91	2.87	3.11	1.76	1.77	2.39	.79	.55	.42	.31

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	18.1	17.3	24.0	28.8	36.0	35.0	27.8	23.2	19.6	20.8	17.1	17.2
MAX	76.4	40.4	48.7	82.0	78.7	101.9	75.8	57.8	74.4	152.1	62.0	85.5
(WY)	1960	1986	1963	1978	1979	1975	1987	1982	1982	1984	1978	1979
MIN	5.90	7.21	8.67	8.52	13.5	12.4	9.79	8.19	5.03	3.64	5.88	3.39
(WY)	1968	1968	1956	1956	1968	1967	1967	1986	1986	1977	1977	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	31.1		23.7	
HIGHEST ANNUAL MEAN			42.7	1984
LOWEST ANNUAL MEAN			11.7	1967
HIGHEST DAILY MEAN	602	Oct 2	1250	Jul 28 1984
LOWEST DAILY MEAN	4.5	Sep 8	1.7	Aug 7 1977
INSTANTANEOUS PEAK FLOW	952	Oct 2	3950*	Oct 10 1959
INSTANTANEOUS PEAK STAGE	10.12	Oct 2	12.41	Sep 22 1979
INSTANTANEOUS LOW FLOW	4.4*	Sep 7	1.2	Aug 7 1977
ANNUAL RUNOFF (INCHES)	20.5		15.6	
10 PERCENTILE	56		39	
50 PERCENTILE	23		15	
95 PERCENTILE	5.1		5.5	

* See REMARKS.

CAPE FEAR RIVER BASIN

02094500 REEDY FORK NEAR GIBSONVILLE, NC

LOCATION.--Lat 36°10'31", long 79°37'01", Guilford County, Hydrologic Unit 03030002, on right bank 0.2 mi downstream from Huffines Mill on Secondary Road 2719, 1.2 mi upstream from Buffalo Creek, and 6 mi northwest of Gibsonville.

DRAINAGE AREA.--131 mi^2.

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. WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder and rock-masonry control. Datum of gage is 626.88 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good except those below 4 ft^3/s, which are fair. Flow regulated since 1923 by Lake Brandt 14 mi upstream (station 02094117), since 1957 by Lake Higgins on Brush Creek, a tributary to Lake Brandt, (station 02093981), since 1943 by Richland Lake 12 mi above station, and since 1968 by Lake Townsend 9 mi above station (station 02094305). City of Greensboro diverted from Lake Brandt an average of 26.5 ft^3/s and an average of 25.2 ft^3/s from Lake Townsend for municipal water supply. Prior to regulation by Lake Townsend, maximum discharge, 11,600 ft^3/s Sept. 25 1947, gage height 20.77 ft.; minimum discharge not determined. Maximum discharge for regulated period, 5,660 ft^3/S, from high-water mark in well. Minimum discharge for regulated period, 1.4 ft^3/s, also occurred July 30, Aug. 6, 7, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1916 reached a stage of 17.90 ft, from information by local resident, discharge, 8,640 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	454	12	84	502	66	370	201	102	37	12	5.0	5.6
2	1990	11	80	461	56	93	381	489	33	11	4.8	5.4
3	1810	12	22	418	335	166	106	599	32	10	4.6	5.3
4	978	10	17	422	133	411	42	566	31	10	4.5	5.3
5	62	8.9	16	325	436	81	39	497	29	10	4.5	5.1
6	28	45	16	87	419	37	84	440	28	9.5	7.9	5.2
7	23	168	16	63	320	32	243	192	27	9.0	12	5.5
8	20	15	32	539	49	29	54	157	26	9.1	6.2	5.5
9	20	9.8	36	538	34	47	89	48	25	9.5	5.6	5.7
10	20	7.0	26	482	203	383	419	265	23	9.8	5.3	6.8
11	20	7.5	57	327	463	78	315	561	21	13	5.2	7.9
12	19	8.6	730	788	425	30	44	390	19	14	5.1	7.4
13	17	6.6	882	102	407	26	29	59	19	13	5.0	6.4
14	18	6.1	931	38	171	32	28	40	20	15	5.0	7.0
15	17	6.6	700	35	37	30	397	34	19	28	4.8	6.6
16	14	32	97	79	169	157	457	32	19	16	6.4	5.7
17	14	331	42	88	525	132	350	31	19	40	11	5.3
18	20	367	89	31	504	151	54	30	19	43	6.0	5.2
19	985	65	374	71	587	39	34	30	18	16	5.4	5.1
20	773	16	69	359	560	33	31	27	16	12	5.1	11
21	436	353	29	79	843	29	30	32	16	10	5.1	5.8
22	70	67	26	374	708	28	31	41	16	9.2	72	4.5
23	32	333	22	344	311	29	29	415	15	8.7	158	4.3
24	28	324	22	48	316	27	28	127	14	7.5	35	4.2
25	27	39	21	186	57	25	28	33	14	7.0	96	4.1
26	30	25	21	463	37	25	27	31	14	6.1	92	4.5
27	445	22	29	853	35	24	26	36	14	5.7	21	4.9
28	451	21	345	140	76	24	26	196	13	5.6	13	4.5
29	323	20	64	68	---	86	28	728	12	5.4	9.0	4.4
30	30	18	28	492	---	70	36	443	12	5.4	8.1	4.5
31	16	---	41	664	---	438	---	67	---	5.3	6.4	---
MEAN	296	78.9	160	305	296	102	123	217	20.7	12.4	20.5	5.62
MAX	1990	367	931	853	843	438	457	728	37	43	158	11
MIN	14	6.1	16	31	34	24	26	27	12	5.3	4.5	4.1

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD *, BY WATER YEAR (WY)

MEAN	44.6	41.1	94.2	174.2	157.6	148.8	115.9	103.3	70.2	74.1	43.5	59.2
MAX	296.5	152.0	221.2	643.6	456.0	469.1	613.0	365.0	476.6	596.1	216.3	500.0
(WY)	1990	1980	1973	1978	1979	1989	1987	1978	1982	1984	1978	1979
MIN	2.85	6.70	5.97	11.1	19.9	16.4	11.2	7.43	6.08	2.83	2.82	2.27
(WY)	1969	1970	1969	1981	1977	1976	1976	1986	1986	1986	1977	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD*	
AVERAGE FLOW	136.1		93.6	
HIGHEST ANNUAL MEAN			187.7	1984
LOWEST ANNUAL MEAN			20.8	1981
HIGHEST DAILY MEAN	1990	Oct 2	4480	Apr 16 1987
LOWEST DAILY MEAN	4.1	Sep 25	1.2	Oct 3 1968
INSTANTANEOUS PEAK FLOW	2380	Oct 2	5660*	Jun 21 1972
INSTANTANEOUS PEAK STAGE	8.66	Oct 2	14.92*	Jun 21 1972
INSTANTANEOUS LOW FLOW	4.0	Sep 25	1.4*	Jul 29 1977
ANNUAL RUNOFF (INCHES)	14.1		9.70	
10 PERCENTILE	455		257	
50 PERCENTILE	30		24	
95 PERCENTILE	5.1		4.1	

* Regulated period (1968 - 1990) only. See REMARKS.

CAPE FEAR RIVER BASIN

02095500 NORTH BUFFALO CREEK NEAR GREENSBORO, NC

LOCATION.--Lat 36°07'13", long 79°42'30", Guilford County, Hydrologic Unit 03030002, on left bank 5 ft downstream from bridge on Secondary Road 2832, 4.2 mi upstream from mouth, and 5.8 mi northeast of post office in Greensboro.

DRAINAGE AREA.--37.1 mi^2.

PERIOD OF RECORD.--August 1928 to September 1990 (discontinued).

REVISED RECORDS.--WSP 1303: 1929, 1931-42, monthly and yearly runoff. WSP 1383: 1928(M), 1929, 1933-34(M), 1936(M), 1941(M), 1943(M), 1945(M). WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 678.02 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers).

REMARKS.--No estimated daily discharges. Records good. Diurnal fluctuation at low flow caused by mills upstream from station. Diversion into basin from Greensboro and Proximity Mills enter upstream from station. Maximum discharge, 9,140 ft^3/s, gage height, 20.12 ft, Sept. 22, 1979, from floodmarks, from rating curve extended above 2,900 ft^3/s on basis of contracted-opening measurements at gage heights 14.15 ft, 15.96 ft, and 16.63 ft. Minimum discharge for current water year also occurred Sept. 19, 27, 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	891	41	36	327	53	50	94	89	45	28	24	26
2	689	41	34	72	54	58	122	181	41	29	24	24
3	103	46	33	56	50	254	105	370	39	30	25	23
4	57	33	34	68	252	85	59	322	40	28	26	27
5	46	31	34	65	88	62	54	281	41	26	31	28
6	42	38	36	178	61	55	56	174	38	28	66	30
7	41	38	36	72	59	52	224	113	39	28	38	29
8	34	38	153	311	52	49	62	58	39	27	29	28
9	34	43	72	117	55	48	56	81	38	33	30	44
10	34	36	94	68	432	48	54	313	37	31	27	30
11	34	32	117	58	114	45	59	80	35	31	25	30
12	33	29	720	54	68	46	51	54	36	102	24	31
13	34	30	338	51	60	47	45	48	38	49	25	70
14	32	32	109	45	55	47	56	44	35	100	26	33
15	29	42	86	43	51	53	647	47	37	140	26	28
16	30	195	71	44	424	110	100	45	35	43	70	26
17	32	46	53	45	153	191	66	44	34	45	41	26
18	116	37	51	48	68	109	55	40	34	32	27	27
19	1010	34	50	46	306	58	50	38	40	31	27	26
20	88	35	48	45	94	61	49	36	33	29	26	28
21	53	35	48	195	67	51	48	39	33	30	28	28
22	42	110	47	62	178	48	45	165	33	26	99	30
23	42	188	42	52	148	46	46	56	32	28	98	28
24	39	51	39	59	82	45	44	42	32	28	56	25
25	38	41	41	471	57	44	43	42	31	28	70	26
26	37	39	41	345	54	48	43	39	31	28	51	26
27	39	39	46	96	54	43	41	60	33	27	32	25
28	36	37	43	64	53	43	41	228	39	27	31	25
29	34	38	40	84	---	335	65	317	35	26	30	24
30	34	36	41	102	---	102	107	72	29	25	30	24
31	36	---	169	60	---	210	---	49	---	26	28	---
MEAN	124	50.4	90.4	110	116	82.0	86.2	115	36.1	38.4	38.4	29.2
MAX	1010	195	720	471	432	335	647	370	45	140	99	70
MIN	29	29	33	43	50	43	41	36	29	25	24	23
IN.	3.85	1.52	2.81	3.41	3.25	2.55	2.59	3.58	1.08	1.19	1.19	.88

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	43.0	43.1	56.2	71.1	84.2	79.7	65.9	53.3	49.9	50.7	42.8	46.9
MAX	153.9	120.4	129.3	205.3	185.3	230.6	206.4	176.8	191.6	230.6	111.9	246.5
(WY)	1960	1986	1973	1978	1979	1975	1987	1978	1982	1984	1984	1979
MIN	7.71	8.73	13.1	17.2	22.0	31.4	20.3	16.2	10.2	11.2	7.82	8.63
(WY)	1931	1932	1934	1934	1931	1931	1942	1938	1933	1932	1932	1930

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	76.2		57.0	
HIGHEST ANNUAL MEAN			105.5	1984
LOWEST ANNUAL MEAN			30.6	1938
HIGHEST DAILY MEAN	1010	Oct 19	4400	Sep 22 1979
LOWEST DAILY MEAN	23	Sep 3	3.4	Aug 28 1932
INSTANTANEOUS PEAK FLOW	2450	Oct 1	9140*	Sep 22 1979
INSTANTANEOUS PEAK STAGE	11.73	Oct 1	20.12*	Sep 22 1979
INSTANTANEOUS LOW FLOW	15*	Sep 3	1.6	Aug 28 1932
ANNUAL RUNOFF (INCHES)	27.9		20.8	
10 PERCENTILE	147		99	
50 PERCENTILE	44		31	
95 PERCENTILE	26		13	

* See REMARKS.

CAPE FEAR RIVER BASIN

02096500 HAW RIVER AT HAW RIVER, NC

LOCATION.--Lat 36°05'13", long 79°22'02", Alamance County, Hydrologic Unit 03030002, on left bank at town of Haw River, 650 ft downstream from Southern Railway bridge, 800 ft downstream from bridge on U.S. Highway 70 and State Highway 49, and 3 mi downstream from Stony Creek.

DRAINAGE AREA.--606 mi^2.

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

REVISED RECORDS.--WSP 757: 1929(M). WSP 782: 1934. WSP 1383: 1930, 1932(M), 1933(m), 1936, 1943, 1944(M), 1947(m). WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 471.69 ft above National Geodetic Vertical Datum of 1929. U. S. Army Corps of Engineers gage-height telephone telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Diurnal fluctuation and occasional regulation at low flows. City of Burlington diverted from two Stony Creek Reservoirs (stations 02096003, 02096432) an average of 12.0 ft^3/s for municipal water supply, about half of which was returned up stream from station as treated effluent, the remainder was returned downstream from station. Maximum discharge 37,000 ft^3/s, gage height, 31.10 ft, from floodmark. Minimum discharge for current water year also occurred on Sept. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2070	227	261	2520	776	681	1580	518	747	169	97	108
2	8150	243	352	2000	564	627	1120	2010	557	156	95	108
3	6100	282	265	1610	695	796	1620	2750	423	143	92	112
4	3410	276	232	1310	1150	1500	828	2310	384	130	92	105
5	1660	241	214	1190	1960	859	591	2900	341	127	88	92
6	920	225	216	1060	1300	613	502	2890	298	119	123	96
7	603	393	212	1210	1160	534	1260	1450	276	107	228	101
8	424	279	368	2220	749	472	954	967	259	100	148	96
9	326	268	737	2850	564	460	657	612	258	110	110	93
10	280	277	479	1790	1870	623	765	1510	268	139	115	116
11	245	239	576	1320	2830	586	796	1790	264	277	108	112
12	234	218	2510	1460	1470	424	536	1150	217	176	102	120
13	220	207	5430	912	1200	397	429	758	206	249	99	158
14	219	203	2870	522	931	399	394	543	201	284	101	165
15	219	211	2110	458	593	390	2480	434	197	295	97	175
16	212	402	1420	426	1440	545	2630	382	196	357	139	77
17	194	881	913	474	3870	710	1310	338	193	259	159	85
18	217	750	633	401	1930	1240	829	314	187	244	152	97
19	2480	640	733	392	2990	651	561	293	246	164	114	98
20	3330	381	601	590	2370	545	469	275	245	141	108	97
21	1240	463	432	813	1850	494	443	273	191	146	103	104
22	739	461	403	878	1750	434	430	338	178	144	105	100
23	471	1010	325	829	2550	407	399	676	180	128	1610	95
24	373	1010	314	537	1440	398	372	561	173	112	421	102
25	333	549	301	1560	966	375	350	316	169	110	286	92
26	303	430	316	4540	692	368	329	302	163	107	578	103
27	435	371	308	2660	577	362	310	352	206	106	308	83
28	601	332	459	1570	532	344	302	987	264	102	207	80
29	582	308	457	971	---	945	298	3590	195	99	162	83
30	342	276	338	1180	---	1410	441	2140	178	97	124	83
31	240	---	389	1340	---	1680	---	1060	---	92	144	---
MEAN	1199	402	812	1342	1456	654	799	1122	262	161	207	105
MAX	8150	1010	5430	4540	3870	1680	2630	3590	747	357	1610	175
MIN	194	203	212	392	532	344	298	273	163	92	88	77
IN.	2.28	.74	1.55	2.55	2.50	1.24	1.47	2.14	.48	.31	.39	.19

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	376.0	401.9	574.1	856.1	1012	955.7	784.5	491.4	412.0	397.3	352.7	365.0
MAX	2480	1286	1487	2977	2394	2764	2771	1948	2145	2348	1662	2884
(WY)	1960	1948	1946	1937	1960	1975	1987	1978	1982	1984	1939	1945
MIN	48.9	61.1	117.7	172.1	272.1	288.8	184.2	139.1	101.4	70.9	57.2	33.4
(WY)	1942	1954	1934	1956	1931	1967	1967	1986	1986	1932	1953	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	707.4		579.3	
HIGHEST ANNUAL MEAN			1033	1984
LOWEST ANNUAL MEAN			228.6	1967
HIGHEST DAILY MEAN	8150	Oct 2	32000	Sep 18 1945
LOWEST DAILY MEAN	77	Sep 16	5.0	Sep 6 1930
INSTANTANEOUS PEAK FLOW	10200	Oct 2	37000*	Sep 18 1945
INSTANTANEOUS PEAK STAGE	18.33	Oct 2	31.10*	Sep 18 1945
INSTANTANEOUS LOW FLOW	41*	Sep 27	3	Sep 5 1930
ANNUAL RUNOFF (INCHES)	15.8		13.0	
10 PERCENTILE	1750		1240	
50 PERCENTILE	381		294	
95 PERCENTILE	96		73	

*See REMARKS.

CAPE FEAR RIVER BASIN

02096846 CANE CREEK NEAR ORANGE GROVE, NC

LOCATION.--Lat 35°59'13", long 74°12'23", Orange County, Hydrologic Unit 03030002, on right bank at downstream side side of bridge on Secondary Road 1114, 1.0 mi northwest of Orange Grove.

DRAINAGE AREA.--7.54 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 510 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Minimum discharge for period record also occurred on Sept. 18-30. Minimum discharge for current water year also occurred on Sept. 18-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	1.9	2.2	17	6.5	6.8	20	6.2	3.8	.61	.26	.10
2	50	2.0	1.6	8.1	6.4	6.6	34	14	3.2	.65	.26	.08
3	11	3.9	1.7	5.8	5.9	25	53	36	3.0	.66	.22	.06
4	4.5	2.7	1.6	5.1	14	18	16	101	3.1	.65	.21	.05
5	2.8	2.2	1.7	4.9	13	11	11	29	2.5	.57	.21	.05
6	2.2	2.0	1.6	11	8.5	8.7	8.7	23	2.2	.57	.29	.04
7	2.1	2.0	1.6	11	7.2	7.4	23	12	2.1	.51	.33	.03
8	1.9	2.0	15	38	6.3	6.6	12	9.1	1.9	.47	.28	.02
9	1.8	3.9	14	23	5.9	6.7	9.0	7.4	1.8	.46	.28	.01
10	1.7	3.5	8.3	13	54	6.4	7.9	45	1.5	.52	.26	.01
11	1.6	2.7	13	9.3	24	5.9	7.5	20	1.4	.59	.24	.03
12	1.6	2.4	78	7.3	14	5.5	6.2	10	1.3	.66	.23	.02
13	1.5	2.1	62	5.9	9.9	5.1	5.6	8.1	1.2	.61	.21	.01
14	1.8	2.0	18	5.2	8.5	4.8	5.5	6.8	1.2	.61	.21	.01
15	1.6	2.7	13	5.0	7.4	4.7	34	5.8	1.1	.64	.22	.01
16	1.6	3.7	14	5.2	104	4.6	16	5.3	1.3	.57	.21	.01
17	1.7	3.3	8.4	4.1	45	7.2	10	4.7	1.2	.51	.23	0
18	1.9	2.6	6.4	4.2	17	15	8.1	4.2	1.0	.51	.20	0
19	20	2.2	5.7	3.7	30	7.3	6.4	3.7	1.8	.54	.18	0
20	6.4	2.0	5.3	4.0	18	6.0	5.7	3.6	1.3	.52	.17	0
21	3.6	1.9	4.8	12	13	5.2	5.5	3.4	.89	.49	.14	0
22	2.8	1.8	4.5	7.9	16	4.7	5.3	4.6	1.8	.44	.15	0
23	2.3	19	e4.4	5.5	25	4.5	4.7	5.0	1.9	.42	.14	0
24	2.1	7.9	e4.2	5.1	15	4.2	4.2	3.7	1.2	.39	.13	0
25	2.0	4.6	e4.0	11	10	4.1	4.0	3.4	1.0	.36	.12	0
26	1.9	3.5	e3.8	79	8.4	4.1	4.1	3.6	.88	.33	.14	0
27	1.8	2.9	e3.6	18	7.9	3.8	3.7	3.9	.85	.32	.11	0
28	1.8	2.5	3.4	12	7.4	3.6	3.5	5.8	.75	.31	.10	0
29	1.8	2.3	3.0	9.4	---	43	3.6	30	.71	.29	.18	0
30	1.8	2.0	3.7	8.5	---	22	4.8	8.4	.65	.27	.27	0
31	1.8	---	4.8	6.9	---	53	---	4.7	---	.25	.14	---
MEAN	5.24	3.34	10.2	11.8	18.1	10.4	11.4	13.9	1.62	.49	.20	.018
MAX	50	19	78	79	104	53	53	101	3.8	.66	.33	.10
MIN	1.5	1.8	1.6	3.7	5.9	3.6	3.5	3.4	.65	.25	.10	0
IN.	.80	.49	1.57	1.81	2.51	1.59	1.69	2.13	.24	.08	.03	0

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	5.24	3.24	6.07	7.84	21.0	19.5	11.1	16.3	2.69	5.35	.807	.473
MAX	5.24	3.34	10.2	11.8	23.9	28.6	11.4	18.7	3.76	10.2	1.41	.929
(WY)	1990	1990	1990	1990	1989	1989	1990	1989	1989	1989	1989	1989
MIN	5.24	3.15	1.95	3.89	18.1	10.4	10.8	13.9	1.62	.494	.204	.018
(WY)	1990	1989	1989	1989	1990	1990	1989	1990	1990	1990	1990	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	7.18		*****	
HIGHEST ANNUAL MEAN			7.18	1990
LOWEST ANNUAL MEAN			7.18	1990
HIGHEST DAILY MEAN	104	Feb 16	260	Feb 21 1989
LOWEST DAILY MEAN	0	Sep 17	0	Sep 17 1990
INSTANTANEOUS PEAK FLOW	421	May 4	864	Jul 16 1989
INSTANTANEOUS PEAK STAGE	4.66	May 4	6.04	Jul 16 1989
INSTANTANEOUS LOW FLOW	0*	Sep 17	0*	Sep 17 1990
ANNUAL RUNOFF (INCHES)	12.9		*****	
10 PERCENTILE	17		17	
50 PERCENTILE	3.6		3.4	
95 PERCENTILE	.01		.01	

***** Indicates not enough data, therefore statistic is not computed

* See REMARKS.

02096846 CANE CREEK NEAR ORANGE GROVE, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1988 to current year.

REMARKS.--Station operated to define water quality as part of a six-county regional surface water-quality assessment.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT
OCT												
12...	0900	0.72	91	7.7	11.0	28	752	10.8	8.3	3.1	5.6	25
NOV												
16...	0835	3.0	90	5.9	15.0	55	736	7.6	7.7	3.0	5.4	26
DEC												
12...	0915	42	75	6.6	5.0	80	747	11.3	5.6	2.5	4.3	25
JAN												
10...	0815	13	60	5.5	5.0	100	744	11.8	4.6	1.9	4.1	30
FEB												
21...	0945	11	--	7.3	6.0	50	763	10.2	4.6	1.8	4.1	31
MAR												
22...	1315	3.9	68	7.7	12.5	45	754	13.0	5.5	2.0	4.7	31
APR												
30...	1000	4.6	77	7.1	16.0	33	747	8.3	6.2	2.1	4.5	28
MAY												
29...	0815	50	65	7.2	16.0	110	736	9.0	5.5	2.3	3.3	21
JUN												
14...	0900	1.1	85	7.4	17.0	25	748	8.4	7.6	2.6	5.3	27
14...	0905	1.1	85	7.4	17.0	22	748	8.4	7.6	2.5	5.3	27
JUL												
17...	0910	0.36	97	7.1	21.5	18	755	7.7	9.8	3.5	5.8	24
AUG												
06...	1315	0.20	105	7.3	23.0	18	--	6.4	10	3.4	6.2	25
SEP												
04...	1220	0.05	116	7.1	21.5	27	754	6.7	11	3.7	5.8	22

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	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)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)
OCT												
12...	0.4	2.8	4.0	6.8	0.30	16	62	--	<0.010	1.00	0.010	0.01
NOV												
16...	0.4	1.9	3.0	5.8	0.10	16	65	0.290	0.010	0.300	0.030	0.04
DEC												
12...	0.4	2.6	8.0	6.1	<0.10	9.9	66	0.570	0.030	0.600	0.130	0.17
JAN												
10...	0.4	1.0	7.0	5.0	<0.10	11	45	0.480	0.020	0.500	0.030	0.04
FEB												
21...	0.4	0.70	4.0	3.8	0.10	13	53	--	<0.010	0.500	0.020	0.03
MAR												
22...	0.4	0.70	3.5	5.1	<0.10	14	62	--	<0.010	0.500	<0.010	<0.01
APR												
30...	0.4	0.70	2.4	5.6	0.10	16	35	0.590	0.010	0.600	0.020	0.03
MAY												
29...	0.3	2.6	3.5	5.1	<0.10	8.0	125	1.15	0.050	1.20	0.200	0.26
JUN												
14...	0.4	0.90	1.8	5.3	0.10	17	42	--	<0.010	1.00	0.010	0.01
JUL												
17...	0.4	1.7	1.5	8.7	<0.10	17	77	--	<0.010	0.700	0.030	0.04
AUG												
06...	0.4	1.7	1.5	7.9	<0.10	15	75	0.290	0.010	0.300	0.040	0.05
SEP												
04...	0.4	2.1	2.0	9.1	<0.10	15	68	--	<0.010	0.200	<0.010	--

CAPE FEAR RIVER BASIN

02096846 CANE CREEK NEAR ORANGE GROVE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHATE, 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)
OCT 12...	0.39	0.38	0.40	0.40	1.4	6.2	1.4	0.060	0.15	0.030	0.050	<0.010
NOV 16...	0.27	--	0.30	--	0.60	2.7	--	0.060	0.15	0.060	0.050	0.050
DEC 12...	0.77	0.87	0.90	1.0	1.5	6.6	1.6	0.210	0.49	0.160	0.160	0.130
JAN 10...	--	--	0.50	--	--	--	--	0.040	0.12	0.030	0.040	0.030
FEB 21...	0.28	0.18	0.30	0.20	0.80	3.5	0.70	0.030	0.06	0.010	0.020	0.010
MAR 22...	--	0.39	0.40	0.40	0.90	4.0	0.90	0.030	0.06	0.020	0.020	<0.010
APR 30...	0.38	0.27	0.40	0.30	1.0	4.4	0.90	0.050	0.09	0.020	0.030	0.020
MAY 29...	1.3	0.19	1.5	0.30	2.7	12	1.0	0.320	0.83	0.170	0.270	0.140
JUN 14...	0.49	0.39	0.50	0.40	1.5	6.6	1.4	0.040	0.09	0.050	0.030	0.030
JUL 17...	0.17	0.37	0.20	0.40	0.90	4.0	1.1	0.060	0.15	0.050	0.050	0.040
AUG 06...	0.36	0.47	0.40	0.50	0.70	3.1	0.70	0.060	0.09	0.040	0.030	0.030
SEP 04...	--	0.38	0.40	0.40	0.60	2.7	0.60	0.050	0.09	0.030	0.030	0.030

DATE	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)
OCT 12...	<0.03	50	<1	<1	<1	1	2	440	1	20	<0.10	<1
NOV 16...	0.15	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	0.40	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	0.09	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	0.03	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--	--
APR 30...	0.06	150	<1	<1	<1	<1	1	930	1	50	<0.10	<1
MAY 29...	0.43	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	0.09	120	<1	<1	<1	<1	2	980	1	40	<0.10	2
JUL 17...	0.12	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	0.09	40	<1	<1	<1	<1	4	410	1	220	<0.10	1
SEP 04...	0.09	110	<1	<1	1	<1	3	450	1	170	<0.10	<1

CAPE FEAR RIVER BASIN

02096846 CANE CREEK NEAR ORANGE GROVE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	SELENIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)	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)
OCT 12...	<1	<1	<10	4.1	0.06	<0.001	<0.1	<0.1	<1.0	<0.001	<0.1	<0.001
NOV 16...	--	--	--	5.0	0.03	--	--	--	--	--	--	--
DEC 12...	--	--	--	8.7	0.09	--	--	--	--	--	--	--
JAN 10...	--	--	--	6.2	0.04	--	--	--	--	--	--	--
FEB 21...	--	--	--	5.3	0.04	--	--	--	--	--	--	--
MAR 22...	--	--	--	3.0	0.02	--	--	--	--	--	--	--
APR 30...	<1	<1	<10	3.3	0.03	<0.001	--	<0.1	--	<0.001	--	<0.001
MAY 29...	--	--	--	12	0.04	--	--	--	--	--	--	--
JUN 14...	<1	<1	<10	2.5	0.02	--	--	--	--	--	--	--
JUL 17...	--	--	--	3.1	0.02	--	--	--	--	--	--	--
AUG 06...	<1	<1	<10	3.2	0.02	<0.001	--	<0.1	--	<0.001	--	<0.001
SEP 04...	<1	<1	<10	4.0	0.01	--	--	--	--	--	--	--

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)	ENDOSULFAN, TOTAL (UG/L)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL (UG/L)
OCT 12...	<0.1	<0.001	<0.1	<0.01	<0.1	<0.001	<0.1	<0.001	<0.1	<0.001	<0.1	<0.01
NOV 16...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--	--
APR 30...	--	<0.001	--	<0.01	--	<0.001	--	<0.001	--	<0.001	--	<0.01
MAY 29...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 17...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	--	<0.001	--	<0.01	--	<0.001	--	<0.001	--	<0.001	--	<0.01
SEP 04...	--	--	--	--	--	--	--	--	--	--	--	--

CAPE FEAR RIVER BASIN

02096846 CANE CREEK NEAR ORANGE GROVE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)
OCT 12...	<0.1	<0.1	<1	<0.10	<1.0	<0.001	<0.1	<0.001	<0.1	<0.001	<0.1	<0.01
NOV 16...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--	--
APR 30...	--	<0.1	--	<0.10	--	<0.001	--	<0.001	--	<0.001	--	<0.01
MAY 29...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 17...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	--	<0.1	--	<0.10	--	<0.001	--	<0.001	--	<0.001	--	<0.01
SEP 04...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	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)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE TOTAL (UG/L)
OCT 12...	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.1
NOV 16...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--	--
APR 30...	--	<0.01	--	<0.01	--	<0.01	--	<0.01	--	<0.01	--	<0.1
MAY 29...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 17...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	--	<0.01	--	<0.01	--	<0.01	--	<0.01	--	<0.01	--	<0.1
SEP 04...	--	--	--	--	--	--	--	--	--	--	--	--

CAPE FEAR RIVER BASIN

02096846 CANE CREEK NEAR ORANGE GROVE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	PERTHANE 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)	BENZENE TOTAL (UG/L)	BROMOFORM TOTAL (UG/L)	CARBON-TETRACHLORIDE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)
OCT 12...	<1.00	<1	<10	<0.01	<0.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
NOV 16...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--	--
APR 30...	--	<1	--	<0.01	--	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
MAY 29...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 17...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	--	<1	--	<0.01	--	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
SEP 04...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	METHYLCHLORIDE TOTAL (UG/L)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	TETRACHLOROETHYLENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)
OCT 12...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.2
NOV 16...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--	--
APR 30...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.2
MAY 29...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 17...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.2
SEP 04...	--	--	--	--	--	--	--	--	--	--	--	--

CAPE FEAR RIVER BASIN

02096846 CANE CREEK NEAR ORANGE GROVE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)
OCT 12...	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
NOV 16...	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--
APR 30...	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
MAY 29...	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--	--
JUL 17...	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
SEP 04...	--	--	--	--	--	--	--	--	--	--	--

DATE	1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	ACE-NAPHTH-ENE BOT.MAT (UG/KG)	ACE-NAPHTH-YLENE BOT.MAT (UG/KG)	ANTHRA-CENE BOT.MAT (UG/KG)	BENZO A ANTHRAC ENE1,2-BENZANT HRACENE BOT.MAT (UG/KG)	BENZO B FLUOR-AN-THENE BOT.MAT (UG/KG)	BENZOGH I PERYL ENE1,12 -BENZOP ERYLENE BOT.MAT (UG/KG)	BENZO K FLUOR-AN-THENE BOT.MAT (UG/KG)	PARA-CHLORO-META CRESOL BOT.MAT (UG/KG)
OCT 12...	<0.20	<0.20	<0.20	<200	<200	<200	<400	<400	<400	<400	<600
NOV 16...	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--
APR 30...	<0.20	<0.20	<0.20	--	--	--	--	--	--	--	--
MAY 29...	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--	--
JUL 17...	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	<0.20	<0.20	<0.20	--	--	--	--	--	--	--	--
SEP 04...	--	--	--	--	--	--	--	--	--	--	--

CAPE FEAR RIVER BASIN

02096846 CANE CREEK NEAR ORANGE GROVE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	CHRY-SENE BOT.MAT (UG/KG)	DI-N-OCTYL PHTHAL-ATE BOT.MAT (UG/KG)	1,2,5,6 -DIBENZ -ANTHRA -CENE BOT.MAT (UG/KG)	DIETHYL PHTHAL-ATE BOT.MAT (UG/KG)	DI-METHYL PHTHAL-ATE BOT.MAT (UG/KG)	FLUOR-ANTHENE BOT.MAT (UG/KG)	FLUOR-ENE BOT.MAT (UG/KG)	HEXA-CHLORO-BENZENE TOT. IN BOTTOM MATL. (UG/KG)	HEXA-CHLORO-BUT-ADIENCE BOT.MAT (UG/KG)	HEXA-CHLORO-ETHANE BOT.MAT (UG/KG)	INDENO (1,2,3-CD) PYRENE BOT.MAT (UG/KG)
OCT											
12...	<400	<400	<400	<200	<200	<200	<200	<200	<200	<200	<400
NOV											
16...	--	--	--	--	--	--	--	--	--	--	--
DEC											
12...	--	--	--	--	--	--	--	--	--	--	--
JAN											
10...	--	--	--	--	--	--	--	--	--	--	--
FEB											
21...	--	--	--	--	--	--	--	--	--	--	--
MAR											
22...	--	--	--	--	--	--	--	--	--	--	--
APR											
30...	--	--	--	--	--	--	--	--	--	--	--
MAY											
29...	--	--	--	--	--	--	--	--	--	--	--
JUN											
14...	--	--	--	--	--	--	--	--	--	--	--
JUL											
17...	--	--	--	--	--	--	--	--	--	--	--
AUG											
06...	--	--	--	--	--	--	--	--	--	--	--
SEP											
04...	--	--	--	--	--	--	--	--	--	--	--

DATE	ISO-PHORONE BOT.MAT (UG/KG)	NAPHTH-ALENE BOT.MAT (UG/KG)	NITRO-BENZENE BOT.MAT (UG/KG)	PENTA-CHLORO-PHENOL BOT.MAT (UG/KG)	PHENAN-THRENE BOT.MAT (UG/KG)	PHENOL (C6H-5OH) BOT.MAT (UG/KG)	PYRENE BOT.MAT (UG/KG)	1,2,4-TRI-CHLORO-BENZENE BOT.MAT (UG/KG)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE BOT.MAT (UG/KG)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)
OCT											
12...	<200	<200	<200	<600	<200	<200	<200	<200	<0.20	<200	<0.20
NOV											
16...	--	--	--	--	--	--	--	--	--	--	--
DEC											
12...	--	--	--	--	--	--	--	--	--	--	--
JAN											
10...	--	--	--	--	--	--	--	--	--	--	--
FEB											
21...	--	--	--	--	--	--	--	--	--	--	--
MAR											
22...	--	--	--	--	--	--	--	--	--	--	--
APR											
30...	--	--	--	--	--	--	--	--	<0.20	--	<0.20
MAY											
29...	--	--	--	--	--	--	--	--	--	--	--
JUN											
14...	--	--	--	--	--	--	--	--	--	--	--
JUL											
17...	--	--	--	--	--	--	--	--	--	--	--
AUG											
06...	--	--	--	--	--	--	--	--	<0.20	--	<0.20
SEP											
04...	--	--	--	--	--	--	--	--	--	--	--

CAPE FEAR RIVER BASIN

02096846 CANE CREEK NEAR ORANGE GROVE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	1,4-DI-CHLORO-BENZENE BOT.MAT (UG/KG)	2-NITRO-PHENOL BOT.MAT (UG/KG)	2,4-DI-NITRO-TOLUENE BOT.MAT (UG/KG)	2,6-DI-NITRO-TOLUENE BOT.MAT (UG/KG)	4-CHLORO-PHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-NITRO-PHENOL BOT.MAT (UG/KG)	BIS (2-CHLORO-ISO-PROPYL) ETHER BOT.MAT (UG/KG)	BIS (2-CHLORO-ETHOXY) METHANE BOT.MAT (UG/KG)	BIS (2-CHLORO-ETHYL) ETHER BOT.MAT (UG/KG)	BIS(2-ETHYL HEXYL) PHTHAL-ATE BOT.MAT (UG/KG)	BENZO-A-PYRENE BOT.MAT (UG/KG)
OCT 12...	<200	<200	<200	<200	<200	<600	<200	<200	<200	<200	<400
NOV 16...	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--
APR 30...	--	--	--	--	--	--	--	--	--	--	--
MAY 29...	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--	--
JUL 17...	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	--	--	--	--	--	--	--	--	--	--	--
SEP 04...	--	--	--	--	--	--	--	--	--	--	--

DATE	4-BROMO-PHENYL PHENYL ETHER BOT.MAT (UG/KG)	N-BUTYL BENZYL PHTHAL-ATE BOT.MAT (UG/KG)	2-CHLORO-PHENOL BOT.MAT (UG/KG)	2-CHLORO-NAPH-THALENE BOT.MAT (UG/KG)	2,4-DI-CHLORO-PHENOL BOT.MAT (UG/KG)	2,4-DP, IN BOTTOM MAT. (UG/KG)	4,6-DINITRO-ORTHO-CRESOL BOT.MAT (UG/KG)	2,4-DI-NITRO-PHENOL BOT.MAT (UG/KG)	DI-N-BUTYL PHTHAL-ATE BOT.MAT (UG/KG)	HEXA-CHLORO-CYCLO-PENT-ADIENE BOT.MAT (UG/KG)	N-NITRO-SODI-METHY-LAMINE BOT.MAT (UG/KG)
OCT 12...	<200	<200	<200	<200	<200	<200	<600	<600	<200	<200	<200
NOV 16...	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--
APR 30...	--	--	--	--	--	--	--	--	--	--	--
MAY 29...	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--	--
JUL 17...	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	--	--	--	--	--	--	--	--	--	--	--
SEP 04...	--	--	--	--	--	--	--	--	--	--	--

02096846 CANE CREEK NEAR ORANGE GROVE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	N-NITRO-SODI-PHENY-LAMINE BOT.MAT (UG/KG)	N-NITRO-SODI-N-PROPYL-AMINE BOT.MAT (UG/KG)	2,4,6-TRI-CHLORO-PHENOL BOT.MAT (UG/KG)	1,2-DI-CHLORO-BENZENE BOT.MAT (UG/KG)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM
OCT											
12...	<200	<200	<600	<200	41	0.08	0	0	0	1	7
NOV											
16...	--	--	--	--	7	0.06	--	--	--	--	--
DEC											
12...	--	--	--	--	35	4.0	--	--	--	--	--
JAN											
10...	--	--	--	--	14	0.49	--	--	--	--	--
FEB											
21...	--	--	--	--	8	0.24	--	--	--	--	--
MAR											
22...	--	--	--	--	4	0.04	--	--	--	--	--
APR											
30...	--	--	--	--	10	0.12	--	--	--	--	--
MAY											
29...	--	--	--	--	101	14	--	--	--	--	--
JUN											
14...	--	--	--	--	3	0.01	--	--	--	--	--
JUL											
17...	--	--	--	--	3	0.00	--	--	--	--	--
AUG											
06...	--	--	--	--	15	0.01	--	--	--	--	--
SEP											
04...	--	--	--	--	5	0.00	--	--	--	--	--

CAPE FEAR RIVER BASIN

02096960 HAW RIVER NEAR BYNUM, NC

LOCATION.--Lat 35°45'48", long 79°08'02", Chatham County, Hydrologic Unit 03030002, on right bank 500 ft upstream from Pokeberry Creek, 0.9 mi south-southeast of Bynum, and 1.1 mi downstream from U.S. Highway 15 and 501.

DRAINAGE AREA.--1,275 mi^2.

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

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 283.31 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Considerable regulation for short periods at low flow caused by powerplant above station. Satellite data transmitter at the station. Minimum discharge for period of record also occurred on Sept. 27, 1983.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2440	536	635	2230	1950	1300	4600	1020	1690	211	98	181
2	16900	478	605	3700	1340	1460	2560	2170	1300	246	94	153
3	12800	696	708	2510	1220	1770	4780	4630	1000	226	94	116
4	5270	674	631	2140	1480	3710	2810	5960	876	166	92	125
5	3320	598	451	1870	3740	2420	1860	6360	752	163	91	132
6	1900	513	468	1770	2590	1670	1480	5770	616	154	92	127
7	1290	509	524	2510	2100	1390	2340	3760	554	150	172	119
8	934	683	983	2990	1740	1180	2760	2560	520	129	241	116
9	719	697	2680	6130	1280	1100	1720	1710	461	122	213	115
10	681	758	1770	3560	3990	1110	1490	3310	438	119	114	128
11	562	661	1650	2700	7230	1340	1590	5000	419	328	117	114
12	368	575	4080	2220	3540	1080	1380	2540	390	415	121	183
13	592	490	13900	2050	2470	927	1030	1900	336	150	98	110
14	365	501	6820	1250	2080	915	895	1380	305	303	97	250
15	445	498	4140	1020	1550	891	3480	1120	311	384	144	123
16	401	745	3130	940	2990	896	5800	929	304	397	173	175
17	431	1260	2260	903	11900	1300	2850	810	294	407	758	168
18	432	1260	1630	939	4780	2370	2100	723	287	284	270	78
19	4670	1160	1450	849	4880	1920	1450	647	318	306	234	89
20	6550	904	1490	833	5470	1280	1150	592	461	174	141	111
21	2680	622	1120	1900	3420	1130	1010	566	325	187	124	117
22	1710	879	966	2220	2980	994	964	586	298	159	121	119
23	1120	2270	830	1740	6610	899	927	849	292	185	968	122
24	878	2640	816	1420	3830	872	849	1140	280	149	1600	115
25	798	1640	e800	1450	2540	800	811	844	255	127	500	107
26	695	1110	e750	10000	1800	795	782	524	221	136	474	113
27	430	940	e700	6360	1510	790	668	709	237	114	767	125
28	846	807	e680	3540	1360	755	650	1720	385	120	202	118
29	929	771	961	2320	---	3010	613	8460	420	106	290	108
30	813	675	805	2160	---	4440	748	5520	289	104	232	78
31	514	---	754	2350	---	4610	---	2560	---	99	187	---
MEAN	2338	885	1909	2535	3299	1585	1872	2464	488	204	288	128
MAX	16900	2640	13900	10000	11900	4610	5800	8460	1690	415	1600	250
MIN	365	478	451	833	1220	755	613	524	221	99	91	78
IN.	2.11	.77	1.73	2.29	2.70	1.43	1.64	2.23	.43	.18	.26	.11

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	563.9	724.4	1242	2229	2337	2507	1608	1323	914.7	918.8	609.7	774.3
MAX	2338	2888	2681	5895	5465	6110	4044	3936	4632	4477	1893	2809
(WY)	1990	1986	1984	1978	1979	1975	1987	1978	1982	1975	1985	1979
MIN	154.0	225.3	274.6	261.9	627.0	647.5	419.0	256.2	154.6	135.4	118.2	111.0
(WY)	1987	1974	1981	1981	1977	1988	1986	1986	1986	1986	1987	1983

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	1492		1308	
HIGHEST ANNUAL MEAN			2181	1975
LOWEST ANNUAL MEAN			602.7	1988
HIGHEST DAILY MEAN	16900	Oct 2	39400	Mar 1 1987
LOWEST DAILY MEAN	78	Sep 18	.18	Sep 10 1983
INSTANTANEOUS PEAK FLOW	22500	Oct 2	46800	Mar 1 1987
INSTANTANEOUS PEAK STAGE	13.34	Oct 2	17.67	Mar 14 1975
INSTANTANEOUS LOW FLOW	64	Sep 16	.18*	Sep 10 1983
ANNUAL RUNOFF (INCHES)	15.9		13.9	
10 PERCENTILE	3640		2910	
50 PERCENTILE	821		588	
95 PERCENTILE	110		115	

* See REMARKS.

CAPE FEAR RIVER BASIN

02097314 NEW HOPE CREEK NEAR BLANDS, NC

LOCATION.--Lat 35°53'05", long 78°57'58", Durham County, Hydrologic Unit 03030002, on right bank 15 ft downstream from bridge on Secondary Road 1107, 0.5 mi southwest of Blands, and 2 mi downstream from Third Fork Creek.

DRAINAGE AREA.--75.9 mi^2.

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is 230 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Slight diurnal fluctuation at low flow. The city of Durham diverted an average of 36.2 ft^3/s from Neuse River basin for municipal water supply and returned 18.6 ft^3/s as treated effluent into the Cape Fear River basin, of which 14.9 ft^3/s entered upstream from station. About 13.1 ft^3/s was returned to the Neuse River basin. Maximum gage height for period of record, result of backwater from B. Everett Jordan Lake. Minimum discharge and gage height for period of record, result of regulation. Minimum discharge unregulated, 4.2 ft^3/s Apr. 28, 29, May 1, 2, July 10, 1985.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	29	53	51	110	145	540	57	49	16	14	17
2	601	23	49	72	94	102	270	132	38	16	14	14
3	572	82	46	80	83	106	269	233	34	16	14	13
4	266	120	44	76	78	148	302	268	42	16	14	13
5	147	79	43	70	87	149	146	465	42	16	13	13
6	98	56	41	78	96	125	90	484	34	16	14	12
7	57	41	36	101	89	100	193	262	33	15	32	13
8	35	26	61	136	80	84	210	93	33	14	29	12
9	30	35	89	257	72	74	103	61	32	16	22	12
10	29	61	150	211	184	68	77	149	29	16	37	12
11	29	64	176	148	735	63	70	539	27	26	21	13
12	28	59	221	119	418	134	62	200	25	41	17	13
13	28	52	524	98	188	148	53	69	23	29	16	13
14	25	47	711	83	143	64	48	54	23	28	15	13
15	25	45	389	73	123	49	90	45	24	29	15	12
16	26	61	251	67	162	73	160	38	25	34	17	11
17	27	77	181	63	759	53	110	37	24	27	76	12
18	32	72	136	60	587	192	74	33	23	62	41	12
19	385	62	111	57	285	120	59	30	24	52	26	12
20	633	54	99	55	310	72	47	26	26	28	20	12
21	222	49	90	106	189	56	48	27	23	21	17	12
22	72	46	70	150	144	50	48	47	23	18	16	12
23	50	153	39	124	187	47	45	43	30	18	15	11
24	39	256	38	100	208	44	40	33	27	17	36	11
25	39	221	38	99	159	41	37	27	22	16	27	11
26	34	148	40	340	125	41	34	27	21	16	33	12
27	32	103	41	603	167	41	33	50	19	15	26	12
28	28	81	42	282	241	40	30	84	19	14	18	11
29	30	66	42	159	---	288	29	534	19	13	17	9.9
30	29	60	42	144	---	869	65	547	18	14	24	9.8
31	30	---	42	131	---	551	---	98	---	15	24	---
MEAN	122	77.6	127	135	218	133	113	155	27.7	22.3	23.2	12.2
MAX	633	256	711	603	759	869	540	547	49	62	76	17
MIN	25	23	36	51	72	40	29	26	18	13	13	9.8

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	39.3	89.4	103.6	123.0	232.4	196.1	176.6	104.3	30.0	40.6	48.1	27.4
MAX	122.0	371.1	264.2	236.1	401.7	339.3	618.5	207.3	58.6	126.5	97.8	60.8
(WY)	1990	1986	1984	1984	1985	1984	1987	1989	1989	1989	1986	1987
MIN	12.8	16.1	17.0	38.6	62.3	42.0	13.5	34.8	14.3	16.0	17.3	10.8
(WY)	1987	1985	1989	1986	1986	1985	1985	1988	1985	1983	1987	1984

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	96.6		100.2	
HIGHEST ANNUAL MEAN			156.5	1984
LOWEST ANNUAL MEAN			48.3	1988
HIGHEST DAILY MEAN	869	Mar 30	4620	Apr 19 1987
LOWEST DAILY MEAN	9.8	Sep 30	.39	Dec 30 1988
INSTANTANEOUS PEAK FLOW	957	Mar 30	4980	Apr 19 1987
INSTANTANEOUS PEAK STAGE	9.15	Mar 30	15.03	Mar 4 1987
INSTANTANEOUS LOW FLOW	5.2	Sep 23	.28*	Dec 30 1988
ANNUAL RUNOFF (INCHES)	17.3		17.9	
10 PERCENTILE	230		220	
50 PERCENTILE	47		33	
95 PERCENTILE	13		12	

* See REMARKS.

CAPE FEAR RIVER BASIN

0209736050 LITTLE CREEK TRIBUTARY NEAR CHAPEL HILL, NC

LOCATION.--Lat 35°55'02", long 79°01'57", Orange County, Hydrologic Unit 03030002, 0.8 mi upstream of mouth and 1.2 mi east of Post Office building, Chapel Hill, NC.

DRAINAGE AREA.--0.42 mi^2.

PERIOD OF RECORD.-- February 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is 377 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Minimum discharge for period of record, occurs frequently every year. Minimum discharge for current water year occurred serveral days during June to Sept.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	.06	.03	.47	e.46	e.55	.97	.77	.09	0	0	.01
2	1.5	.93	.03	.13	e.45	e.55	1.3	1.8	.06	0	.01	.01
3	e1.0	.07	.03	.12	e.44	e1.2	1.0	1.4	.11	0	0	.01
4	e.55	.04	.05	.11	e.55	e.90	.54	1.4	.14	0	0	.01
5	e.40	.04	.05	.12	e.50	e.65	.38	1.1	.08	0	0	.01
6	e.32	.05	.06	.72	e.43	e.55	.38	.52	.04	0	.21	.01
7	e.29	.06	.06	.25	e.42	.18	2.2	.29	.02	0	.09	0
8	e.25	.46	2.4	e1.2	e.39	.18	.60	.17	e.01	0	.02	0
9	e.19	.14	.50	e.90	e.39	.20	.43	.14	e.01	0	.37	.01
10	e.17	.03	.53	e.60	e3.3	.16	.31	3.9	e.01	0	.05	.01
11	e.15	.04	.81	e.49	e1.6	.14	.32	.44	e.01	0	.04	.01
12	e.15	.04	2.8	e.43	e.90	.20	.26	.24	e.01	.12	.03	0
13	e.15	.05	2.2	e.37	e.65	.22	.22	.22	e.01	.05	.01	.01
14	e.14	.05	.57	e.34	e.60	.22	.22	.21	e.01	.27	.50	.01
15	e.15	.20	.34	e.33	e.55	.19	.97	.21	e.01	.38	.17	.01
16	.22	.15	.27	e.32	e4.3	.12	.48	.18	e.01	.23	4.1	.01
17	.24	.03	.17	e.31	e2.6	.87	.25	.13	e.01	.80	.16	0
18	1.8	.02	.14	e.31	e1.0	.41	.26	.07	.04	.09	.04	0
19	1.7	.02	e.13	e.31	e1.7	.18	.17	.03	1.1	.07	.04	0
20	.03	.03	.12	e.30	e1.0	.18	.17	.01	.06	.12	.04	.01
21	.02	.04	.11	e.70	e.75	.15	.18	e.01	.04	.21	.06	0
22	.02	.84	.10	e.46	e1.1	.14	.17	.42	.64	.07	.05	.01
23	.02	1.6	e.09	e.38	e1.7	.15	.14	.14	.06	.01	.04	.01
24	.02	.09	e.09	e.38	e.95	.12	.14	.07	.02	e.01	.05	0
25	.02	.05	e.08	e.90	e.70	.11	.13	.05	e.01	e.01	.04	0
26	.03	.04	e.08	e3.5	e.65	.13	.11	.03	0	e.01	.07	0
27	.04	.03	e.08	e1.0	e.60	.11	.10	.68	0	e.01	.03	0
28	.04	.03	e.07	e.70	e.60	.12	.08	2.7	0	0	.02	0
29	.04	.02	e.06	e.65	---	6.5	.24	2.5	0	.01	.04	0
30	.05	.03	e.06	e.65	---	1.5	.67	.28	0	.01	.04	.01
31	.06	---	.21	e.50	---	3.5	---	.14	---	.01	.02	---
MEAN	.41	.18	.40	.58	1.05	.66	.45	.65	.087	.080	.20	.006
MAX	3.0	1.6	2.8	3.5	4.3	6.5	2.2	3.9	1.1	.80	4.1	.01
MIN	.02	.02	.03	.11	.39	.11	.08	.01	0	0	0	0
IN.	1.13	.47	1.09	1.59	2.59	1.81	1.19	1.79	.23	.22	.56	.02

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	.257	.701	.229	.381	.920	.740	.590	.484	.145	.140	.179	.091
MAX	.412	1.79	.397	.579	1.23	1.34	.846	.785	.190	.392	.300	.158
(WY)	1990	1989	1990	1990	1987	1989	1987	1989	1989	1989	1989	1987
MIN	.072	.137	.100	.172	.319	.110	.245	.141	.087	.015	.101	.010
(WY)	1988	1988	1989	1989	1988	1988	1988	1988	1990	1988	1987	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	.39		*****	
HIGHEST ANNUAL MEAN			.61	1989
LOWEST ANNUAL MEAN			.16	1988
HIGHEST DAILY MEAN	6.5	Mar 29	14	Feb 28 1987
LOWEST DAILY MEAN	0	Jun 26	0	Jun 2 1987
INSTANTANEOUS PEAK FLOW	200	Aug 16	401	May 5 1989
INSTANTANEOUS PEAK STAGE	2.64	Aug 16	3.16	May 5 1989
INSTANTANEOUS LOW FLOW	0*	Jun 26	0*	Jul 16 1987
ANNUAL RUNOFF (INCHES)	12.7		*****	
10 PERCENTILE	.99		1.1	
50 PERCENTILE	.13		.07	
95 PERCENTILE	0		0	

***** Indicates not enough data, therefore statistic is not computed

* See REMARKS.

CAPE FEAR RIVER BASIN

0209741955 NORTHEAST CREEK AT SECONDARY ROAD 1100 NEAR GENLEE, NC

LOCATION.--Lat 35°52'20", long 78°54'49", Durham County, Hydrologic Unit 03030002, on left bank at downstream side of bridge on Secondary Road 1100, 1.3 mi west of Genlee, and 1.6 mi downstream from Burdens Creek.

DRAINAGE AREA.--21.1 mi^2.

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is 235 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges and records below 5 ft^3/s, which are poor. Slight diurnal fluctuation at low flow. The city of Durham diverted from Neuse River basin an average of 36.2 ft^3/s for municipal water supply and returned an average of 18.6 ft^3/s as treated effluent into the Cape Fear River basin, of which 3.7 ft^3/s entered upstream from station. About 13.1 ft^3/s was returned to Neuse River basin.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	6.5	e7.2	e11	37	12	140	12	24	4.8	7.2	5.9
2	525	e6.0	e6.0	e14	34	11	42	39	18	6.0	7.2	5.0
3	106	e12	e5.3	e13	31	80	205	188	16	6.6	7.1	5.3
4	17	e70	e5.0	e11	31	77	42	156	26	4.8	6.3	e6.2
5	9.8	e27	e4.6	e11	34	26	22	119	24	4.3	5.9	e5.8
6	8.2	e12	e4.4	e11	28	17	16	94	18	5.9	7.4	e5.4
7	6.6	e6.4	e4.2	e28	29	14	137	26	14	4.9	13	e6.0
8	5.3	e4.4	e11	e70	29	11	38	15	15	3.9	10	e5.4
9	5.6	e15	e37	150	25	12	20	9.4	11	6.3	14	e6.8
10	5.5	e11	e140	61	266	12	17	124	8.7	8.9	13	e6.0
11	5.1	e9.0	e350	45	252	10	15	105	10	22	7.9	e5.5
12	4.7	e8.0	e480	39	66	9.8	13	16	11	12	6.4	e5.3
13	4.5	e6.6	e300	31	45	9.9	10	11	11	12	7.2	e4.9
14	3.9	e6.0	e200	26	36	12	8.9	11	13	11	7.6	e4.7
15	3.6	e5.8	e130	28	33	8.4	15	11	13	9.6	9.0	e4.5
16	4.7	e29	e90	24	164	8.3	20	12	11	9.3	14	e4.4
17	6.0	e21	e70	25	560	18	15	14	8.3	9.0	50	e4.5
18	11	e15	e45	24	63	120	14	12	9.8	9.0	13	e4.3
19	453	e13	e25	23	172	26	12	8.7	17	17	7.8	e4.0
20	148	e100	e18	20	99	15	9.8	8.4	12	11	7.8	e3.9
21	20	e150	e15	208	35	12	9.9	12	11	7.4	8.2	e3.7
22	11	e100	e11	119	29	11	7.7	32	15	8.7	7.9	e3.5
23	9.0	e54	e10	48	56	9.1	8.1	24	18	9.4	15	3.2
24	7.9	e37	e7.0	41	36	8.0	8.6	15	9.5	9.8	48	3.7
25	8.3	e26	e5.2	48	20	6.0	12	12	7.9	10	12	3.8
26	8.2	e19	e5.6	284	14	7.4	9.2	9.7	8.9	15	11	3.7
27	6.2	e15	e5.7	140	13	8.8	7.1	45	8.9	27	9.8	3.7
28	4.9	e12	e5.8	54	12	7.1	5.5	71	8.6	6.6	7.6	3.7
29	4.6	e9.0	e5.9	45	---	476	5.7	479	8.3	6.2	6.7	3.3
30	5.9	e7.0	e5.9	63	---	418	22	105	6.0	7.5	6.3	2.9
31	7.0	---	e6.0	45	---	233	---	35	---	7.5	6.9	---
MEAN	49.2	27.1	65.0	56.8	80.3	55.0	30.2	59.1	13.1	9.46	11.7	4.63
MAX	525	150	480	284	560	476	205	479	26	27	50	6.8
MIN	3.6	4.4	4.2	11	12	6.0	5.5	8.4	6.0	3.9	5.9	2.9
IN.	2.69	1.43	3.55	3.10	3.97	3.01	1.60	3.23	.69	.52	.64	.25

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	13.2	23.3	33.7	42.9	72.3	60.1	35.2	26.7	10.3	16.9	18.6	8.28
MAX	49.2	73.8	86.3	82.0	101.6	110.8	69.6	59.1	30.8	48.6	66.7	26.1
(WY)	1990	1986	1984	1984	1989	1989	1984	1990	1989	1989	1986	1987
MIN	3.27	3.89	4.32	12.6	18.7	8.18	4.00	8.57	4.55	3.33	3.50	2.49
(WY)	1986	1985	1989	1986	1986	1985	1985	1987	1987	1983	1983	1983

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	38.3		29.9	
HIGHEST ANNUAL MEAN			45.0	1984
LOWEST ANNUAL MEAN			14.7	1988
HIGHEST DAILY MEAN	560	Feb 17	1000	Jan 11 1984
LOWEST DAILY MEAN	2.9	Sep 30	1.2	Oct 7 1985
INSTANTANEOUS PEAK FLOW	1030	Mar 29	2220	Aug 20 1986
INSTANTANEOUS PEAK STAGE	10.08	Mar 29	11.07	Aug 20 1986
INSTANTANEOUS LOW FLOW	2.1	Sep 23	.76	Oct 7 1985
ANNUAL RUNOFF (INCHES)	24.6		19.2	
10 PERCENTILE	100		60	
50 PERCENTILE	12		7.0	
95 PERCENTILE	4.0		2.7	

CAPE FEAR RIVER BASIN

02097464 MORGAN CREEK NEAR WHITE CROSS, NC

LOCATION.--Lat 35°55'25", long °79'06"56, Orange County, Hydrologic Unit 030200201, at bridge on NC 54, 2 miles above University Lake and 3.5 miles east of White Cross.

DRAINAGE AREA.--8.35 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 420 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Minimum discharge for period of record and current water year also occurred on Sept. 25-30, 1990.

REVISIONS.--Maximum dicharge for period November to September 1989 has been revised to 770 ft^3/s May 1. These figures supersede those published in the Water-Data Report for 1989.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	4.9	4.3	15	9.7	14	29	10	7.0	1.9	.24	.25
2	91	7.0	4.2	8.6	9.4	13	23	20	6.4	2.1	.20	.19
3	27	13	4.0	7.2	8.8	28	36	69	6.6	1.8	.17	.17
4	16	7.0	3.6	6.8	12	22	19	87	8.1	1.6	.19	.15
5	12	5.7	3.8	6.6	11	16	16	51	6.2	1.4	.15	.11
6	9.6	5.3	3.6	12	8.7	14	14	45	5.5	1.4	.81	.12
7	8.9	5.4	3.4	11	8.5	12	28	22	5.3	1.2	4.4	.13
8	7.9	5.4	23	27	7.8	12	17	16	5.0	1.1	1.2	.12
9	6.1	8.9	21	20	7.7	12	14	14	4.8	1.1	1.1	.10
10	5.5	7.3	14	14	67	12	14	41	4.4	.98	2.5	.09
11	5.0	5.7	18	11	35	11	14	20	3.9	.80	1.2	.08
12	4.7	5.0	59	9.2	19	11	12	15	3.6	.96	.95	.06
13	4.7	4.6	73	7.6	14	10	11	13	3.8	1.4	.69	.06
14	4.6	4.5	28	6.9	12	10	11	11	4.3	1.3	.60	.08
15	4.7	5.1	19	6.7	11	9.7	26	10	4.3	2.2	1.4	.07
16	4.4	15	16	6.5	81	9.7	18	9.6	4.5	1.4	3.5	.04
17	4.8	8.1	12	6.2	56	14	15	9.0	4.1	1.3	3.5	.04
18	10	6.1	9.7	6.2	25	19	13	8.1	3.8	1.4	1.4	.04
19	59	5.2	8.8	6.0	38	12	12	7.5	10	1.3	.93	.03
20	18	5.0	8.2	5.9	25	11	12	7.3	4.8	1.6	.82	.04
21	11	4.7	7.4	16	19	10	11	7.1	4.0	1.1	.69	.04
22	8.3	4.6	7.0	9.8	27	9.9	11	7.5	5.1	1.1	.96	.04
23	7.0	35	7.0	7.9	38	9.9	9.8	7.6	5.5	.74	1.1	.04
24	6.4	12	7.0	7.8	23	9.6	9.0	6.7	3.7	.52	.68	.03
25	6.0	8.5	7.0	19	18	9.4	8.4	6.7	3.2	.32	.64	.03
26	5.5	7.3	6.9	71	15	9.3	7.9	6.9	2.9	.29	1.0	.03
27	5.2	6.3	6.5	23	15	8.9	7.6	8.1	2.8	.27	.51	.02
28	5.0	5.9	6.2	16	14	8.7	7.3	12	2.6	.32	.40	.02
29	4.9	5.3	5.7	14	---	57	7.8	28	2.4	.33	.31	.02
30	4.7	4.5	5.9	14	---	33	12	12	2.0	.32	.68	.02
31	5.1	---	6.3	11	---	54	---	8.3	---	.33	.61	---
MEAN	13.1	7.61	13.2	13.2	22.7	15.9	14.9	19.2	4.69	1.09	1.08	.075
MAX	91	35	73	71	81	57	36	87	10	2.2	4.4	.25
MIN	4.4	4.5	3.4	5.9	7.7	8.7	7.3	6.7	2.0	.27	.15	.02
IN.	1.81	1.02	1.82	1.83	2.83	2.19	1.99	2.66	.63	.15	.15	.01

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	13.1	5.54	7.38	7.87	22.3	21.9	16.0	24.6	4.31	3.19	1.85	1.16
MAX	13.1	7.61	13.2	13.2	22.7	27.9	17.2	30.1	4.69	5.29	2.61	2.25
(WY)	1990	1990	1990	1990	1990	1989	1989	1989	1990	1989	1989	1989
MIN	13.1	3.47	1.56	2.54	22.0	15.9	14.9	19.2	3.93	1.09	1.08	.075
(WY)	1990	1989	1989	1989	1989	1990	1990	1990	1989	1990	1990	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	10.5		*****	
HIGHEST ANNUAL MEAN			10.5	1990
LOWEST ANNUAL MEAN			10.5	1990
HIGHEST DAILY MEAN	91	Oct 2	258	May 2 1989
LOWEST DAILY MEAN	.02	Sep 27	.02	Sep 27 1990
INSTANTANEOUS PEAK FLOW	333	May 4	770	May 1 1989
INSTANTANEOUS PEAK STAGE	6.16	May 4	7.87	May 1 1989
INSTANTANEOUS LOW FLOW	.02*	Sep 24	.02*	Sep 24 1990
ANNUAL RUNOFF (INCHES)	17.1		*****	
10 PERCENTILE	23		23	
50 PERCENTILE	7.1		6.4	
95 PERCENTILE	.07		.08	

***** Indicates not enough data, therefore statistic is not computed

* See REMARKS.

02097464 MORGAN CREEK NEAR WHITE CROSS, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1988 to current year.

REMARKS.--Station operated to define water quality as part of a six-county regional surface water-quality assessment.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT
OCT												
12...	1030	3.1	110	5.9	11.5	45	755	9.4	7.4	2.8	3.5	18
NOV												
28...	0915	5.2	93	5.8	10.0	32	748	9.6	8.1	2.9	5.1	24
DEC												
12...	0830	26	90	5.6	5.0	60	748	11.8	6.9	2.9	4.7	--
JAN												
10...	0915	13	80	6.3	6.0	55	747	11.4	6.3	2.5	4.5	26
FEB												
21...	1015	14	83	7.2	6.5	30	766	11.6	5.4	2.2	4.0	26
MAR												
22...	1230	6.8	75	7.8	11.5	25	758	14.4	6.3	2.4	4.5	27
APR												
30...	1200	9.8	110	7.1	15.0	33	749	8.9	7.4	2.8	4.6	21
MAY												
29...	0915	31	79	7.1	16.0	90	738	7.5	6.2	2.4	3.8	21
JUN												
12...	1300	2.4	88	7.2	17.0	15	754	8.0	7.7	2.7	4.7	24
JUL												
26...	1430	0.55	112	7.7	21.5	45	753	7.6	10	3.7	5.7	21
AUG												
06...	0940	0.35	132	7.1	22.0	32	749	5.7	12	4.0	6.4	21
SEP												
04...	0945	0.20	155	6.1	21.0	45	756	5.4	13	4.5	6.4	19

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	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)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)
OCT												
12...	0.3	3.8	4.0	5.2	0.40	6.2	46	--	<0.010	0.200	0.050	0.06
NOV												
28...	0.4	2.1	5.0	6.2	0.10	14	66	--	<0.010	0.800	0.020	0.03
DEC												
12...	0.4	--	8.0	7.5	0.10	10	82	0.760	0.040	0.800	0.310	0.40
JAN												
10...	0.4	2.0	6.0	5.4	<0.10	12	64	--	0.020	0.900	0.090	--
FEB												
21...	0.4	1.3	5.0	4.5	0.10	12	57	0.690	0.010	0.700	0.020	0.03
MAR												
22...	0.4	1.2	3.6	5.5	<0.10	9.8	56	--	<0.010	0.500	<0.010	--
APR												
30...	0.4	5.5	6.1	8.3	0.10	14	65	0.930	0.070	1.00	0.250	0.32
MAY												
29...	0.3	4.8	4.1	3.9	<0.10	8.1	60	0.360	0.040	0.400	0.170	0.22
JUN												
12...	0.4	1.8	2.6	5.2	0.10	17	56	--	<0.010	1.10	0.030	0.04
JUL												
26...	0.4	4.6	2.7	7.3	0.30	--	80	--	<0.010	1.20	0.040	0.05
AUG												
06...	0.4	5.5	2.6	7.9	<0.10	20	109	0.890	0.010	0.900	0.080	0.10
SEP												
04...	0.4	7.8	3.3	9.1	<0.10	20	95	--	<0.010	1.50	0.050	0.06

CAPE FEAR RIVER BASIN

02097464 MORGAN CREEK NEAR WHITE CROSS, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC 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)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHATE, 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)
OCT 12...	0.65	0.65	0.70	0.70	0.90	4.0	0.90	0.040	0.09	0.020	0.030	<0.010
NOV 28...	0.38	0.57	0.40	0.60	1.2	5.3	1.3	0.140	0.31	0.100	0.100	0.100
DEC 12...	0.59	1.0	0.90	1.3	1.7	7.5	2.1	0.270	0.71	0.170	0.230	0.170
JAN 10...	--	--	0.50	--	--	--	--	0.130	0.37	0.110	0.120	0.100
FEB 21...	0.38	--	0.40	<0.20	1.1	4.9	--	0.090	0.25	0.050	0.080	0.050
MAR 22...	--	0.19	0.30	0.20	0.80	3.5	0.70	0.070	0.18	0.040	0.060	0.040
APR 30...	1.2	0.88	1.5	1.1	2.5	11	2.2	0.690	1.56	0.430	0.510	0.420
MAY 29...	1.9	1.5	2.1	1.6	2.5	11	2.0	0.420	0.89	0.330	0.290	0.230
JUN 12...	0.37	--	0.40	0.60	1.5	6.6	1.6	0.160	0.46	0.120	0.150	0.110
JUL 26...	0.36	0.27	0.40	0.30	1.6	7.1	1.4	0.270	0.74	0.200	0.240	0.190
AUG 06...	0.72	0.62	0.80	0.70	1.7	7.5	1.6	0.230	0.58	0.160	0.190	0.130
SEP 04...	0.75	0.73	0.80	0.80	2.3	10	2.3	0.300	0.83	0.250	0.270	0.220

DATE	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)
OCT 12...	<0.03	90	<1	<1	<1	1	4	660	2	420	<0.10	3
NOV 28...	0.31	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	0.52	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	0.31	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	0.15	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	0.12	--	--	--	--	--	--	--	--	--	--	--
APR 30...	1.3	1700	1	<1	4	1	3	2900	3	100	--	2
MAY 29...	0.71	--	--	--	--	--	--	--	--	--	--	--
JUN 12...	0.34	160	<1	1	<1	1	2	760	1	50	<0.10	1
JUL 26...	0.58	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	0.40	60	1	<1	2	<1	2	920	<1	160	<0.10	1
SEP 04...	0.67	70	1	3	1	<1	2	1100	1	150	<0.10	<1

CAPE FEAR RIVER BASIN

02097464 MORGAN CREEK NEAR WHITE CROSS, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	ALDRIN, TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)
OCT 12...	<1	<1	<10	7.1	0.04	<0.001	<0.1	<0.001	<0.001	<0.001	<0.01
NOV 28...	--	--	--	3.2	0.04	--	--	--	--	--	--
DEC 12...	--	--	--	7.7	0.04	--	--	--	--	--	--
JAN 10...	--	--	--	4.1	0.11	--	--	--	--	--	--
FEB 21...	--	--	--	4.5	0.05	--	--	--	--	--	--
MAR 22...	--	--	--	2.5	0.03	--	--	--	--	--	--
APR 30...	<1	<1	<10	11	0.17	<0.001	<0.1	<0.001	<0.001	<0.001	<0.01
MAY 29...	--	--	--	13	0.04	--	--	--	--	--	--
JUN 12...	<1	<1	<10	2.4	0.02	--	--	--	--	--	--
JUL 26...	--	--	--	4.0	0.02	--	--	--	--	--	--
AUG 06...	<1	<1	<10	4.0	0.02	<0.001	<0.1	<0.001	<0.001	<0.001	<0.01
SEP 04...	<1	<1	<10	5.9	0.01	--	--	--	--	--	--

DATE	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	PCB, TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)
OCT 12...	<0.001	<0.001	<0.001	<0.01	<0.1	<0.10	<0.001	<0.001	<0.001	<0.01	<0.01
NOV 28...	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--
APR 30...	<0.001	<0.001	<0.001	<0.01	<0.1	<0.10	<0.001	<0.001	<0.001	<0.01	<0.01
MAY 29...	--	--	--	--	--	--	--	--	--	--	--
JUN 12...	--	--	--	--	--	--	--	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	<0.001	<0.001	<0.001	<0.01	<0.1	<0.10	<0.001	<0.001	<0.001	<0.01	<0.01
SEP 04...	--	--	--	--	--	--	--	--	--	--	--

CAPE FEAR RIVER BASIN

02097464 MORGAN CREEK NEAR WHITE CROSS, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	METHYL PARA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	BENZENE TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)
OCT 12...	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20
NOV 28...	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--
APR 30...	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20
MAY 29...	--	--	--	--	--	--	--	--	--	--	--
JUN 12...	--	--	--	--	--	--	--	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20
SEP 04...	--	--	--	--	--	--	--	--	--	--	--

DATE	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	STYRENE TOTAL (UG/L)
OCT 12...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
NOV 28...	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--
APR 30...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
MAY 29...	--	--	--	--	--	--	--	--	--	--	--
JUN 12...	--	--	--	--	--	--	--	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
SEP 04...	--	--	--	--	--	--	--	--	--	--	--

CAPE FEAR RIVER BASIN

02097464 MORGAN CREEK NEAR WHITE CROSS, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)
OCT 12...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
NOV 28...	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--
APR 30...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
MAY 29...	--	--	--	--	--	--	--	--	--	--	--
JUN 12...	--	--	--	--	--	--	--	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
SEP 04...	--	--	--	--	--	--	--	--	--	--	--

DATE	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 12...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	3	0.02
NOV 28...	--	--	--	--	--	--	--	--	--	2	0.03
DEC 12...	--	--	--	--	--	--	--	--	--	14	0.98
JAN 10...	--	--	--	--	--	--	--	--	--	6	0.21
FEB 21...	--	--	--	--	--	--	--	--	--	17	0.64
MAR 22...	--	--	--	--	--	--	--	--	--	9	0.17
APR 30...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	65	1.7
MAY 29...	--	--	--	--	--	--	--	--	--	111	9.3
JUN 12...	--	--	--	--	--	--	--	--	--	5	0.03
JUL 26...	--	--	--	--	--	--	--	--	--	5	0.01
AUG 06...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	4	0.00
SEP 04...	--	--	--	--	--	--	--	--	--	7	0.00

CAPE FEAR RIVER BASIN

02097517 MORGAN CREEK NEAR CHAPEL HILL, NC

LOCATION.--Lat 35°53'36", long 79°01'10", Orange County, Hydrologic Unit 03030002, on left bank 3.8 mi downstream from U.S. Highway 501, and 2.5 mi southeast of Chapel Hill.

DRAINAGE AREA.--41.0 mi^2.

PERIOD OF RECORD.--November 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is 245 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good, except those below 10 ft^3/s, which are fair. Slight diurnal fluctuation at low flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	105	15	15	35	25	39	208	41	31	13	14	13
2	310	37	14	26	36	36	137	83	26	14	14	13
3	129	36	15	20	33	115	167	252	26	14	14	14
4	27	23	14	32	36	110	112	232	29	13	13	14
5	17	18	14	24	37	60	82	187	24	14	13	13
6	15	17	13	35	29	49	63	194	21	14	16	13
7	13	16	14	34	27	38	181	101	20	14	18	13
8	12	26	139	109	26	33	110	51	19	13	15	13
9	12	28	188	119	24	35	78	36	17	14	17	13
10	12	21	88	63	360	32	65	291	17	13	15	13
11	12	16	99	41	246	29	61	158	17	14	15	13
12	12	14	233	33	126	29	49	80	17	15	14	13
13	12	13	466	27	82	25	42	48	17	16	15	13
14	12	13	202	24	57	46	40	37	17	17	18	12
15	12	14	131	22	47	52	110	32	17	21	15	11
16	13	22	101	22	312	15	102	28	16	16	86	10
17	13	25	75	21	432	21	86	25	16	44	24	10
18	42	19	56	22	165	54	75	22	16	18	11	10
19	269	15	33	19	225	32	61	20	99	15	11	11
20	82	14	29	20	156	29	40	19	25	19	12	11
21	27	14	25	125	104	24	32	20	17	17	12	11
22	19	20	23	72	95	24	29	26	45	15	13	11
23	16	224	19	49	163	23	26	22	25	15	12	11
24	14	77	19	32	108	22	24	19	17	14	13	12
25	14	31	18	65	67	21	24	19	16	14	13	12
26	13	23	19	421	48	21	21	19	16	14	14	12
27	14	20	18	168	44	20	30	38	15	14	13	12
28	13	20	17	102	42	20	36	166	14	14	13	12
29	13	18	17	81	---	405	34	375	14	14	14	12
30	14	16	17	105	---	277	63	130	13	14	14	12
31	15	---	19	66	---	339	---	56	---	14	14	---
MEAN	42.0	28.8	69.4	65.6	113	66.9	72.9	91.2	22.6	15.8	16.6	12.1
MAX	310	224	466	421	432	405	208	375	99	44	86	14
MIN	12	13	13	19	24	15	21	19	13	13	11	10
IN.	1.18	.78	1.95	1.85	2.86	1.88	1.99	2.56	.62	.44	.47	.33

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	20.2	36.6	45.7	55.4	89.8	95.6	63.1	45.8	19.2	19.9	23.1	13.4
MAX	42.0	140.8	105.2	107.0	140.6	180.8	131.3	91.2	30.8	51.5	65.0	17.6
(WY)	1990	1986	1984	1984	1984	1984	1984	1990	1984	1984	1985	1985
MIN	13.3	10.5	12.9	15.2	24.6	18.0	17.5	14.5	11.1	8.93	12.1	8.77
(WY)	1985	1983	1989	1989	1986	1988	1986	1986	1986	1988	1988	1983

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	51.1		41.9	
HIGHEST ANNUAL MEAN			75.6	1984
LOWEST ANNUAL MEAN			21.7	1988
HIGHEST DAILY MEAN	466	Dec 13	1270	Nov 21 1985
LOWEST DAILY MEAN	10	Sep 16	.60	Nov 26 1982
INSTANTANEOUS PEAK FLOW	945	Feb 16	2240	Mar 6 1984
INSTANTANEOUS PEAK STAGE	9.03	Feb 16	12.75	Mar 06 1984
INSTANTANEOUS LOW FLOW	7.0	Sep 20	NOT DETERMINED	
ANNUAL RUNOFF (INCHES)	16.9		13.9	
10 PERCENTILE	127		89	
50 PERCENTILE	22		18	
95 PERCENTILE	12		9.6	

CAPE FEAR RIVER BASIN

02098198 HAW RIVER BELOW B. EVERETT JORDAN DAM NEAR MONCURE, NC

LOCATION.--Lat 35°39'11", long 79°04'03", Chatham County, Hydrologic Unit 03030002, on right bank 300 ft downstream from B. Everett Jordan Dam, 2.5 mi north of Moncure, and 4.2 mi upstream from mouth.

DRAINAGE AREA.--1,689 mi^2.

PERIOD OF RECORD.--October 1965 to current year. Published as Haw River near Haywood, NC (0209820) October 1965 to September 1978.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 155.00 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Oct. 1, 1978, water-stage recorder at site 0.3 mi downstream at same datum. Since June 22, 1966, auxiliary water-stage recorder 2.9 mi downstream. U. S. Army Corps of Engineers satellite data transmitter at station.

REMARKS.--No estimated daily discharges. Records good. Prior to 1972, some regulation for short periods at low flow caused by powerplants above station and Dec. 16, 1972 to Aug. 31, 1981 by temporary storage in B. Everett Jordan Lake (sta 02098197). Prior to regulation from B. Everett Jordan Lake, maximum discharge, 25,800 ft^3/s Oct. 25, 1971, gage height, 22.41 ft at former site; minimum, no flow for part of Aug. 1, 1980, result of gate closure by U. S. Army Corps of Engineers to facilitate construction of gaging station, and part of June 19, 1981 and Aug. 19, 1982, for maintenance work at dam and at gaging station; minimum daily discharge, 35 ft^3/s Sept. 12, 1966, at former site.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	456	1150	675	411	7440	1650	6340	884	10900	488	570	554
2	1200	918	676	1970	6170	1170	6540	1060	7570	483	513	552
3	2000	397	803	4840	2670	1000	6820	2230	3990	483	588	545
4	4770	398	901	4240	1640	1600	7350	2900	1560	484	588	568
5	9020	396	898	2830	2330	1950	7030	3780	401	479	588	578
6	10400	393	894	1820	3760	3860	6950	5830	400	479	586	574
7	10000	850	887	1870	3890	4950	6360	6870	401	471	503	578
8	8610	1500	800	2720	3390	4410	5260	7920	399	470	404	578
9	6640	1800	1000	2600	1900	2130	4330	7650	399	465	446	577
10	4830	1790	1450	4080	1000	1180	3140	6650	399	464	453	579
11	2040	1250	2800	5390	1130	1180	2510	5460	398	462	451	573
12	380	872	3480	5060	3640	1430	2030	5380	551	479	486	579
13	384	867	1300	4530	7120	1630	1460	5070	630	497	503	573
14	378	582	3000	4050	8010	1460	906	3470	652	497	498	582
15	384	393	7390	2470	7220	1150	926	1690	470	508	504	582
16	391	424	12200	2700	3860	1160	2620	1290	395	506	508	580
17	390	781	13000	2700	1000	1150	4870	913	436	504	508	441
18	391	973	11500	713	1400	1230	5900	748	402	499	505	413
19	878	935	8070	200	2640	1250	4170	874	456	358	510	461
20	2710	1990	5160	241	8270	2680	1470	874	420	373	504	498
21	3690	2760	2540	391	12300	3110	914	560	428	516	501	531
22	3410	1260	1540	2350	11200	2280	893	794	426	516	483	556
23	3490	670	1150	3490	10500	1710	909	801	427	523	449	556
24	3580	2070	1150	3340	10800	1400	909	640	437	508	438	561
25	3280	3650	1140	3310	8900	896	911	635	423	502	491	574
26	3640	3470	692	1750	6780	633	893	637	413	462	520	577
27	3190	3380	409	1050	3300	638	888	638	466	429	522	585
28	1950	2100	413	1920	2470	634	882	650	586	448	516	586
29	1440	673	416	4950	---	824	886	1030	536	528	515	576
30	1150	689	414	7600	---	1310	892	2810	492	526	510	575
31	1150	---	415	7570	---	3580	---	7940	---	516	529	---
MEAN	3104	1313	2812	3005	5169	1782	3199	2861	1195	481	506	555
MAX	10400	3650	13000	7600	12300	4950	7350	7940	10900	528	588	586
MIN	378	393	409	200	1000	633	882	560	395	358	404	413
(†)	+23	-24	-24	+403	-472	+807	-785	-529	-618	-367	-205	-521

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD*, BY WATER YEAR (WY)

MEAN	835.6	840.0	1559	2160	3369	3884	2785	1559	1734	930.4	1099	544.4
MAX	3104	3254	3823	4452	5169	8158	5412	3460	7837	2309	2828	765.2
(WY)	1990	1986	1984	1984	1990	1989	1984	1989	1982	1984	1984	1989
MIN	401.7	314.5	218.8	737.9	1196	650.8	422.1	496.2	482.0	469.7	415.8	324.6
(WY)	1983	1989	1987	1986	1986	1988	1985	1986	1987	1985	1986	1988

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD *	
AVERAGE FLOW	2147	‡ 2050	‡ 1636	
HIGHEST ANNUAL MEAN			2802	1984
LOWEST ANNUAL MEAN			852.8	1988
HIGHEST DAILY MEAN	13000	Dec 17	16400	Mar 7 1987
LOWEST DAILY MEAN	200	Jan 19	136	Oct 3 1981
INSTANTANEOUS PEAK FLOW	13900	Dec 16	16800	Mar 10 1989
INSTANTANEOUS PEAK STAGE	13.44	Dec 16	14.91	Mar 10 1989
INSTANTANEOUS LOW FLOW	52	Jun 18	0*	Aug 19 1982
ANNUAL RUNOFF (INCHES)	17.3		14.2	
10 PERCENTILE	6270		5030	
50 PERCENTILE	917		622	
95 PERCENTILE	396		243	

† Change in contents, equivalent in cubic feet per secord, in B. Jordan Reservoir; furnished by U. S. Army Corps of Engineers.
‡ Adjusted for change in contents.
* Regulated period only (1982-1990). See REMARKS.

CAPE FEAR RIVER BASIN

02099000 EAST FORK DEEP RIVER NEAR HIGH POINT, NC

LOCATION.--Lat 36°02'15", long 79°56'46", Guilford County, Hydrologic Unit 03030003, on left bank 5 ft upstream from bridge on Secondary Road 1541, 3.3 mi upstream from High Point Dam, and 5.2 mi northeast of High Point College, High Point.

DRAINAGE AREA.--14.8 mi^2.

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

REVISED RECORDS.--WSP 1723: 1929(M). WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 764.02 ft above National Geodetic Vertical Datum of 1929. Intake pipe extended to downstream side of bridge since Mar. 1, 1934.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Slight diurnal fluctuation at low flow during growing season. Maximum discharge, 6,300 ft^3/s, gage height, 10.87 ft, from floodmark, from rating curve extended above 1,600 ft^3/s on basis of contracted-opening measurement of peak flow. Minimum discharge, 0.6 ft^3/s, result of temporary regulation. Minimum unregulated, 1.0 ft^3/s, Aug. 8, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	464	8.5	9.7	e110	e21	12	24	11	12	4.5	2.6	3.4
2	240	7.9	9.3	e45	e19	14	21	30	9.5	4.2	2.6	2.9
3	39	8.1	8.9	e26	e17	87	18	76	8.3	3.6	2.6	2.8
4	19	7.2	8.8	e20	e95	32	13	102	7.8	3.6	2.5	2.7
5	13	8.6	8.7	e24	e68	18	11	97	7.2	3.5	2.5	2.8
6	10	10	8.6	e50	e35	15	11	45	7.0	3.4	24	3.4
7	9.0	8.7	8.3	e40	e26	13	43	28	6.8	3.3	4.6	3.4
8	7.9	10	35	e100	e21	12	14	14	6.7	3.4	3.2	3.4
9	7.6	9.3	20	e60	13	13	12	15	6.6	3.4	3.4	16
10	9.3	7.4	27	e40	141	12	11	127	6.1	3.3	3.4	4.4
11	8.3	7.0	39	e28	40	11	16	26	5.8	7.0	3.5	6.2
12	7.0	6.8	257	e22	20	11	11	14	5.5	8.4	3.1	4.7
13	6.5	6.8	111	e18	16	10	9.4	12	5.8	14	3.2	28
14	6.5	6.9	41	e15	14	10	10	10	6.3	8.2	2.9	6.4
15	6.3	9.0	25	e14	13	10	191	9.1	6.3	39	3.0	4.1
16	6.2	120	22	e14	224	12	36	8.6	5.9	4.9	14	3.3
17	6.4	23	15	e13	59	35	19	8.3	5.6	4.3	5.9	3.0
18	61	14	14	e13	24	24	14	7.3	5.4	4.1	3.5	2.7
19	189	11	13	e12	106	13	12	7.0	5.4	3.8	3.2	2.7
20	27	10	13	e11	32	14	11	7.4	5.3	3.7	3.2	2.8
21	14	9.4	12	e33	20	11	11	7.6	5.1	3.6	3.1	3.2
22	11	32	9.9	e25	76	10	11	79	4.9	3.5	4.1	3.3
23	9.5	62	8.8	e19	57	9.9	9.8	18	4.8	3.2	6.2	2.7
24	8.9	18	8.7	e17	30	9.6	9.1	9.7	4.5	3.1	7.0	2.5
25	8.2	13	8.7	e15	17	9.5	8.7	9.1	4.4	3.0	12	2.5
26	7.7	12	9.1	e170	14	9.6	8.4	8.4	4.4	2.9	6.2	2.4
27	7.5	11	8.8	e68	14	7.8	8.0	9.4	4.3	2.9	3.9	2.2
28	7.4	10	8.8	e35	13	10	7.7	67	4.3	2.9	3.3	2.2
29	7.1	9.7	11	e26	---	51	14	123	4.1	2.8	3.4	2.1
30	7.2	9.1	9.9	e33	---	24	14	27	4.0	2.8	4.0	2.1
31	8.8	---	51	e26	---	58	---	15	---	2.7	4.0	---
MEAN	40.0	16.2	27.1	36.8	44.5	19.0	20.3	33.2	6.00	5.39	4.97	4.48
MAX	464	120	257	170	224	87	191	127	12	39	24	28
MIN	6.2	6.8	8.3	11	13	7.8	7.7	7.0	4.0	2.7	2.5	2.1
IN.	3.12	1.22	2.11	2.87	3.13	1.48	1.53	2.58	.45	.42	.39	.34

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	11.4	11.6	16.4	22.9	28.1	25.1	19.2	15.2	12.5	13.0	12.1	12.7
MAX	79.5	39.2	48.5	82.9	83.0	106.3	71.6	58.8	61.5	97.5	55.9	88.9
(WY)	1960	1980	1933	1978	1979	1975	1987	1978	1969	1975	1949	1979
MIN	1.88	2.35	3.53	4.32	6.48	6.76	5.52	4.57	3.41	2.93	2.87	1.74
(WY)	1942	1942	1942	1942	1931	1967	1942	1941	1986	1977	1941	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	21.4		16.6	
HIGHEST ANNUAL MEAN			34.1	1978
LOWEST ANNUAL MEAN			7.28	1967
HIGHEST DAILY MEAN	464	Oct 1	1670	Sep 24 1947
LOWEST DAILY MEAN	2.1	Sep 29	1.1	Aug 8 1977
INSTANTANEOUS PEAK FLOW	1020	Oct 1	6300*	Sep 24 1947
INSTANTANEOUS PEAK STAGE	4.67	Oct 1	10.87*	Sep 24 1947
INSTANTANEOUS LOW FLOW	1.9	Sep 30	.6*	Jan 17 1981
ANNUAL RUNOFF (INCHES)	19.6		15.3	
10 PERCENTILE	45		26	
50 PERCENTILE	9.8		6.9	
95 PERCENTILE	2.8		2.6	

* See REMARKS.

CAPE FEAR RIVER BASIN

02099500 DEEP RIVER NEAR RANDLEMAN, NC

LOCATION.--Lat 35°54'06", long 79°51'05", Randolph County, Hydrologic Unit 03030003, on left bank 500 ft downstream from bridge on Secondary Road 1929, 0.2 mi downstream from Coltrane's Mill, 0.5 mi south of Guilford County line, 4.8 mi upstream from Muddy Creek, and 7 mi north of Randleman.

DRAINAGE AREA.--125 mi^2.

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

REVISED RECORDS.--WSP 782: 1929-30. WSP 1383: 1934-35, 1941. WSP 1723: 1929(M). WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 638.11 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers).

REMARKS.--No estimated discharges. Records good. Large diurnal fluctuation at times at low flow caused by Coltrane's mill. Some regulation by Oak Hollow Reservoir and High Point Lake (stations 02098495, 02099096). City of High Point diverted an average of 16.8 ft^3/s for municipal water supply during water year; 16.9 ft^3/s was discharged as treated effluent into Richland Creek above station and 5.8 ft^3/s into Rich Fork Creek in Pee Dee River basin. Maximum discharge, 20,000 ft^3/s, gage height, 32.2 ft, from floodmark, from rating curve extended above 7,100 ft^3/s on basis of contracted-opening measurement of peak flow at bridge 1.5 mi upstream. Minimum discharge for current water year also occurred Sept. 22, 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1870	57	43	600	133	114	276	79	112	23	16	15
2	3400	55	40	291	118	111	191	81	94	22	15	16
3	702	60	44	166	109	482	218	621	78	20	16	15
4	262	54	45	130	525	372	133	793	65	18	16	15
5	153	47	37	147	436	213	104	687	58	17	16	15
6	110	48	34	308	224	162	90	735	49	17	16	15
7	88	56	33	264	165	133	266	479	44	17	16	15
8	73	55	182	565	136	112	162	215	40	17	15	16
9	64	77	210	433	118	113	112	161	47	17	15	18
10	55	63	144	251	1000	109	94	914	45	18	15	22
11	48	48	229	173	572	102	107	391	42	25	16	60
12	46	43	1220	136	282	101	93	204	40	19	15	86
13	43	41	1440	111	186	96	74	150	37	24	15	174
14	41	41	488	94	151	92	71	128	31	27	15	72
15	39	44	271	89	129	88	1720	99	34	90	15	35
16	37	438	203	84	1160	124	660	79	35	78	18	24
17	38	286	144	80	1060	227	302	67	35	87	39	27
18	133	125	116	80	356	346	199	60	28	71	24	22
19	3260	81	101	79	619	173	140	50	23	35	20	16
20	522	64	94	74	380	134	117	44	29	27	19	25
21	236	64	85	305	234	113	109	45	27	32	19	19
22	147	57	74	209	367	98	117	143	21	19	19	22
23	111	443	64	131	553	93	99	170	24	27	19	12
24	93	198	62	110	334	105	87	104	23	16	18	21
25	80	117	58	770	213	102	77	82	25	18	18	13
26	70	93	60	1130	154	94	70	59	21	19	18	15
27	64	81	65	401	135	75	64	156	22	19	17	15
28	57	71	72	233	126	72	59	467	46	18	16	18
29	54	67	69	182	---	264	103	1040	19	18	16	14
30	56	49	72	246	---	277	104	354	22	17	15	15
31	58	---	127	173	---	382	---	168	---	17	15	---
MEAN	387	101	191	260	356	164	201	285	40.5	28.7	17.5	28.9
MAX	3400	443	1440	1130	1160	482	1720	1040	112	90	39	174
MIN	37	41	33	74	109	72	59	44	19	16	15	12
IN.	3.57	.90	1.76	2.39	2.97	1.51	1.79	2.63	.36	.26	.16	.26

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	73.0	80.2	127.5	193.3	235.1	218.1	165.3	108.2	78.9	84.0	76.2	76.5
MAX	458.5	354.1	389.2	644.9	584.2	697.2	528.5	444.9	351.0	465.1	310.7	542.8
(WY)	1960	1986	1933	1937	1960	1975	1936	1978	1982	1975	1949	1947
MIN	5.78	9.56	16.8	15.8	38.6	54.4	27.6	23.5	16.7	17.2	17.1	10.5
(WY)	1931	1932	1934	1942	1986	1967	1985	1977	1933	1947	1945	1941

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	171.0		125.8	
HIGHEST ANNUAL MEAN			229.9	1978
LOWEST ANNUAL MEAN			45.9	1967
HIGHEST DAILY MEAN	3400	Oct 2	12000	Sep 25 1947
LOWEST DAILY MEAN	12	Sep 23	1.2	Nov 12 1933
INSTANTANEOUS PEAK FLOW	5160	Oct 19	20000*	Sep 25 1947
INSTANTANEOUS PEAK STAGE	19.36	Oct 19	32.2*	Sep 25 1947
INSTANTANEOUS LOW FLOW	11*	Sep 21	.5	Nov 28 1931
ANNUAL RUNOFF (INCHES)	18.6		13.7	
10 PERCENTILE	397		242	
50 PERCENTILE	78		52	
95 PERCENTILE	15		12	

* See REMARKS.

CAPE FEAR RIVER BASIN

02100500 DEEP RIVER AT RAMSEUR, NC

LOCATION.--Lat 34°43'34", long 79°39'20", Randolph County, Hydrologic Unit 03030003, on right bank 0.2 mi downstream from Main Street bridge in Ramseur, 0.5 mi downstream from mill dam, and 1.5 mi downstream from Sandy Creek.

DRAINAGE AREA.--349 mi^2.

PERIOD OF RECORD.--November 1922 to current year.

REVISED RECORDS.--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. WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 419.50 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow slightly regulated by Oak Hollow Reservoir, High Point Municipal Lake, (stations 02098495, 02099096) and small powerplant reservoirs. Prior to January 1963 large diurnal fluctuation caused by powerplant immediately above station. Town of Asheboro diverted an average of 6.7 ft^3/s for water supply from Pee Dee River basin and discharged an average of 7.2 ft^3/s of treated effluent into the Deep River above the station. Maximum discharge, 43,000 ft^3/s, gage height, 34.04 ft, from rating curve extended above 18,000 ft^3/s on basis of slope-area measurement of peak flow. Minimum discharge, 0.4 ft^3/s, occurred frequently in 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1901 reached a stage of 28.75 ft, from floodmarks, 0.2 mi upstream, discharge, 30,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3210	151	187	1080	387	365	1050	237	477	92	47	46
2	9600	166	164	741	357	352	602	278	347	88	65	32
3	2220	180	162	428	329	1480	571	1470	299	83	64	22
4	704	162	162	353	681	1560	439	1880	271	79	36	19
5	395	141	177	341	1250	677	375	1480	251	81	28	20
6	289	151	159	510	560	503	369	1940	207	e74	34	23
7	231	144	144	740	425	424	541	1210	221	e68	129	30
8	188	171	639	1330	381	371	531	611	174	e61	145	37
9	163	260	981	1420	340	348	378	412	179	e51	96	31
10	160	217	523	719	2880	354	344	2830	151	e43	48	28
11	136	177	675	510	2290	328	319	1560	146	e37	26	33
12	127	157	2620	420	894	314	295	589	143	34	20	64
13	117	144	5100	351	576	311	270	425	128	43	18	96
14	122	136	1730	301	466	290	237	363	136	57	19	258
15	119	154	842	283	408	281	2910	308	118	58	19	145
16	109	487	595	263	3210	380	2060	258	116	76	23	65
17	117	683	451	235	4890	457	862	567	119	148	29	49
18	132	328	385	252	1130	1120	557	434	117	179	70	45
19	6250	225	356	240	1680	525	416	213	113	123	75	41
20	1750	192	332	223	1220	400	366	152	123	102	62	31
21	619	176	309	1010	680	347	352	156	101	85	50	31
22	384	183	258	705	939	335	330	192	99	73	39	35
23	293	1130	218	437	2120	292	258	232	95	72	31	28
24	247	646	218	363	979	284	275	360	96	45	24	47
25	227	368	207	1480	615	319	253	233	94	30	21	48
26	198	294	227	4170	464	217	224	225	93	31	19	41
27	176	259	209	1410	416	253	207	215	90	26	20	30
28	182	233	214	710	391	235	173	573	88	26	20	23
29	155	217	213	540	---	933	269	4340	96	29	19	20
30	159	202	217	548	---	1120	256	3740	110	29	23	19
31	158	---	257	469	---	1460	---	902	---	32	32	---
MEAN	933	271	611	728	1106	537	536	916	160	66.3	43.6	47.9
MAX	9600	1130	5100	4170	4890	1560	2910	4340	477	179	145	258
MIN	109	136	144	223	329	217	173	152	88	26	18	19
IN.	3.08	.87	2.02	2.41	3.30	1.77	1.71	3.03	.51	.22	.14	.15

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	200.4	212.6	353.4	538.6	670.4	624.8	481.4	299.4	216.1	231.7	216.3	234.2
MAX	1013	1237	1050	1660	1642	1842	1440	943.7	978.2	1434	896.0	1934
(WY)	1930	1986	1933	1937	1979	1975	1936	1978	1982	1975	1939	1928
MIN	8.69	14.1	39.1	40.8	131.1	144.5	115.6	71.3	48.1	36.5	32.4	17.7
(WY)	1942	1942	1934	1942	1931	1967	1967	1986	1933	1986	1956	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	494.0		354.9	
HIGHEST ANNUAL MEAN			665.2	1975
LOWEST ANNUAL MEAN			154.8	1967
HIGHEST DAILY MEAN	9600	Oct 2	27800	Sep 18 1945
LOWEST DAILY MEAN	18	Aug 13	.70	Nov 29 1941
INSTANTANEOUS PEAK FLOW	11800	Oct 2	43000*	Sep 18 1945
INSTANTANEOUS PEAK STAGE	17.78	Oct 2	34.04*	Sep 18 1945
INSTANTANEOUS LOW FLOW	16	Aug 14	.4*	May 27 1941
ANNUAL RUNOFF (INCHES)	19.2		13.8	
10 PERCENTILE	1150		700	
50 PERCENTILE	239		153	
95 PERCENTILE	25		24	

* See REMARKS.

CAPE FEAR RIVER BASIN

0210166029 ROCKY RIVER NEAR CRUTCHFIELDS CROSSROADS, NC

LOCATION.--Lat 35°48'25", long 79°31'41", Chatham County, Hydrologic Unit 03030003, on right bank at downstream side of culvert on Secondary Road 1300 and 5.5 mi west of Crutchfields Crossroads.

DRAINAGE AREA.--7.42 mi^2.

PERIOD OF RECORD.--May 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 620 ft, from topographic map.

REMARKS.--Records poor. Several days of zero flow occurred in August 1988. Minimum discharge for current water year occurred several days in September.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	e3.2	6.5	e8.8	e3.5	e5.6	28	6.7	7.9	.57	e.30	.24
2	165	13	6.6	e6.4	e4.7	e3.8	14	12	4.8	.60	e.29	.24
3	37	20	6.5	e5.0	e4.5	e25	18	40	4.3	.59	e.29	.24
4	e12	14	6.0	e7.0	e5.0	e15	5.9	38	5.3	.60	e.29	.24
5	e4.0	12	6.8	e6.0	e5.5	e10	4.9	22	3.0	.53	e.28	.23
6	e3.3	11	6.4	e8.2	e4.4	e8.0	6.6	24	2.6	.48	e.64	.22
7	e2.9	10	5.9	e8.0	e4.0	e6.5	28	22	2.3	.51	e3.8	.22
8	e2.6	9.7	34	e20	e3.8	e5.0	11	7.8	1.8	.50	e.90	.23
9	e2.5	15	17	e30	e3.5	e6.0	9.4	4.2	1.9	.50	e.45	.24
10	e2.5	10	14	e16	73	e5.5	e8.5	67	1.5	.47	e.36	.26
11	e2.4	9.2	18	e11	25	e4.8	e8.0	25	1.3	e.37	e.34	.25
12	e2.4	9.0	73	e8.0	6.3	e4.0	e7.2	9.5	1.1	e.36	e.32	.27
13	e2.3	9.3	66	e6.8	4.6	e2.7	e6.5	5.9	.92	e.39	e.30	.43
14	e2.3	8.3	14	e6.0	4.4	e5.5	e6.0	4.7	.89	e.45	e.30	.36
15	e2.4	7.9	7.5	e5.6	4.8	e10	68	3.5	.85	e1.7	e.29	.35
16	e2.5	12	6.1	e5.2	88	e5.0	39	3.1	.85	e.95	e.27	.29
17	e3.0	8.9	5.0	e4.9	49	13	18	2.6	.93	e.52	e.27	.25
18	29	8.2	4.2	e5.0	8.6	31	13	2.2	.91	e4.0	e.26	.22
19	86	7.5	2.9	e4.5	39	12	7.5	1.8	.81	e.70	e.26	.23
20	15	7.6	e1.6	e5.0	3.9	6.5	5.2	1.7	.74	e.52	e.26	.24
21	e6.5	6.3	e1.6	e32	e8.5	4.6	4.9	1.7	.73	e.42	e.30	.24
22	e4.4	5.5	e1.5	e20	e7.6	3.6	7.4	2.4	.75	e.43	e.27	.25
23	e3.5	27	e1.5	e12	e30	3.0	6.1	3.1	.83	e.40	e.25	.28
24	e3.1	9.8	e1.6	e8.0	e16	2.8	5.1	2.2	.73	e.36	e.40	.27
25	e2.9	8.3	e1.6	e15	e10	2.9	4.0	2.4	.83	e.34	e.35	.27
26	e2.8	7.3	e1.6	e90	e8.2	2.6	3.5	2.5	.69	e.31	e.32	.27
27	e3.0	6.2	e1.6	e30	e7.5	2.2	3.4	13	.67	e.30	e.29	.27
28	e2.7	6.4	e1.6	e16	e6.5	1.8	2.9	81	.65	e.30	e.27	.27
29	e2.8	6.6	e1.7	e12	---	63	5.0	136	.61	e.31	e.25	.27
30	e3.0	6.0	e3.0	e16	---	35	6.1	33	.59	e.32	.24	.27
31	e3.1	---	e4.5	e11	---	73	---	14	---	e.31	.24	---
MEAN	17.1	9.84	10.6	14.2	15.7	12.2	12.0	19.2	1.73	.62	.44	.26
MAX	165	27	73	90	88	73	68	136	7.9	4.0	3.8	.43
MIN	2.3	3.2	1.5	4.5	3.5	1.8	2.9	1.7	.59	.30	.24	.22
IN.	2.66	1.48	1.65	2.20	2.20	1.90	1.81	2.98	.26	.10	.07	.04

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	9.78	7.69	5.98	8.26	17.5	18.6	10.5	11.2	2.61	5.30	1.19	1.56
MAX	17.1	9.84	10.6	14.2	19.4	25.0	12.0	19.2	5.65	14.8	1.77	3.64
(WY)	1990	1990	1990	1990	1989	1989	1990	1990	1989	1989	1988	1988
MIN	2.46	5.55	1.36	2.33	15.7	12.2	9.05	1.58	.442	.496	.440	.264
(WY)	1989	1989	1989	1989	1990	1990	1989	1988	1988	1988	1990	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	9.48		*****	
HIGHEST ANNUAL MEAN			9.48	1990
LOWEST ANNUAL MEAN			8.32	1989
HIGHEST DAILY MEAN	165	Oct 2	171	Mar 24 1989
LOWEST DAILY MEAN	.22	Sep 6	.00	Aug 20 1988
INSTANTANEOUS PEAK FLOW	256	Feb 16	395	May 2 1989
INSTANTANEOUS PEAK STAGE	6.67	Feb 16	8.93	May 2 1989
INSTANTANEOUS LOW FLOW	0.21*	Aug 29	0*	Aug 19 1988
ANNUAL RUNOFF (INCHES)	17.3		*****	
10 PERCENTILE	24		21	
50 PERCENTILE	3.4		2.1	
95 PERCENTILE	0.2		0.2	

***** Indicates not enough data, therefore statistic is not computed

*See REMARKS.

CAPE FEAR RIVER BASIN

02102000 DEEP RIVER AT MONCURE, NC

LOCATION.--Lat 35°37'38", long 79°06'58", Lee County, Hydrologic Unit 03030003, on right bank 1.0 mi upstream from Lockville Dam, 1.2 mi upstream from bridge on U.S. Highway 1, 1.5 mi northwest of Moncure, 2.2 mi downstream from Rocky River, and 4.5 mi upstream from confluence with Haw River.

DRAINAGE AREA.--1,434 mi^2.

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 1082: (1930-46 not previously published). WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 185.06 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Diurnal fluctuation and some regulation at low flow caused by small powerplants upstream from station. Satellite data transmitter at station. Minimum discharge for current water year also occurred on Aug. 5 and Sept. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1630	446	987	1030	1790	1450	9030	1080	1710	152	49	50
2	14600	615	837	1790	1440	1360	5510	963	1110	129	45	46
3	16000	731	756	1870	1390	3260	4110	4730	857	133	43	47
4	15000	894	703	1250	1280	7310	2570	7310	656	137	42	44
5	4600	833	632	1040	1280	4060	1940	4620	794	134	42	44
6	1460	670	480	1030	2070	2340	1600	4350	644	119	65	44
7	998	531	727	1950	1460	1790	2430	3800	581	103	188	46
8	811	565	1390	3450	1180	1580	3180	2570	434	105	143	45
9	678	702	7630	6110	1200	1430	2220	1780	301	107	67	45
10	590	777	5320	4060	5970	1360	1650	3290	481	95	64	44
11	540	898	3800	2460	10400	1300	1470	7810	358	103	128	112
12	493	765	5210	1840	6020	1210	1220	3990	354	95	119	80
13	573	652	11500	1540	2790	1040	1160	1890	221	88	86	55
14	380	514	12600	1200	1970	1200	1050	1380	254	91	70	85
15	419	529	6250	1030	1570	933	1230	1100	290	97	65	136
16	371	921	2890	1070	2010	997	4480	943	331	90	59	286
17	319	2060	2120	882	10300	1040	3990	822	272	107	53	277
18	507	1840	1690	910	10800	2780	2390	619	186	194	75	161
19	9670	1230	1460	893	6120	3450	1620	649	267	512	67	116
20	12400	903	1370	869	7550	2000	1330	671	346	413	52	72
21	6830	778	1310	2810	4130	1390	1020	346	201	127	49	58
22	1980	710	1170	5400	2610	1300	951	539	201	147	115	59
23	1300	1970	1070	2900	4480	1160	987	642	294	155	129	69
24	972	4120	889	1830	5200	958	924	855	297	140	99	62
25	825	2430	797	1460	2990	917	781	803	217	116	101	55
26	724	1510	e760	7200	2060	930	794	658	146	101	90	51
27	667	1120	e740	10400	1640	897	728	616	228	92	84	49
28	583	1010	e720	4410	1440	814	655	954	174	77	66	51
29	594	1130	e700	2460	---	5110	701	10400	156	67	60	50
30	533	1180	789	2160	---	11300	665	11800	143	61	58	52
31	490	---	814	2110	---	8890	---	4810	---	53	55	---
MEAN	3146	1101	2520	2562	3684	2437	2080	2800	417	134	78.3	79.7
MAX	16000	4120	12600	10400	10800	11300	9030	11800	1710	512	188	286
MIN	319	446	480	869	1180	814	655	346	143	53	42	44
IN.	2.53	.86	2.03	2.06	2.68	1.96	1.62	2.25	.32	.11	.06	.06

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	687.9	828.1	1369	2345	2936	2809	2082	1168	787.6	869.4	889.4	771.7
MAX	3590	4789	4765	7182	7945	7103	6455	3590	4147	5528	3861	10580
(WY)	1965	1986	1973	1978	1960	1952	1936	1989	1982	1975	1931	1945
MIN	28.2	14.1	34.6	130.1	423.5	565.7	392.6	192.9	134.5	79.7	75.2	24.1
(WY)	1931	1942	1934	1934	1931	1981	1981	1981	1977	1986	1980	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR			FOR PERIOD OF RECORD	
AVERAGE FLOW	1746			1457	
HIGHEST ANNUAL MEAN				2711	1984
LOWEST ANNUAL MEAN				605.6	1988
HIGHEST DAILY MEAN	16000	Oct	3	66400	Sep 18 1945
LOWEST DAILY MEAN	42	Aug	4	6.0	Oct 9 1954
INSTANTANEOUS PEAK FLOW	16600	Oct	2	80300	Sep 18 1945
INSTANTANEOUS PEAK STAGE	7.86	Oct	2	17.20	Sep 18 1945
INSTANTANEOUS LOW FLOW	41*	Aug	4	5.5	Oct 10 1954
ANNUAL RUNOFF (INCHES)	16.5			13.8	
10 PERCENTILE	4820			3370	
50 PERCENTILE	859			551	
95 PERCENTILE	51			66	

* See REMARKS.

02102192 BUCKHORN CREEK NEAR CORINTH, NC

LOCATION.--Lat 35°33'34", long 78°58'25", Chatham County, Hydrologic Unit 03030004, on left bank at upstream side of bridge on State Highway 42, 0.2 mi downstream from White Oak Creek, 1.2 mi downstream from Shearon Harris Main Reservoir, and 2 mi east of Corinth.

DRAINAGE AREA.--76.3 mi^2.

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

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 154.63 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Since Dec. 1, 1980, considerable regulation by Shearon Harris Main Reservoir (station 02102190). Prior to regulation, maximum discharge, 6,920 ft^3/s Feb. 2, 1973, gage height, 20.02 ft; minimum, 0.01 ft^3/s Sept. 2, 1976. Minimum discharge for current water year also occurred on Sept. 29, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	28	61	69	e80	108	328	24	31	2.9	.53	.96
2	156	32	57	64	e70	100	324	25	28	5.3	.53	.85
3	139	48	54	60	e60	151	301	45	25	1.0	.51	.79
4	120	42	47	57	e54	156	259	37	23	.80	.49	.85
5	101	39	44	55	e50	147	227	38	20	.61	.50	.64
6	88	37	41	59	e48	136	201	53	14	.54	1.3	.59
7	78	36	40	59	e50	128	221	44	14	.66	3.2	.61
8	71	37	96	100	e48	112	202	36	13	.57	.57	.62
9	60	40	164	119	e100	105	182	32	9.5	.53	2.0	.65
10	51	40	161	116	e150	100	163	52	8.0	.77	1.5	1.1
11	45	36	164	109	e170	94	153	66	8.5	.59	.87	2.5
12	40	34	193	103	e140	88	136	59	5.0	.87	.74	2.4
13	35	32	266	95	e100	83	120	51	2.0	1.0	.73	2.5
14	30	31	246	88	e90	78	107	48	2.1	1.3	.86	2.4
15	28	43	226	82	e80	73	109	42	3.3	2.2	.96	2.2
16	26	67	211	78	e200	68	107	35	19	1.3	2.4	1.8
17	26	67	186	73	e180	70	99	30	17	1.2	4.0	1.8
18	42	62	171	70	e160	90	91	27	13	1.1	1.2	1.5
19	111	58	158	67	e180	84	78	23	27	.99	.79	1.2
20	81	52	148	62	e170	83	70	20	22	.81	.76	1.1
21	71	49	137	105	161	72	62	19	16	.87	.72	1.0
22	64	46	131	117	155	65	59	25	27	.84	1.4	1.1
23	58	69	116	113	163	60	53	21	26	.72	1.9	.97
24	52	66	105	108	164	58	47	20	21	.62	2.0	.94
25	47	62	90	e102	157	53	42	19	14	.59	1.2	.80
26	42	60	84	e120	141	47	37	17	11	.60	.91	.67
27	38	58	79	e150	125	43	33	21	7.8	.60	.89	.59
28	35	55	75	e100	116	40	28	30	5.6	.62	.88	.54
29	33	70	70	e90	---	175	28	44	3.9	.62	.94	.50
30	32	64	68	e100	---	249	26	40	2.7	.58	1.2	.51
31	31	---	65	e90	---	318	---	35	---	.55	1.0	---
MEAN	60.5	48.7	121	89.7	120	104	130	34.8	14.6	1.04	1.21	1.16
MAX	156	70	266	150	200	318	328	66	31	5.3	4.0	2.5
MIN	26	28	40	55	48	40	26	17	2.0	.53	.49	.50

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD *, BY WATER YEAR (WY)

MEAN	9.16	12.8	35.2	64.2	102.4	133.5	99.5	47.1	26.0	21.5	31.9	6.40
MAX	60.5	48.7	143.5	241.2	222.9	334.5	261.5	184.4	138.1	101.8	198.9	40.2
(WY)	1990	1990	1984	1984	1984	1989	1984	1989	1984	1989	1986	1986
MIN	.704	1.92	2.20	2.54	8.86	2.73	1.80	1.97	.674	.335	.748	.881
(WY)	1982	1982	1989	1981	1981	1981	1981	1981	1981	1981	1988	1981

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD *	
AVERAGE FLOW	60.2		48.9	
HIGHEST ANNUAL MEAN			126.0	1984
LOWEST ANNUAL MEAN			2.47	1981
HIGHEST DAILY MEAN	328	Apr 1	889	Mar 1 1987
LOWEST DAILY MEAN	.49	Aug 4	.11	Jul 23 1981
INSTANTANEOUS PEAK FLOW	363	Mar 31	2110	Aug 20 1986
INSTANTANEOUS PEAK STAGE	4.39	Mar 31	11.66	Aug 20 1986
INSTANTANEOUS LOW FLOW	.47*	Sep 28	.05	May 10 1988
ANNUAL RUNOFF (INCHES)	10.7		8.70	
10 PERCENTILE	156		161	
50 PERCENTILE	44		5.5	
95 PERCENTILE	.60		.42	

* Regulated period only (1981-1990). See REMARKS.

CAPE FEAR RIVER BASIN

02102500 CAPE FEAR RIVER AT LILLINGTON, NC

LOCATION.--Lat 35°24'22", long 78°48'48", Harnett County, Hydrologic Unit 03030004, on right bank 60 ft downstream from downstream bridge on U.S. Highway 401, 1,860 ft downstream from Southern Railway bridge, 0.5 mi north of Lillington, 1 mi downstream from Neal Creek, and at mile 178.

DRAINAGE AREA.--3,464 mi^2.

PERIOD OF RECORD.--December 1923 to current year.

REVISED RECORDS.--WSP 1002: 1930(M). WSP 1032: 1942(m). WSP 1303: 1944(M). WSP 1333: 1945. WSP 1383: 1924-29, 1936. WSP 1703: 1929. WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 104.62 ft above 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 upstream in bridge pier at same datum.

REMARKS.--No estimated daily discharges. Records good. Some regulation at high flows, December 1972 to August 1981, caused by temporary storage in B. Everett Jordan Lake. Flow regulated since September 1981 by B. Everett Jordan Lake (station 02098197). Diurnal fluctuation and slight regulation at low flow caused by powerplants above station. Fluctuation and regulation by Buckhorn Reservoir 13 mi above station ended in December 1962. Prior to regulation, maximum discharge, 150,000 ft^3/s Sept. 19, 1945, gage height, 33.19 ft, from floodmark, from rating curve extended above 76,000 ft^3/s; minimum discharge, 11 ft^3/s Oct. 14, 15, 1954, gage height, -0.17 ft. Minimum discharge for current water year also occurred on July 31. Gage height telemeter and satellite data transmitter at the station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1480	1660	1840	1520	9750	3600	17000	1730	12600	681	553	574
2	13900	1690	1580	2280	8900	2710	13400	1990	10500	764	558	573
3	18000	1670	1600	6580	5180	4340	11700	5070	5550	649	598	576
4	19300	1490	1640	6320	2980	9250	10900	11400	3470	673	636	572
5	15700	1480	1610	4540	3020	7240	9780	7760	1250	639	633	592
6	11900	1280	1430	2910	5440	6220	9130	10300	1180	628	636	597
7	11100	1270	1610	3480	5420	7190	9390	10500	1080	609	803	597
8	10200	1760	2350	5540	5200	6830	9190	11100	1030	604	738	591
9	8270	2610	8790	9480	3480	4620	7340	9990	786	606	830	592
10	6290	2650	8520	8090	5840	2720	5410	10200	831	590	689	605
11	4080	2520	6680	8360	11300	2640	4150	13300	963	609	581	648
12	1110	1740	9050	7380	9630	2540	3680	10800	741	626	617	663
13	1040	1620	13200	6530	9950	2760	2990	7360	1000	654	641	659
14	948	1460	15000	5650	10600	2780	2150	6070	846	652	649	595
15	949	1040	14700	4510	9740	2230	2160	3070	896	682	709	602
16	801	1810	14600	3250	7330	2150	4730	2410	880	651	634	679
17	905	2720	14800	4130	8970	2240	8980	1940	894	688	795	794
18	1060	3170	13500	2420	12300	3540	8390	1500	662	763	681	566
19	7510	2450	10800	1230	8890	5190	7360	1420	990	832	618	546
20	14900	2220	7700	1280	14600	4260	3180	1620	855	897	605	575
21	13200	4050	4660	2440	16800	5290	2140	1350	852	844	593	551
22	6080	2390	3100	7240	14400	3590	1860	1040	750	650	598	580
23	4860	2250	2440	7210	13800	3190	1900	1560	1050	693	641	585
24	4730	5310	2230	5360	16400	2450	1840	1520	861	679	647	615
25	4300	6580	2010	4930	13100	2100	1760	1490	830	651	583	560
26	4220	5220	1970	7310	10400	1600	1650	1410	686	643	631	550
27	4500	4660	1490	11700	6020	1600	1670	1380	625	543	632	563
28	2680	4000	1460	7690	4100	1520	1510	1670	819	555	619	563
29	2340	2170	1430	6390	---	4160	1620	7680	774	551	609	561
30	1730	2100	1390	10200	---	15000	1610	13600	690	574	593	563
31	1630	---	1470	10100	---	12600	---	13500	---	532	572	---
MEAN	6442	2568	5637	5679	9055	4456	5619	5669	1831	658	643	596
MAX	19300	6580	15000	11700	16800	15000	17000	13600	12600	897	830	794
MIN	801	1040	1390	1230	2980	1520	1510	1040	625	532	553	546

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD *, BY WATER YEAR (WY)

MEAN	1510	1983	3319	4809	7166	7914	5262	3228	2740	1789	2179	846.1
MAX	6442	7919	8595	10060	11560	15160	11010	7784	12510	5348	5448	1318
(WY)	1990	1986	1984	1984	1984	1989	1984	1989	1982	1984	1985	1989
MIN	640.0	655.1	885.2	1373	1860	1628	969.3	824.1	701.6	653.9	634.1	596.2
(WY)	1987	1982	1989	1986	1986	1988	1985	1986	1986	1986	1983	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD *	
AVERAGE FLOW	4046		3544	
HIGHEST ANNUAL MEAN			6167	1984
LOWEST ANNUAL MEAN			1488	1988
HIGHEST DAILY MEAN	19300	Oct 4	33500	Mar 1 1987
LOWEST DAILY MEAN	532	Jul 31	210	Oct 23 1981
INSTANTANEOUS PEAK FLOW	20800	Oct 4	36500	Mar 1 1987
INSTANTANEOUS PEAK STAGE	11.43	Oct 4	15.59	Mar 1 1987
INSTANTANEOUS LOW FLOW	522*	Jul 27	190	Oct 23 1981
ANNUAL RUNOFF (INCHES)	15.9		13.9	
10 PERCENTILE	10800		10900	
50 PERCENTILE	2000		1230	
95 PERCENTILE	571		580	

* Regulated period only (1982-1990). See REMARKS.

CAPE FEAR RIVER BASIN

02102908 FLAT CREEK NEAR INVERNESS, NC

LOCATION.--Lat 35°10'54", long 79°10'40", Hoke County, Hydrologic Unit 03030004, Fort Bragg military reservation, on left bank 15 ft downstream from culvert on Manchester Road, 0.4 mi upstream from mouth, and 3.6 mi east of Inverness.

DRAINAGE AREA.--7.63 mi^2.

PERIOD OF RECORD.--June 1968 to current year.

REVISED RECORDS.--WDR NC-72-1: 1968-70 (M). WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 191.18 ft above National Geodetic Vertical Datum of 1929. Recording rain gage at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some diurnal fluctuation at low flow during growing season. Minimum discharge some years effected by regulation from unknown source. Minimum discharge for period of record also occurred on June 8, 25, 1988.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	13	13	20	13	12	19	11	15	6.2	5.2	5.5
2	86	20	13	15	15	12	45	11	14	7.5	5.6	5.3
3	33	43	13	14	14	30	37	39	14	6.7	6.2	5.3
4	20	19	13	14	17	21	19	18	12	6.4	5.6	5.2
5	18	16	13	14	23	14	16	14	10	6.1	5.4	5.3
6	17	15	12	17	14	13	15	12	10	5.9	6.2	5.2
7	16	14	12	16	13	12	24	11	9.8	6.0	28	5.0
8	16	15	32	28	13	12	16	10	9.2	6.4	11	4.9
9	15	18	39	22	13	13	14	9.8	9.4	6.2	15	5.3
10	15	16	27	16	30	14	14	23	8.7	5.6	16	5.9
11	14	14	26	15	17	12	14	16	8.2	14	8.8	6.7
12	14	14	25	14	14	11	13	11	8.0	8.7	7.0	6.5
13	14	13	31	14	12	11	13	10	8.0	7.4	6.3	6.0
14	14	13	22	13	12	11	13	11	8.0	8.6	6.2	6.5
15	14	18	18	13	12	11	18	9.0	8.2	9.3	8.2	6.0
16	13	28	17	13	14	11	16	8.5	9.2	7.4	8.7	5.3
17	13	17	16	13	21	15	13	8.2	8.5	7.3	9.2	5.1
18	20	15	16	13	13	26	12	8.6	7.6	8.1	7.4	5.1
19	40	14	16	13	28	13	12	7.8	12	8.1	6.5	5.2
20	21	14	17	12	19	12	12	7.9	8.4	7.9	6.3	5.2
21	16	14	16	16	14	11	11	8.3	7.4	6.9	6.4	5.4
22	15	13	15	14	15	11	11	11	7.5	6.6	13	6.0
23	14	27	14	13	21	11	11	13	7.9	6.1	17	5.8
24	13	18	14	12	20	11	11	9.1	7.1	5.9	9.3	5.1
25	14	15	14	13	14	11	10	9.2	6.8	5.7	7.8	5.1
26	13	15	e14	24	13	11	9.7	9.5	6.9	5.6	7.0	5.0
27	13	14	e14	15	13	13	9.4	9.3	7.0	5.6	6.6	4.9
28	13	14	e14	13	13	11	9.0	143	6.8	5.9	6.0	4.9
29	13	14	14	13	---	28	14	51	6.8	5.7	5.7	5.1
30	13	13	15	20	---	29	12	24	6.4	5.5	5.7	5.4
31	14	---	15	14	---	26	---	17	---	5.4	5.7	---
MEAN	19.4	16.9	17.7	15.4	16.1	14.8	15.4	18.1	8.96	6.93	8.68	5.44
MAX	86	43	39	28	30	30	45	143	15	14	28	6.7
MIN	13	13	12	12	12	11	9.0	7.8	6.4	5.4	5.2	4.9
IN.	2.93	2.47	2.68	2.32	2.19	2.24	2.26	2.74	1.31	1.05	1.31	.80

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	10.2	11.2	12.3	14.1	15.7	18.1	18.4	11.9	11.0	10.9	9.66	9.68
MAX	19.9	20.5	19.5	20.2	32.0	73.6	105.8	18.9	22.3	24.5	16.4	20.0
(WY)	1972	1980	1973	1975	1973	1974	1974	1973	1973	1989	1974	1979
MIN	5.73	6.10	7.64	8.69	9.76	8.77	6.50	6.59	4.85	4.70	5.28	4.35
(WY)	1987	1982	1971	1969	1989	1981	1981	1988	1981	1986	1968	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	13.6		12.8	
HIGHEST ANNUAL MEAN			26.3	1974
LOWEST ANNUAL MEAN			8.12	1981
HIGHEST DAILY MEAN	143	May 28	314	Apr 9 1974
LOWEST DAILY MEAN	4.9	Sep 8	2.2	Jun 24 1988
INSTANTANEOUS PEAK FLOW	301	May 28	394	Apr 1 1973
INSTANTANEOUS PEAK STAGE	5.96	May 28	7.30	Apr 1 1973
INSTANTANEOUS LOW FLOW	3.9	Sep 8	1.9*	Jun 7 1988
ANNUAL RUNOFF (INCHES)	24.2		22.8	
10 PERCENTILE	21		21	
50 PERCENTILE	13		10	
95 PERCENTILE	5.3		4.7	

* See REMARKS.

CAPE FEAR RIVER BASIN

02104220 ROCKFISH CREEK AT RAEFORD, NC

LOCATION.--Lat 34°59'55", long 79°12'55", Hoke County, Hydrologic Unit 03030004, at upstream side of bridge on U.S. Highway 401, 1.0 mi downstream from Nicholsons Creek and 1.0 mile north of Raeford.

DRAINAGE AREA.--93.1 mi^2.

PERIOD OF RECORD.--July 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 178 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Minimum discharge for period of record also occurred on Aug. 20, 1988.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	182	143	135	169	145	132	248	127	173	62	51	64
2	420	146	134	180	147	130	278	112	116	109	51	62
3	644	191	134	168	153	156	323	138	109	90	54	60
4	401	222	131	153	147	188	379	160	102	74	53	59
5	295	231	131	149	161	190	306	156	93	66	52	58
6	235	203	131	158	172	183	232	129	88	62	57	58
7	189	159	131	171	158	146	187	111	86	59	188	58
8	168	148	178	195	142	131	180	101	82	59	218	56
9	161	151	272	235	137	130	172	95	81	60	191	57
10	155	158	332	231	154	137	152	117	79	57	210	61
11	150	158	343	212	177	133	143	149	77	107	206	65
12	145	152	301	176	187	127	136	146	73	151	119	100
13	141	140	278	154	165	123	130	111	71	118	86	95
14	139	136	262	145	140	120	128	100	71	94	75	77
15	141	145	245	143	135	118	145	93	72	112	72	73
16	138	204	228	142	138	117	174	89	89	94	92	67
17	135	238	196	141	173	128	172	87	83	81	134	63
18	138	220	170	140	175	186	143	96	77	77	99	60
19	203	190	163	140	205	188	124	84	72	77	80	59
20	280	156	168	139	246	160	120	79	78	72	75	60
21	274	147	171	143	236	129	120	79	73	68	77	61
22	231	141	165	154	208	121	119	86	69	66	181	64
23	171	164	154	148	182	117	116	107	78	63	198	67
24	147	190	149	140	193	114	113	94	72	60	193	61
25	141	187	148	139	189	112	109	89	66	57	123	59
26	138	171	150	176	153	112	106	88	64	55	98	59
27	135	153	154	194	137	125	103	82	63	54	85	58
28	133	146	152	182	134	125	98	190	62	55	76	57
29	133	144	151	155	---	145	118	531	66	55	71	58
30	135	139	153	150	---	208	138	424	64	53	68	60
31	142	---	154	156	---	242	---	291	---	53	67	---
MEAN	201	169	186	164	167	144	167	140	81.6	74.8	110	63.9
MAX	644	238	343	235	246	242	379	531	173	151	218	100
MIN	133	136	131	139	134	112	98	79	62	53	51	56
IN.	2.50	2.04	2.31	2.04	1.88	1.79	2.01	1.74	.98	.93	1.36	.77

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	139.4	145.2	134.9	134.9	131.8	158.6	173.7	161.1	128.4	129.9	117.0	106.7
MAX	201.3	169.1	185.9	163.8	167.5	172.9	180.3	182.3	175.3	223.8	176.1	162.5
(WY)	1990	1990	1990	1990	1990	1989	1989	1989	1989	1989	1989	1989
MIN	77.6	121.4	84.0	106.0	96.2	144.3	167.1	140.0	81.6	74.8	65.2	63.9
(WY)	1989	1989	1989	1989	1989	1990	1990	1990	1990	1990	1988	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	139.1		*****	
HIGHEST ANNUAL MEAN			146.8	1989
LOWEST ANNUAL MEAN			139.1	1990
HIGHEST DAILY MEAN	644	Oct 3	699	Jul 18 1989
LOWEST DAILY MEAN	51	Aug 1	40	Aug 20 1988
INSTANTANEOUS PEAK FLOW	729	Oct 3	740	Jul 18 1989
INSTANTANEOUS PEAK STAGE	7.65	Oct 3	7.67	Jul 18 1989
INSTANTANEOUS LOW FLOW	50	Aug 2	40*	Aug 19 1988
ANNUAL RUNOFF (INCHES)	20.4		*****	
10 PERCENTILE	210		233	
50 PERCENTILE	137		131	
95 PERCENTILE	58		61	

***** Indicates not enough data, therefore statistic is not computed

* See REMARKS.

02105500 CAPE FEAR RIVER AT WILLIAM O. HUSKE LOCK NEAR TARHEEL, NC

LOCATION.--Lat 34°50'05", long 78°49'27", Bladen County, Hydrologic Unit 03030005, on right bank 100 ft upstream from William O. Huske Lock, 1 mi downstream from Cumberland-Bladen County line, 7 mi north of Tarheel, 9 mi upstream from Phillips Creek, and at mile 123.

DRAINAGE AREA.--4,852 mi^2.

PERIOD OF RECORD.--October 1937 to current year. Prior to October 1964, published as Cape Fear River at Lock 3 near Tarheel, NC.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder and concrete lock and dam control. Datum of gage is 28.97 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 8, 1939, nonrecording gage on upper lock wall 100 ft downstream at same datum. Auxiliary water-stage recorder 1.8 mi downstream from base gage; prior to Jan. 14, 1943, auxiliary nonrecording gage 400 ft downstream on lower end of lock wall; Jan. 14, 1943 to Sept. 30, 1953, auxiliary water-stage recorder at site 600 ft downstream.

REMARKS.--No estimated daily discharges. Records good. Slight regulation at high flows, December 1972 to August 1981, caused by temporary storage in B. Everett Jordan Lake. Flow regulated since September 1981 by B. Everett Jordan Lake (station 02098197). Slight diurnal fluctuation and some regulation for short periods at low flow caused by powerplants above station. Prior to regulation, maximum discharge not determined; minimum dischage, 170 ft^3/s Sep. 20, 1950. Minimum discharge during regulation also occurred Oct 8, 9, 10 1981. Minimum discharge for current water year also occurred on Aug. 2. U.S. Army Corps of Engineers satellite rain gage and gage height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3050	2790	3270	3430	12300	5700	18600	2740	16000	1110	818	1020
2	10200	2800	2940	3440	11600	4810	20700	3170	13800	1130	808	965
3	29000	3550	2780	5370	9400	4850	19100	4020	7700	1140	835	940
4	23700	3810	2670	8110	5810	8760	16700	10100	6310	1030	855	938
5	23700	3480	2650	7130	4690	11500	13900	12300	3640	1030	875	938
6	19500	3200	2620	5540	5270	9390	11500	11200	2210	1020	892	961
7	15000	2890	2530	4750	6970	9100	9400	12900	1960	992	1330	963
8	12000	2960	3440	6390	6830	9200	9960	13000	1780	1000	1790	935
9	9200	3490	7260	10500	5920	7930	8300	12400	1630	906	2280	871
10	6900	4120	14600	12600	5070	5630	8660	11100	1370	905	2580	872
11	5130	4060	13600	11800	10100	4370	6910	12800	1360	1540	2090	906
12	4460	3590	12600	11200	13500	4080	5900	16400	1400	1350	1800	956
13	2500	2940	16200	9400	12200	4090	4820	9100	1250	1150	1390	1010
14	2350	2780	18200	8060	12500	4100	4110	8050	1370	1550	1300	1050
15	2210	2530	18100	7090	12400	3960	3560	5870	1290	1990	1360	1090
16	2190	2660	17200	5410	10900	3420	4030	3750	1390	1610	1310	1070
17	2010	3780	17400	5140	8870	3420	8500	3030	1360	1220	1510	1060
18	2090	4970	16400	5120	13000	4550	10200	2580	1300	1240	1500	1070
19	3690	4870	14200	3540	14900	6600	9930	2180	1720	1290	1320	892
20	14500	4030	10200	2730	14500	6920	6840	2070	2240	1430	1240	853
21	19700	4240	9700	2690	19900	6560	4140	2180	1610	1490	1220	864
22	11900	4800	6200	5250	17600	5900	3150	1880	1360	1370	1670	879
23	5300	3770	4910	8850	16100	4760	2850	2060	1310	1220	2070	883
24	6540	4780	4240	7960	17000	4020	2780	2350	1420	1200	2170	861
25	6030	7770	3840	6860	17000	3460	2750	2280	1300	1150	1890	895
26	5460	7610	3680	6790	13600	2890	2520	2210	1230	1040	1540	875
27	5550	6630	3530	11100	8820	2760	2430	2090	1090	986	1410	847
28	5030	6040	3170	13600	7340	2860	2350	3140	1030	896	1300	855
29	3710	4730	3140	8930	---	3050	2300	6860	1190	862	1130	876
30	3200	3540	3110	9800	---	11600	2550	16900	1260	847	1110	851
31	2850	---	3050	12100	---	20800	---	21600	---	865	1080	---
MEAN	8666	4107	7982	7441	11220	6163	7648	7171	2796	1179	1435	935
MAX	29000	7770	18200	13600	19900	20800	20700	21600	16000	1990	2580	1090
MIN	2010	2530	2530	2690	4690	2760	2300	1880	1030	847	808	847

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD *, BY WATER YEAR (WY)

MEAN	2212	2846	4752	6844	9247	10650	7145	4517	3734	3001	3259	1604
MAX	8666	9035	11360	12600	14160	19760	14830	11770	14200	8725	7358	2927
(WY)	1990	1986	1984	1984	1984	1989	1984	1989	1982	1984	1984	1989
MIN	979.4	1297	1647	2197	2799	3078	1508	1184	1051	957.8	969.4	934.9
(WY)	1987	1982	1989	1986	1986	1988	1986	1986	1986	1986	1983	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD *	
AVERAGE FLOW	5534		4965	
HIGHEST ANNUAL MEAN			8328	1984
LOWEST ANNUAL MEAN			2426	1988
HIGHEST DAILY MEAN	29000	Oct 3	39100	Mar 2 1987
LOWEST DAILY MEAN	808	Aug 2	414	Oct 8 1981
INSTANTANEOUS PEAK FLOW	31800	Oct 3	31800	Oct 3 1989
INSTANTANEOUS PEAK STAGE	15.50	Oct 5	18.67	Jun 13 1982
INSTANTANEOUS LOW FLOW	800*	Aug 1	408*	Oct 8 1981
ANNUAL RUNOFF (INCHES)	15.5		13.9	
10 PERCENTILE	13400		14000	
50 PERCENTILE	3540		2300	
95 PERCENTILE	880		903	

* Regulated period only (1982-1990). See REMARKS.

CAPE FEAR RIVER BASIN

02105769 CAPE FEAR RIVER AT LOCK 1 NEAR KELLY, NC
(National stream-quality accounting network station)

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 upstream from Natmore Creek, 2.0 mi upstream from bridge on State Highway 11, 4.6 mi southeast on Kelly, and at mile 67.

DRAINAGE AREA.--5,255 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1969 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder with concrete lock and dam control. Datum of gage is 2.90 ft below National Geodetic Vertical Datum of 1929 (U. S. Army Corps of Engineers bench mark).

REMARKS.--No estimated daily discharges. Records good. Slight regulation at high flow December 1972 to August 1981, caused by storage in B. Everett Jordan Lake. Flow regulated since September 1981 by B. Everett Jordan Lake (station 02098197). Slight diurnal fluctuation and some regulation for short periods at low flow caused by powerplants upstream from station. The city of Wilmington diverted an average of 14.3 ft^3/s for municipal water supply, most of which was returned as treated effluent downstream from station. Prior to regulation, maximum discharge, 57,000 ft^3/s March 3, 1979, gage height, 24.92 ft from floodmarks; minimum discharge prior to regulation, 406 ft^3/s July 1, 1981.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4720	3440	4420	4380	13200	10600	15700	3000	16300	1350	866	1210
2	6280	3390	3330	4680	13500	7810	17400	3240	16700	1310	824	1110
3	13200	4060	3570	4990	13100	6260	18800	3940	16100	1280	822	1060
4	17200	4880	3330	7800	11200	7150	19500	6310	13200	1230	836	1030
5	19100	4810	3250	9470	7850	10700	19300	11200	8420	1170	859	963
6	20500	4460	3200	8600	6410	12000	18100	12200	4290	1140	867	932
7	20900	3990	3130	7080	7480	11300	16500	12700	2760	1100	1070	1010
8	19700	3640	3670	7110	8520	11100	15200	13300	2230	1110	1790	997
9	17600	3850	6420	9400	8470	10900	14300	13500	2030	1070	2320	974
10	15300	4540	11500	12200	7250	9390	13000	13300	1800	991	2730	951
11	12500	4980	14500	13400	7760	6860	11000	12800	1570	1240	2780	935
12	9250	4850	14800	13500	11700	5540	8770	13600	1570	1580	2320	954
13	5320	4100	15000	13000	13300	5100	7240	14300	1490	1400	1890	984
14	3370	3550	15800	11700	13400	5020	5950	13000	1480	1390	1550	1050
15	2980	3310	17100	10300	13500	4940	4960	10400	1500	1880	1550	1100
16	2750	3120	18000	8880	13400	4550	4560	6810	1550	2080	1510	1130
17	2610	3620	18300	6910	12500	4100	6050	4460	1540	1680	1540	1090
18	2490	4970	18500	6760	11700	4600	9970	3450	1510	1390	1660	1090
19	2800	5960	18400	6010	13600	6040	11200	2900	1560	1410	1570	1040
20	6900	5600	17600	4330	14200	7930	11100	2490	2240	1460	1440	919
21	13000	4870	15900	3660	14900	7850	7950	2370	2250	1580	1380	897
22	15300	5580	12600	4020	16600	7920	4930	2470	1790	1610	1740	907
23	14700	5490	8810	7680	17600	6610	3720	2300	1490	1450	2240	932
24	11300	5050	6580	10100	17800	5670	3360	2620	1550	1320	2470	910
25	8560	6940	5670	9560	18000	4720	3210	2700	1520	1280	2590	905
26	7260	9110	4960	8730	18100	3920	3090	2620	1440	1180	2230	927
27	6560	8920	4830	9380	17200	3330	2820	2550	1330	1080	1900	901
28	6540	8070	4450	12300	14800	3270	2830	2850	1200	1010	1730	864
29	5440	7190	4180	13200	---	3540	2750	5350	1210	932	1480	881
30	4400	5390	4180	11600	---	6170	2850	9850	1350	882	1330	887
31	3760	---	4210	12100	---	12800	---	14200	---	874	1290	---
MEAN	9751	5058	9380	8801	12750	7022	9537	7315	3832	1305	1651	985
MAX	20900	9110	18500	13500	18100	12800	19500	14300	16700	2080	2780	1210
MIN	2490	3120	3130	3660	6410	3270	2750	2300	1200	874	822	864

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD *, BY WATER YEAR (WY)

MEAN	2410	2948	5113	7452	9774	11580	8385	4757	4217	3139	3539	1931
MAX	9751	8260	11050	12840	14970	20140	16980	12110	15070	8313	7883	3592
(WY)	1990	1986	1984	1984	1983	1989	1984	1989	1982	1984	1984	1989
MIN	1068	1398	1935	2265	3025	3629	1667	1272	1147	1046	1046	984.7
(WY)	1988	1988	1985	1986	1986	1988	1986	1986	1986	1986	1983	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD *	
AVERAGE FLOW	6415		5415	
HIGHEST ANNUAL MEAN			8529	1984
LOWEST ANNUAL MEAN			2865	1988
HIGHEST DAILY MEAN	20900	Oct 7	44300	Mar 6 1987
LOWEST DAILY MEAN	822	Aug 3	445	Oct 9 1981
INSTANTANEOUS PEAK FLOW	21000	Oct 7	44500	Mar 6 1987
INSTANTANEOUS PEAK STAGE	20.57	Oct 7	23.61	Mar 6 1987
INSTANTANEOUS LOW FLOW	800	Aug 3	380	Oct 7 1981
ANNUAL RUNOFF (INCHES)	16.6		14.0	
10 PERCENTILE	14700		15400	
50 PERCENTILE	4580		2600	
95 PERCENTILE	932		959	

* Regulated period only (1982-1990). See REMARKS.

02105769 CAPE FEAR RIVER AT LOCK 1 NEAR KELLY, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1973 to September 1984.
WATER TEMPERATURE: January 1973 to September 1984.

INSTRUMENTATION.--Water-quality monitor from May 1973 to September 1984.

REMARKS.--Station operated as part of NASQAN network from January 1973 to present. Daily records of specific conductance for period October 1956 to September 1961 are available in the district office in Raleigh, NC. During period 1956-73, data were collected at bridge on State Highway 11 located 2 mi downstream and published as Cape Fear River near Acme (station 02105771).

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 317 microsiemens Oct. 19, 20, 1976; minimum, 40 microsiemens June 26, 1973.
WATER TEMPERATURE: Maximum, 32.0°C July 9, 19, 20, 21, 1977, Aug. 10, 1979; minimum, 0.5°C Jan. 24, 1976.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
NOV												
15...	1200	3300	95	6.1	16.5	5.5	765	9.0	K30	K20	5.5	2.1
JAN												
30...	1245	11300	87	6.9	10.0	34	767	10.5	220	280	5.0	2.1
MAY												
15...	1115	10600	84	5.8	21.0	30	769	7.3	K60	K56	7.0	2.1
SEP												
04...	1130	1020	124	6.6	29.0	8.0	768	6.2	K16	220	4.5	1.9

DATE	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
NOV											
15...	9.6	45	0.9	2.6	11	9	10	10	0.10	9.5	67
JAN											
30...	6.9	39	0.7	2.1	10	8	10	7.6	0.10	9.3	75
MAY											
15...	6.8	34	0.6	2.1	10	8	7.5	6.5	<0.10	9.4	78
SEP											
04...	15	59	1	3.0	20	16	17	13	<0.10	6.2	81

DATE	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)
NOV											
15...	0.560	0.010	0.570	0.100	0.100	0.13	0.13	0.50	0.60	0.120	0.100
JAN											
30...	0.610	0.020	0.630	0.100	0.080	0.13	0.10	0.60	0.70	0.120	0.060
MAY											
15...	0.580	0.020	0.600	0.070	0.060	0.09	0.08	0.53	0.60	0.150	0.060
SEP											
04...	0.480	0.020	0.500	0.090	0.080	0.12	0.10	0.51	0.60	0.090	0.080

DATE	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
NOV											
15...	0.080	0.25	100	1	27	<0.5	6.0	2	<3	5	410
JAN											
30...	0.050	0.15	160	<1	20	<0.5	<1.0	<1	<3	<10	120
MAY											
15...	0.050	0.15	100	1	24	<0.5	2.0	<1	<3	3	230
SEP											
04...	0.050	0.15	90	1	26	<0.5	2.0	<1	<3	5	200

CAPE FEAR RIVER BASIN

02105769 CAPE FEAR RIVER AT LOCK 1 NEAR KELLY, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 15...	1	<4	67	<0.1	<10	1	<1	<1.0	41	<6	25
JAN 30...	<10	<4	17	0.2	<10	<10	<1	<1.0	36	<6	7
MAY 15...	1	<4	34	<0.1	<10	<1	<1	<1.0	43	<6	8
SEP 04...	1	5	130	<0.1	<10	2	<1	<1.0	39	<6	8

DATE	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)	URANIUM NATURAL DIS-SOLVED (UG/L AS U)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 15...	2.7	<0.4	4.5	0.7	3.6	0.7	0.12	0.08	8	71	77
JAN 30...	--	--	--	--	--	--	--	--	66	2010	70
MAY 15...	--	--	--	--	--	--	--	--	42	1200	91
SEP 04...	--	--	--	--	--	--	--	--	13	36	74

02106000 LITTLE COHARIE CREEK NEAR ROSEBORO, NC

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 east of Roseboro, and 1.5 mi upstream from Bearskin Swamp.

DRAINAGE AREA.--92.8 mi^2.

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

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 80.52 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Jan. 12, 1951, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records fair. Minimum discharge for period of record also occurred on Sept. 14, 27, and Oct. 1-11, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD..--Flood in 1924 reached a stage of 11.6 ft, from information by North Carolina State Highway Commission.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	76	128	159	110	100	141	51	134	21	11	54
2	118	88	123	168	106	96	244	65	129	23	7.8	41
3	138	148	117	165	104	109	406	66	80	20	9.2	24
4	149	162	111	164	103	125	258	74	45	16	9.0	21
5	174	171	107	162	109	123	213	72	35	14	8.0	19
6	195	178	103	163	108	124	188	65	27	13	8.9	17
7	185	170	102	166	110	118	167	54	23	12	14	16
8	157	152	134	183	107	107	147	45	18	12	19	14
9	120	132	191	213	104	101	133	39	14	13	33	8.6
10	87	121	278	218	106	101	121	37	12	12	41	9.9
11	71	119	331	233	107	99	112	39	11	31	41	10
12	60	124	365	235	107	95	105	36	9.7	38	31	9.5
13	53	132	376	216	103	91	99	32	7.9	38	21	9.8
14	48	134	343	195	98	86	93	29	7.4	41	16	8.4
15	46	134	289	176	94	83	92	26	23	40	15	7.7
16	45	152	239	162	93	80	96	22	100	43	14	7.2
17	44	172	211	150	102	82	96	21	92	39	26	5.9
18	43	173	192	143	106	111	92	26	49	36	27	4.3
19	53	172	179	136	120	116	81	28	82	33	23	4.5
20	64	168	171	130	126	121	70	21	118	62	18	4.5
21	80	159	165	131	124	127	64	17	110	35	14	4.6
22	95	143	159	132	127	117	61	27	120	25	28	5.5
23	100	145	156	126	127	101	57	51	124	21	41	5.1
24	90	155	155	122	125	91	56	46	53	18	117	4.5
25	77	155	155	119	123	84	50	34	31	15	122	3.9
26	67	157	154	130	122	79	45	28	23	12	110	3.9
27	60	158	153	128	116	80	41	24	21	9.3	88	3.1
28	57	153	148	126	106	80	37	31	19	8.2	37	3.1
29	57	143	143	125	---	100	37	65	16	11	26	2.9
30	60	135	145	121	---	123	45	83	17	14	25	2.6
31	70	---	147	115	---	127	---	102	---	14	43	---
MEAN	87.9	146	186	158	110	102	115	43.7	51.7	23.9	33.7	11.2
MAX	195	178	376	235	127	127	406	102	134	62	122	54
MIN	43	76	102	115	93	79	37	17	7.4	8.2	7.8	2.6
IN.	1.09	1.76	2.31	1.97	1.24	1.27	1.38	.54	.62	.30	.42	.13

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	64.7	75.2	109.3	170.8	201.3	217.4	149.6	77.3	59.2	79.6	94.9	77.2
MAX	451.2	237.4	308.4	357.7	554.5	570.5	447.9	251.9	205.9	388.5	349.9	465.5
(WY)	1965	1963	1958	1978	1983	1983	1973	1978	1965	1965	1974	1984
MIN	5.24	6.96	33.8	46.7	45.4	61.5	27.9	16.7	7.73	6.00	2.39	.807
(WY)	1974	1974	1966	1986	1951	1981	1981	1981	1951	1952	1953	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	89.1		115.4	
HIGHEST ANNUAL MEAN			191.1	1965
LOWEST ANNUAL MEAN			45.6	1986
HIGHEST DAILY MEAN	406	Apr 3	2820	Oct 7 1964
LOWEST DAILY MEAN	2.6	Sep 30	.10	Sep 12 1954
INSTANTANEOUS PEAK FLOW	460	Apr 3	3400	Oct 7 1964
INSTANTANEOUS PEAK STAGE	7.12	Apr 3	10.34	Sep 15 1984
INSTANTANEOUS LOW FLOW	2.4	Sep 30	.1*	Sep 13 1954
ANNUAL RUNOFF (INCHES)	13.0		16.9	
10 PERCENTILE	169		276	
50 PERCENTILE	87		72	
95 PERCENTILE	7.8		6.2	

* See REMARKS.

CAPE FEAR RIVER BASIN

02106500 BLACK RIVER NEAR TOMAHAWK, NC

LOCATION.--Lat 34°45'17", long 78°17'21", Sampson County, Hydrologic Unit 03030006, on left bank 30 ft upstream from bridge on State Highway 411, 0.2 mi downstream from Clear Run Swamp, and 3.8 mi northeast of Tomahawk.

DRAINAGE AREA.--676 mi^2.

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

REVISED RECORDS.--WSP 1723: 1955(M). WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 24.61 ft above 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 lower.

REMARKS.--Records good except those for estimated daily discharges and those for period November to April, which are fair. Minimum discharge for current water year also occurred on Aug. 7. Minimum discharge for period of record, present site and datum. Satellite data transmitter at the station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1928 reached a stage of 22.0 ft, present datum, discharge, 14,500 ft^3/s and floods in 1945 and 1948 reached a stage of 17.6 ft, present datum, discharge, 5,420 ft^3/s, from information furnished by North Carolina State Highway Commission.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	716	410	646	e1900	794	807	1360	330	929	73	34	416
2	1080	400	595	e1950	752	727	1620	370	789	93	34	430
3	1660	702	553	e2000	720	694	1860	519	754	99	31	434
4	2080	1030	517	e1800	686	745	2100	556	832	84	28	339
5	2450	1150	486	e1600	793	808	2380	493	814	67	25	231
6	2390	1170	461	1450	868	817	2540	441	586	58	23	163
7	2080	1100	440	1410	789	794	2400	407	359	53	29	127
8	1730	988	543	1460	724	741	2050	375	254	51	178	103
9	1400	924	1050	1550	691	686	1680	333	197	60	370	87
10	1170	884	1540	1650	694	662	1440	319	160	52	478	78
11	987	793	1870	1750	708	648	1260	407	139	51	487	70
12	757	687	2230	e1900	679	608	1160	369	120	69	533	63
13	608	607	2610	e1800	619	571	1080	295	102	130	488	57
14	530	565	2820	e1700	612	537	927	276	90	154	306	54
15	483	553	2780	e1600	606	506	779	248	81	147	230	52
16	440	585	2600	e1500	578	478	726	221	99	160	157	51
17	404	649	2370	e1400	564	458	702	202	219	153	109	48
18	382	676	2100	1280	567	557	652	176	274	155	157	45
19	423	717	1800	1150	624	755	588	170	294	169	203	42
20	452	735	1620	1030	825	801	535	166	318	166	241	41
21	447	719	1540	948	914	784	485	159	358	157	246	43
22	424	698	e1400	898	902	740	443	171	357	163	285	67
23	416	742	e1300	848	974	711	407	364	310	118	437	80
24	423	893	e1200	812	1120	679	377	516	268	87	735	63
25	435	939	e1100	783	1210	608	348	476	239	69	1200	52
26	430	904	e1200	816	1210	534	321	344	161	60	1170	47
27	401	852	e1300	912	1090	490	289	280	127	51	969	45
28	361	785	e1400	939	945	468	260	447	103	45	796	43
29	331	733	e1500	920	---	494	245	876	89	40	643	41
30	318	693	e1600	878	---	855	259	1090	83	36	572	42
31	371	---	e1800	835	---	1110	---	1020	---	35	549	---
MEAN	857	776	1451	1338	795	673	1042	401	317	93.7	379	115
MAX	2450	1170	2820	2000	1210	1110	2540	1090	929	169	1200	434
MIN	318	400	440	783	564	458	245	159	81	35	23	41
IN.	1.46	1.28	2.47	2.28	1.22	1.15	1.72	.68	.52	.16	.65	.19

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	431.9	463.1	696.0	1102	1311	1462	1109	576.2	448.7	493.4	665.9	544.4
MAX	2613	1412	2092	2069	2903	3410	3070	1687	1179	2088	2810	3319
(WY)	1965	1963	1958	1958	1973	1983	1973	1978	1957	1965	1974	1955
MIN	29.6	57.1	237.7	286.7	447.7	460.3	224.6	140.9	112.6	76.7	25.2	13.4
(WY)	1955	1974	1989	1986	1989	1981	1981	1986	1985	1953	1954	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	686.9		772.9	
HIGHEST ANNUAL MEAN			1300	1960
LOWEST ANNUAL MEAN			326.8	1986
HIGHEST DAILY MEAN	2820	Dec 14	17000	Sep 17 1984
LOWEST DAILY MEAN	23	Aug 6	8.9	Sep 13 1954
INSTANTANEOUS PEAK FLOW	2840	Dec 14	17500	Sep 17 1984
INSTANTANEOUS PEAK STAGE	13.52	Dec 14	22.08	Sep 17 1984
INSTANTANEOUS LOW FLOW	22*	Aug 6	8.5*	Oct 13 1954
ANNUAL RUNOFF (INCHES)	13.8		15.5	
10 PERCENTILE	1580		1790	
50 PERCENTILE	557		508	
95 PERCENTILE	47		69	

* See REMARKS.

CAPE FEAR RIVER BASIN

0210782005 NAHUNGA CREEK AT SECONDARY ROAD 1301 NEAR WARSAW, NC

LOCATION.--Lat 35°01'36", long 78°00'41", Duplin County, Hydrologic Unit 03030007, on downstream side of bridge on Secondary Road 1301, 0.1 mi upstream from King Branch, 4.7 mi northeast of Warsaw.

DRAINAGE AREA.--8.28 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1982 to September 1990 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. No flow for several days most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	4.1	4.9	49	9.0	e11	e54	2.0	11	0	0	1.7
2	206	7.5	4.2	51	8.3	e9.5	e72	11	5.5	0	0	.91
3	123	54	4.1	39	8.0	e14	e65	5.4	4.0	0	0	.61
4	72	40	3.2	32	9.5	e17	41	2.7	2.2	0	0	.57
5	57	24	3.3	29	17	e11	27	1.8	1.2	0	0	.38
6	45	15	3.1	38	8.6	e8.5	19	1.5	.88	0	0	.31
7	37	11	3.0	47	7.5	e7.5	16	.94	.80	0	5.7	.27
8	28	8.7	37	61	6.2	e6.8	12	.71	.61	0	25	.22
9	28	8.4	80	69	5.8	e7.3	10	.55	.45	0	5.2	.20
10	19	6.4	129	51	7.4	e8.0	8.0	2.1	.35	0	12	.18
11	15	5.5	84	43	6.6	e7.3	21	2.7	.25	0	2.6	.14
12	9.9	4.7	63	35	4.9	e6.8	17	.89	.20	0	.83	.11
13	7.7	3.7	54	28	4.0	e6.3	8.0	.71	.16	0	.49	.09
14	7.0	3.8	49	23	3.9	e5.9	5.0	.81	.14	0	.33	.10
15	5.9	5.7	44	21	3.6	e5.5	8.5	.56	.15	e0	.25	.09
16	4.3	21	36	20	3.8	e5.5	12	.44	.41	e0	.23	.06
17	3.7	11	29	18	5.4	e5.5	6.0	.40	.36	e0	.62	.01
18	7.2	6.9	26	17	3.2	e20	3.2	.62	.26	e0	.42	0
19	12	5.4	27	15	25	e17	2.5	.36	.19	e0	.34	0
20	8.8	4.8	36	13	22	e8.2	2.3	.27	.15	e0	.30	0
21	6.1	5.0	33	14	11	e6.3	2.1	.78	.11	e0	.25	0
22	3.9	3.5	30	12	e12	e5.8	1.9	40	.09	e0	4.9	0
23	2.8	28	27	10	e52	e5.5	1.7	43	.06	e0	28	0
24	2.6	32	e26	9.1	e45	e5.0	1.3	11	.01	e0	51	0
25	2.6	17	e24	9.2	e28	e4.8	1.1	3.9	0	e0	11	0
26	2.2	14	e22	23	e17	e4.8	.87	2.9	0	0	2.4	0
27	1.9	11	e20	16	e14	e5.1	.69	1.7	0	e0	1.0	0
28	1.8	9.1	e18	12	e12	e4.8	.53	45	0	e0	.64	0
29	1.9	8.0	e28	12	---	e16	.81	87	0	e0	.47	0
30	2.3	5.7	39	14	---	e63	3.0	59	0	0	39	0
31	8.3	---	40	11	---	e42	---	26	---	0	8.6	---
MEAN	24.3	12.8	33.1	27.1	12.9	11.3	14.1	11.5	.98	0	6.50	.20
MAX	206	54	129	69	52	63	72	87	11	0	51	1.7
MIN	1.8	3.5	3.0	9.1	3.2	4.8	.53	.27	0	0	0	0
IN.	3.37	1.73	4.60	3.77	1.62	1.58	1.90	1.60	.13	0	.90	.03

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	4.38	3.92	10.2	13.1	16.1	18.9	15.1	6.57	3.40	3.96	4.56	5.15
MAX	24.3	12.8	33.1	27.9	46.4	47.3	36.6	14.5	17.0	14.5	9.29	26.2
(WY)	1990	1990	1990	1987	1983	1983	1987	1989	1983	1989	1989	1984
MIN	.141	1.95	1.39	2.67	3.44	3.91	1.20	.490	.221	0	.129	.198
(WY)	1984	1985	1989	1986	1986	1986	1986	1985	1984	1990	1983	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	13.0		8.74	
HIGHEST ANNUAL MEAN			15.2	1983
LOWEST ANNUAL MEAN			2.73	1986
HIGHEST DAILY MEAN	206	Oct 2	387	Sep 14 1984
LOWEST DAILY MEAN	0	Jun 25	0	Aug 1 1983
INSTANTANEOUS PEAK FLOW	346	Oct 2	577	Sep 14 1984
INSTANTANEOUS PEAK STAGE	94.23	Oct 2	94.68	Sep 14 1984
INSTANTANEOUS LOW FLOW	0	Jun 25	0	Aug 1 1983
ANNUAL RUNOFF (INCHES)	21.3		14.3	
10 PERCENTILE	39		21	
50 PERCENTILE	4.9		2.8	
95 PERCENTILE	0		0	

CAPE FEAR RIVER BASIN

0210789100 GROVE CREEK AT KENANSVILLE, NC

LOCATION.--Lat 34°58'13", long 77°57'32", Duplin County, Hydrologic Unit 03030007, in right channel on downstream side of bridge on State Highway 11, 0.3 mi upstream from Buckskin Swamp, and 1 mi northeast of Kenansville.

DRAINAGE AREA.--22.6 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1982 to September 1990 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	11	11	52	15	20	137	23	53	1.2	.74	18
2	274	11	11	63	15	19	189	121	37	1.1	.68	12
3	379	46	11	46	14	26	171	98	29	1.1	.72	10
4	124	41	9.9	35	16	31	101	51	23	1.0	.70	8.4
5	60	20	9.5	31	34	21	64	29	18	.91	.66	7.3
6	39	15	9.6	35	21	17	48	21	15	.86	.62	6.5
7	30	13	9.7	49	16	15	43	17	13	1.1	12	5.8
8	29	12	39	63	15	14	41	14	11	1.9	93	5.1
9	31	13	142	82	13	14	33	12	9.3	1.4	45	4.7
10	23	16	264	60	15	16	31	31	8.0	1.1	90	5.0
11	19	13	171	43	15	14	45	48	6.8	2.0	34	4.6
12	16	11	86	35	13	13	64	19	5.8	1.5	10	4.0
13	14	11	65	28	11	12	38	17	5.1	1.2	6.0	3.8
14	13	10	53	24	11	11	30	32	4.6	1.2	7.2	4.2
15	12	11	45	22	10	10	28	18	4.7	2.4	6.8	4.3
16	11	21	42	21	11	10	32	14	6.8	8.1	5.7	3.7
17	9.7	21	33	20	12	10	26	11	6.0	16	34	3.1
18	12	15	28	19	10	38	21	13	4.5	5.1	14	2.9
19	22	12	29	19	27	32	18	9.6	4.0	2.8	6.4	2.8
20	18	11	38	18	39	16	18	7.6	3.3	2.4	11	2.4
21	14	11	38	18	20	13	17	14	2.8	2.1	7.2	3.1
22	11	10	35	18	23	12	17	78	2.4	1.5	8.7	3.8
23	8.9	25	e32	16	125	11	16	152	2.2	1.5	160	4.1
24	7.9	47	e30	15	99	9.8	14	71	2.0	1.5	492	3.4
25	7.6	25	e32	15	58	8.9	13	31	1.8	1.2	99	3.0
26	7.2	18	e34	36	33	8.9	11	24	1.6	1.0	44	2.7
27	6.5	16	e35	34	25	9.9	10	18	1.6	.89	23	2.5
28	5.8	15	34	21	22	8.9	8.7	56	1.5	1.2	16	2.4
29	5.7	14	35	18	---	26	10	321	1.4	1.1	12	2.5
30	6.3	13	43	19	---	133	19	264	1.3	.92	47	2.9
31	11	---	46	17	---	97	---	101	---	.86	42	---
MEAN	40.4	17.6	48.4	32.0	26.4	22.5	43.8	56.0	9.55	2.20	42.9	4.97
MAX	379	47	264	82	125	133	189	321	53	16	492	18
MIN	5.7	10	9.5	15	10	8.9	8.7	7.6	1.3	.86	.62	2.4
IN.	2.06	.87	2.47	1.63	1.21	1.15	2.16	2.86	.47	.11	2.19	.25

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	12.4	15.6	28.5	32.9	42.0	51.3	43.7	22.6	14.9	15.2	19.7	16.9
MAX	40.4	29.0	51.0	66.1	115.5	145.9	119.1	56.0	68.4	32.3	42.9	72.7
(WY)	1990	1983	1984	1987	1983	1983	1983	1990	1983	1983	1990	1984
MIN	3.70	9.35	5.24	12.5	16.3	15.2	5.40	4.38	1.70	2.20	6.05	3.57
(WY)	1987	1985	1989	1989	1986	1988	1986	1985	1985	1990	1988	1985

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	29.0		26.2	
HIGHEST ANNUAL MEAN			52.8	1983
LOWEST ANNUAL MEAN			11.8	1986
HIGHEST DAILY MEAN	492	Aug 24	977	Sep 14 1984
LOWEST DAILY MEAN	.62	Aug 6	.62	Aug 6 1990
INSTANTANEOUS PEAK FLOW	694	Aug 24	1880	Jun 8 1983
INSTANTANEOUS PEAK STAGE	68.34	Aug 24	69.25	Jun 8 1983
INSTANTANEOUS LOW FLOW	.57	Aug 6	.57	Aug 6 1990
ANNUAL RUNOFF (INCHES)	17.4		15.8	
10 PERCENTILE	56		58	
50 PERCENTILE	15		13	
95 PERCENTILE	1.1		1.5	

CAPE FEAR RIVER BASIN

02108000 NORTHEAST CAPE FEAR RIVER NEAR CHINQUAPIN, NC

LOCATION.--Lat 34°49'40", long 77°50'00", Duplin County, Hydrologic Unit 03030007, on right bank 540 ft downstream from bridge on State Highway 41, 0.5 mi downstream from Muddy Creek, and 1.2 mi west of Chinquapin.

DRAINAGE AREA.--599 mi^2.

PERIOD OF RECORD.--July 1940 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 17.28 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers).

REMARKS.--No estimated daily discharges. Records good. Minimum discharge for period of record also occurred on Oct. 11, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1908 reached a stage of 22.6 ft at old bridge site 1,000 ft upstream from gage. Flood in 1928 reached a stage of 0.8 ft lower than that in 1908, from information by North Carolina State Highway Commission.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	727	219	400	1440	709	1030	2040	172	1700	26	33	679
2	1050	254	368	1640	658	844	2350	264	1690	23	29	615
3	1600	320	340	1670	616	788	2760	393	1370	21	25	553
4	2240	459	309	1620	585	830	2970	509	938	19	23	559
5	2420	513	288	1510	692	815	2800	460	549	17	21	537
6	2370	545	272	1400	706	786	2380	342	324	16	20	415
7	2110	519	259	1370	668	732	1900	259	223	15	19	255
8	1790	480	409	1470	603	676	1480	208	170	54	67	174
9	1400	456	1170	1650	554	626	1170	182	137	228	386	132
10	1080	445	2000	1720	525	590	935	171	115	418	743	111
11	839	500	2890	1720	503	546	777	208	99	368	915	100
12	643	409	3340	1680	479	500	723	282	86	192	994	91
13	488	323	3310	1590	453	454	706	273	76	121	859	84
14	500	287	3060	1480	427	417	690	303	69	99	531	78
15	366	262	2710	1360	409	385	641	293	63	109	409	74
16	303	255	2320	1190	395	359	598	278	63	134	290	71
17	268	260	1930	1020	380	341	533	213	66	364	359	66
18	243	276	1590	872	364	520	472	168	87	617	752	58
19	289	305	1350	770	445	753	412	147	96	556	844	52
20	352	315	1210	697	699	823	367	130	86	270	776	48
21	439	308	1150	650	786	798	327	116	76	210	891	50
22	313	295	1100	621	814	719	291	190	72	214	1000	45
23	277	392	1020	583	1060	627	262	602	67	134	972	44
24	274	542	871	553	1310	535	237	891	55	89	1060	45
25	376	496	791	526	1510	451	214	909	47	69	1770	43
26	329	638	832	574	1590	390	192	811	46	55	2590	40
27	284	622	841	693	1480	356	171	589	40	48	2490	37
28	225	534	861	751	1270	333	153	445	35	46	1950	35
29	171	485	906	773	---	460	141	835	33	45	1420	34
30	149	437	1000	773	---	1310	142	1240	30	43	974	32
31	159	---	1180	750	---	1730	---	1480	---	38	750	---
MEAN	777	405	1293	1133	739	662	961	431	284	150	773	172
MAX	2420	638	3340	1720	1590	1730	2970	1480	1700	617	2590	679
MIN	149	219	259	526	364	333	141	116	30	15	19	32
IN.	1.50	.75	2.49	2.18	1.28	1.27	1.79	.83	.53	.29	1.49	.32

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	406.9	415.4	662.6	1032	1196	1244	864.0	502.4	399.7	576.3	661.4	533.1
MAX	2448	1852	2225	2249	3832	3506	2958	1901	1953	3922	2681	4754
(WY)	1943	1948	1949	1978	1973	1983	1973	1969	1961	1962	1955	1955
MIN	7.59	15.6	59.6	158.3	248.6	260.8	145.1	71.5	20.8	25.9	13.8	11.0
(WY)	1955	1955	1955	1955	1955	1955	1986	1985	1985	1954	1954	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	649.6		707.4	
HIGHEST ANNUAL MEAN			1243	1973
LOWEST ANNUAL MEAN			278.8	1951
HIGHEST DAILY MEAN	3340	Dec 12	19500	Jul 6 1962
LOWEST DAILY MEAN	15	Jul 7	5.3	Oct 10 1954
INSTANTANEOUS PEAK FLOW	3390	Dec 12	20400	Jul 6 1962
INSTANTANEOUS PEAK STAGE	11.94	Dec 12	20.16	Jul 6 1962
INSTANTANEOUS LOW FLOW	14	Jul 7	5.3*	Oct 10 1954
ANNUAL RUNOFF (INCHES)	14.7		16.0	
10 PERCENTILE	1580		1740	
50 PERCENTILE	454		399	
95 PERCENTILE	35		34	

* See REMARKS.

CAPE FEAR RIVER BASIN

02108548 LITTLE ROCKFISH CREEK AT WALLACE, NC

LOCATION.--Lat 34°44'02", long 77°58'03", Duplin County, Hydrologic Unit 03030007, on right bank, 0.4 mi downstream from bridge on State Highway 41, 0.6 mi east-southeast of Wallace, and 1.2 mi upstream from mouth.

DRAINAGE AREA.--7.8 mi^2.

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

REVISED RECORDS.--WDR NC-78-1: Drainage area.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 27.58 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. Minimum discharge for current water year also occurred on Sept. 28. No flow occurs periodically.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e50	6.7	2.8	42	7.7	9.9	47	1.6	3.3	3.6	.22	.51
2	e200	9.8	2.5	33	7.2	9.2	92	4.3	3.2	1.1	.17	.35
3	125	23	3.9	23	7.9	15	62	3.2	4.4	.15	.12	5.8
4	54	16	2.5	18	7.7	15	33	1.5	1.2	.18	.37	3.5
5	33	12	1.8	16	9.7	11	23	.96	.59	.17	.92	1.7
6	23	9.5	1.7	19	8.3	8.9	16	2.8	.39	.12	.33	.47
7	17	14	1.8	26	7.3	7.7	13	1.2	.33	2.5	4.6	.31
8	29	6.9	32	46	6.6	6.5	12	.47	.31	6.7	14	.32
9	32	5.9	91	42	6.0	6.4	8.6	.43	.24	.29	6.6	1.2
10	21	11	164	28	6.6	7.7	7.6	1.0	.25	.24	1.8	.25
11	16	6.1	71	21	7.2	7.3	9.3	.37	.25	.31	2.3	.20
12	13	5.7	44	17	5.1	5.2	7.7	1.7	.24	.18	1.3	.17
13	11	4.3	37	14	4.0	4.2	5.8	3.1	.23	.18	.62	.16
14	9.8	5.3	30	11	3.6	3.7	5.5	.70	.22	.74	.52	.16
15	10	4.5	24	10	3.6	3.1	7.0	.23	6.8	.32	.67	.14
16	7.6	5.0	20	9.2	3.8	2.8	6.9	.19	.73	.29	1.0	.12
17	6.7	4.7	17	8.6	5.2	6.0	4.8	.18	2.7	.86	1.2	.11
18	5.4	3.9	14	8.0	5.7	24	3.4	.18	.83	.22	1.7	.09
19	6.5	4.1	15	7.9	15	14	2.7	.19	.69	.62	1.6	.09
20	7.3	3.5	18	8.2	13	10	2.5	1.4	.23	.21	2.6	.09
21	7.1	3.2	17	8.3	9.2	8.9	3.8	.63	.35	.17	1.3	.13
22	8.2	2.9	14	7.4	15	7.7	3.5	14	.35	.16	5.0	.25
23	4.7	13	12	6.3	50	7.3	1.8	14	.26	.18	6.3	.51
24	3.5	14	10	6.1	41	7.8	1.1	3.3	.25	.21	11	.24
25	3.1	9.2	14	6.3	28	8.6	.84	.95	.22	.22	9.3	.18
26	2.1	7.4	15	16	16	6.4	.65	.58	.20	.19	6.3	.17
27	2.3	4.6	14	14	13	6.2	.55	2.0	.29	3.5	1.8	.09
28	4.0	3.7	14	11	11	5.8	.45	14	.42	.43	.63	.14
29	6.1	3.7	17	9.7	---	35	1.0	29	.31	.41	.33	.20
30	6.2	2.9	22	11	---	66	2.2	16	.47	.23	4.6	.18
31	8.1	---	34	8.9	---	38	---	6.4	---	.13	1.1	---
MEAN	23.6	7.55	25.1	16.5	11.6	12.1	12.9	4.08	1.01	.80	2.91	.59
MAX	200	23	164	46	50	66	92	29	6.8	6.7	14	5.8
MIN	2.1	2.9	1.7	6.1	3.6	2.8	.45	.18	.20	.12	.12	.09
IN.	3.49	1.08	3.71	2.45	1.55	1.79	1.84	.60	.14	.12	.43	.09

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	3.14	4.86	9.69	16.6	17.2	19.8	10.1	5.62	6.66	7.71	6.69	8.65
MAX	23.6	24.7	25.1	39.0	49.1	54.0	27.5	11.7	25.1	19.8	25.2	33.9
(WY)	1990	1978	1990	1987	1983	1983	1983	1977	1982	1984	1981	1984
MIN	.101	.174	.603	1.69	2.63	6.31	1.33	1.67	.528	.676	.263	.299
(WY)	1979	1982	1989	1989	1989	1988	1986	1983	1978	1988	1983	1983

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	9.93		9.72	
HIGHEST ANNUAL MEAN			17.4	1983
LOWEST ANNUAL MEAN			3.35	1986
HIGHEST DAILY MEAN	200	Oct 2	301	Sep 14 1984
LOWEST DAILY MEAN	.09	Sep 18	.00	Jun 19 1978
INSTANTANEOUS PEAK FLOW	271	Oct 2	361	Jul 3 1987
INSTANTANEOUS PEAK STAGE	5.90	Oct 2	7.92	Jul 3 1987
INSTANTANEOUS LOW FLOW	.03*	Sep 27	0*	Jun 19 1978
ANNUAL RUNOFF (INCHES)	17.3		16.9	
10 PERCENTILE	24		24	
50 PERCENTILE	4.8		3.2	
95 PERCENTILE	.14		.09	

* See REMARKS.

WACCAMAW RIVER BASIN

02109500 WACCAMAW RIVER AT FREELAND, NC

LOCATION.--Lat 34°05'43", long 78°32'55", Brunswick County, Hydrologic Unit 03040206, on left bank 150 ft downstream from New Britton Bridge on State Highway 130, 1 mi southwest of Freeland, 7 mi downstream from Juniper Creek, and 117 mi upstream from mouth in Winyah Bay.

DRAINAGE AREA.--680 mi^2.

PERIOD OF RECORD.--July 1939 to current year.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 15.52 ft above National Geodetic Vertical Datum of 1929. Prior to July 15, 1943, nonrecording gage 150 ft upstream at same datum. Auxiliary nonrecording gage 3.3 mi 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 fair except those for estimated daily discharges and those for period June to September, which are poor. Minimum discharge for period of record also occurred on Sept. 9, 10, 28, and Oct. 4-14, 1954. Minimum discharge for current water year also occurred on Aug. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2120	381	354	1650	676	717	941	198	269	25	e8.6	111
2	2550	383	336	1700	647	708	1280	202	267	23	e20	100
3	2800	451	321	1780	622	708	1650	200	291	22	38	91
4	2880	538	303	1820	599	714	1950	195	416	22	19	118
5	2750	604	289	1820	580	719	2130	189	558	22	12	105
6	2590	641	277	1810	558	714	2160	193	642	20	10	89
7	2480	647	266	1810	535	694	2120	194	663	20	7.9	78
8	2400	632	280	1850	511	663	2030	187	634	20	e16	68
9	2300	611	397	1900	493	630	1910	172	573	20	e100	59
10	2200	587	608	1940	476	598	1780	161	490	20	110	51
11	2130	562	810	1960	456	569	1700	164	415	19	84	45
12	2060	537	1040	1960	443	537	1630	159	366	18	59	41
13	1970	514	1430	1940	426	504	1520	149	315	17	40	38
14	1840	497	1880	1930	407	472	1400	146	255	30	31	35
15	1700	486	2320	1910	389	439	1170	155	200	51	31	34
16	1550	493	2610	1870	375	408	1070	155	155	30	29	32
17	1400	539	2740	1810	361	385	969	150	125	22	58	28
18	1130	596	2740	1760	348	376	857	140	101	24	73	26
19	1000	613	2690	1690	347	377	753	127	82	24	65	25
20	882	601	2570	1600	368	370	663	110	65	23	63	24
21	777	570	2420	1510	383	357	585	97	54	42	66	23
22	695	532	2250	1410	397	343	512	96	45	44	68	25
23	625	500	e2000	1250	510	330	445	99	39	32	73	25
24	568	480	e1800	1100	613	317	386	114	33	e28	84	23
25	517	463	e1500	1020	683	303	337	128	32	e30	92	22
26	475	447	e1000	948	728	282	297	133	30	e26	96	21
27	444	429	e1100	874	738	272	261	128	28	e18	109	20
28	418	411	e1200	819	730	265	228	122	27	e15	125	19
29	394	392	e1300	775	---	295	207	157	27	e13	e123	19
30	375	372	1380	739	---	510	196	219	26	e11	121	18
31	377	---	1530	707	---	693	---	255	---	e10	118	---
MEAN	1497	517	1346	1537	514	493	1105	158	241	23.9	62.9	47.1
MAX	2880	647	2740	1960	738	719	2160	255	663	51	125	118
MIN	375	372	266	707	347	265	196	96	26	10	7.9	18
IN.	2.54	.85	2.28	2.61	.79	.84	1.81	.27	.40	.04	.11	.08

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	381.0	325.7	466.7	950.2	1297	1453	1011	350.3	328.5	555.7	662.7	625.5
MAX	1778	2332	3080	2964	4197	5319	2895	1928	1474	3040	2740	4825
(WY)	1948	1978	1949	1987	1948	1983	1973	1978	1969	1961	1981	1955
MIN	1.14	.537	3.53	20.6	44.6	218.8	120.5	35.6	5.51	5.72	7.59	.307
(WY)	1941	1955	1955	1955	1941	1955	1967	1950	1952	1952	1954	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	631.1		698.4	
HIGHEST ANNUAL MEAN			1392	1948
LOWEST ANNUAL MEAN			229.8	1941
HIGHEST DAILY MEAN	2880	Oct 4	9910	Sep 26 1955
LOWEST DAILY MEAN	7.9	Aug 7	.10	Sep 27 1983
INSTANTANEOUS PEAK FLOW	2910	Oct 4	10200	Sep 25 1955
INSTANTANEOUS PEAK STAGE	14.07	Oct 4	16.63	Sep 26 1955
INSTANTANEOUS LOW FLOW	7.0*	Aug 2	.10*	Aug 30 1954
ANNUAL RUNOFF (INCHES)	12.6		13.9	
10 PERCENTILE	1860		1920	
50 PERCENTILE	384		352	
95 PERCENTILE	20		14	

* See REMARKS.

PEE DEE RIVER BASIN

02111000 YADKIN RIVER AT PATTERSON, NC

LOCATION.--Lat 35°59'29", long 81°33'30", Caldwell County, Hydrologic Unit 03040101, on left bank 200 ft upstream from bridge on State Highway 268, 0.4 mi upstream from Warrior Creek, 0.5 mi south of Patterson, 2.0 mi downstream from Walnut Branch, and at mile 416.

DRAINAGE AREA.--28.8 mi^2.

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). WDR NC-80-1: 1975(P), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,211.47 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 9, 1940, nonrecording gage at present site, at datum 1.00 ft higher. Prior to Oct. 20, 1970, at datum 1.00 ft higher. U.S. Army Corps of Engineers rain gage and gage height radio telemetry and satellite data transmitter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Maximum discharge, 16,200 ft^3/s, from rating curve extended above 1,400 ft^3/s on basis of computation of peak flow over dam 1 mi upstream at gage heights 4.58 ft, 6.60 ft, 7.70 ft, 12.70 ft. Minimum discharge for current water year also occurred July 8, 11, 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	478	66	59	131	82	89	73	50	51	26	27	51
2	356	63	58	83	78	96	71	54	49	30	28	48
3	214	62	55	72	79	148	69	54	49	26	28	44
4	158	60	53	75	124	123	68	68	46	25	29	42
5	127	60	53	71	100	108	66	62	43	24	40	40
6	112	64	52	92	90	100	67	54	42	23	164	37
7	99	61	50	84	88	94	66	51	40	23	61	37
8	91	60	78	127	82	90	62	49	e39	23	49	35
9	85	59	65	112	82	90	60	55	e38	23	44	41
10	80	56	61	95	270	85	62	149	e37	24	69	48
11	77	54	61	82	180	82	76	89	e35	22	73	65
12	72	54	116	74	129	79	63	71	34	24	48	56
13	69	53	110	67	110	76	60	64	34	43	41	61
14	66	52	88	62	100	75	60	59	33	195	48	52
15	64	67	78	60	92	75	59	55	40	106	43	47
16	63	1080	69	58	344	128	57	53	37	57	43	41
17	81	196	62	55	237	506	56	56	35	45	40	37
18	100	119	61	55	160	261	54	50	33	51	42	35
19	211	96	57	54	164	168	52	46	32	45	35	35
20	123	85	55	55	131	132	52	47	30	49	32	35
21	104	77	e52	68	116	113	53	46	30	59	33	33
22	93	88	e49	57	146	104	53	59	30	70	35	34
23	85	114	e49	55	148	96	52	50	30	62	339	31
24	81	90	e48	58	128	90	51	45	29	45	149	29
25	77	82	e49	88	112	85	50	44	28	40	232	29
26	74	77	e47	82	103	81	49	43	27	36	221	29
27	71	72	e44	72	98	78	49	49	27	33	154	28
28	69	69	46	69	94	75	53	118	27	31	96	27
29	67	64	45	89	---	78	65	108	27	31	75	28
30	66	61	46	102	---	75	52	70	26	30	64	27
31	68	---	105	90	---	81	---	58	---	28	55	---
MEAN	116	109	62.0	77.2	131	115	59.3	62.1	35.3	43.5	78.6	39.4
MAX	478	1080	116	131	344	506	76	149	51	195	339	65
MIN	63	52	44	54	78	75	49	43	26	22	27	27
IN.	4.63	4.21	2.48	3.09	4.74	4.60	2.30	2.49	1.37	1.74	3.15	1.53

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	35.5	41.2	45.0	48.3	61.9	72.1	69.3	54.0	47.2	39.1	44.0	37.2
MAX	115.5	139.7	98.8	132.3	142.6	144.5	164.0	125.0	118.1	98.9	194.5	135.7
(WY)	1990	1978	1974	1946	1960	1973	1980	1973	1975	1941	1940	1979
MIN	8.45	9.07	11.8	11.4	27.0	23.7	26.5	20.5	13.0	9.04	9.05	6.95
(WY)	1955	1982	1956	1956	1988	1988	1981	1940	1956	1988	1988	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	77.0		49.5	
HIGHEST ANNUAL MEAN			78.3	1973
LOWEST ANNUAL MEAN			21.5	1956
HIGHEST DAILY MEAN	1080	Nov 16	2130	Aug 13 1940
LOWEST DAILY MEAN	22	Jul 11	5.3	Sep 30 1954
INSTANTANEOUS PEAK FLOW	4450	Nov 16	16200*	Aug 13 1940
INSTANTANEOUS PEAK STAGE	8.44	Nov 16	12.70	Aug 13 1940
INSTANTANEOUS LOW FLOW	21*	Jul 6	3.0	May 15 1940
ANNUAL RUNOFF (INCHES)	36.3		23.3	
10 PERCENTILE	124		87	
50 PERCENTILE	61		38	
95 PERCENTILE	28		13	

* See REMARKS.

PEE DEE RIVER BASIN

02111180 ELK CREEK AT ELKVILLE, NC

LOCATION.--Lat 36°04'16", long 81°24'13", Wilkes County, Hydrologic Unit 03040101, on left bank 700 ft upstream from bridge on State Highway 268, in community of Elkville, and 3,400 ft upstream from mouth.

DRAINAGE AREA.--48.1 mi^2.

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

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 1,082.40 ft above National Geodetic Vertical Datum of 1929. U. S. Army Corps of Engineers rain gage and gage height radio telemetry and satellite data transmitter at station.

REMARKS.--Records fair, except those for estimated daily discharges, which are poor. Maximum discharge, 11,600 ft^3/s, gage height 9.58 ft from floodmarks, from rating curve extended above 3,200 ft^3/s on basis of contracted-opening measurement at gage height 7.28 ft. Minimum discharge for period of record, 11 ft^3/s, result of freezeup. Minimum discharge for current water year also occurred July 9, 11.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Aug. 13, 1940 reached a stage of about 22 ft, discharge, about 70,000 ft^3/s, on basis of several contracted-opening and slope-area measurements. A discharge of 6.0 ft^3/s was measured Sept. 19, 1956.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1170	87	100	317	157	144	121	97	91	44	43	63
2	851	82	97	187	141	149	117	108	86	61	42	60
3	383	81	94	154	132	217	113	131	83	45	42	58
4	245	76	88	144	207	198	106	156	79	40	42	55
5	186	75	89	132	171	176	105	152	72	39	62	55
6	155	77	89	154	151	161	108	124	70	38	280	55
7	132	77	86	147	143	148	108	110	68	38	77	54
8	117	75	122	219	130	139	102	100	67	37	60	51
9	106	74	108	223	126	136	102	101	66	37	57	187
10	100	70	98	183	e381	129	103	246	65	39	82	81
11	93	67	98	155	e274	123	129	174	61	38	107	70
12	89	66	180	140	e214	119	103	134	59	44	61	81
13	84	65	182	126	e182	119	101	120	56	70	56	124
14	82	64	146	115	e164	115	98	108	55	415	62	86
15	79	68	128	110	e150	111	99	102	61	193	83	86
16	75	2610	112	108	546	188	98	103	66	132	64	74
17	104	421	101	101	440	1110	97	104	60	90	57	65
18	138	247	95	97	274	513	94	92	56	200	55	58
19	507	189	94	92	262	295	90	88	54	116	49	55
20	231	163	91	91	220	224	89	86	52	86	48	51
21	171	145	89	113	194	191	89	88	51	78	47	51
22	142	146	79	99	241	171	90	119	49	83	51	53
23	122	201	e75	98	283	153	88	96	48	77	1040	49
24	112	155	e79	97	236	145	86	84	47	68	260	45
25	105	137	e84	154	196	138	85	81	47	62	286	45
26	99	132	e84	151	176	131	83	79	45	56	244	45
27	95	124	e79	128	164	122	82	84	43	51	154	44
28	90	119	e77	120	154	122	87	155	43	50	110	45
29	88	110	77	162	---	127	110	224	43	48	91	47
30	86	102	79	248	---	117	91	130	42	48	76	47
31	88	---	181	185	---	131	---	103	---	46	66	---
MEAN	198	203	103	147	218	196	99.1	119	59.5	79.6	124	64.7
MAX	1170	2610	182	317	546	1110	129	246	91	415	1040	187
MIN	75	64	75	91	126	111	82	79	42	37	42	44
IN.	4.74	4.72	2.46	3.52	4.72	4.69	2.30	2.85	1.38	1.91	2.98	1.50

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	75.1	96.0	90.5	93.6	122.5	145.9	143.4	116.0	101.8	70.2	74.5	68.5
MAX	221.5	365.3	193.1	194.0	250.0	307.0	378.5	290.9	215.5	185.2	245.7	257.0
(WY)	1977	1978	1974	1978	1966	1979	1980	1973	1975	1989	1970	1979
MIN	19.8	19.8	24.7	22.5	48.2	47.9	51.5	37.3	21.7	17.6	18.9	24.9
(WY)	1982	1982	1989	1981	1989	1988	1986	1988	1988	1988	1988	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	133.8		99.6	
HIGHEST ANNUAL MEAN			154.0	1973
LOWEST ANNUAL MEAN			43.7	1988
HIGHEST DAILY MEAN	2610	Nov 16	4400	Nov 6 1977
LOWEST DAILY MEAN	37	Jul 8	12	Jul 18 1988
INSTANTANEOUS PEAK FLOW	10700	Nov 16	11600*	Nov 6 1977
INSTANTANEOUS PEAK STAGE	9.22	Nov 16	9.58*	Nov 6 1977
INSTANTANEOUS LOW FLOW	37*	Jul 8	11*	Jan 5 1981
ANNUAL RUNOFF (INCHES)	37.8		28.1	
10 PERCENTILE	213		170	
50 PERCENTILE	98		71	
95 PERCENTILE	44		25	

* See REMARKS.

PEE DEE RIVER BASIN

02111500 REDDIES RIVER AT NORTH WILKESBORO, NC

LOCATION.--Lat 36°10'29", long 81°10'09", Wilkes County, Hydrologic Unit 03040101, on left bank 550 ft upstream from bridge on Secondary Road 1517, 1.2 mi northwest of North Wilkesboro, 1.4 mi upstream from North Wilkesboro municipal dam, and 2.3 mi upstream from mouth.

DRAINAGE AREA.--89.2 mi².

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

REVISED RECORDS.--WSP 1433: 1944. WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 978.62 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Slight diurnal fluctuation at low flow during growing season. Several water temperature measurements were made during the year. Maximum discharge, 27,000 ft³/s, gage height, 22.02 ft, from rating curve extended above 5,600 ft³/s on basis of computation of peak flow over dam. Minimum discharge for current water year also occurred on Sept. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1220	147	188	373	230	227	243	181	203	109	98	98
2	879	140	185	241	218	242	234	245	193	113	97	95
3	408	139	185	215	212	384	226	254	190	104	98	91
4	288	135	180	231	341	300	219	274	182	102	95	88
5	239	134	181	228	252	264	214	233	172	99	128	88
6	211	141	178	260	227	246	218	202	169	97	135	87
7	193	138	175	238	223	228	231	190	164	95	110	83
8	180	139	218	352	208	221	209	183	160	96	106	82
9	172	137	201	314	204	225	203	184	157	106	108	102
10	165	130	190	263	660	217	208	346	154	98	104	92
11	161	126	195	237	383	212	259	241	147	94	102	90
12	156	126	321	221	292	207	213	207	143	98	95	100
13	151	124	301	207	251	204	204	197	141	132	93	98
14	148	124	246	198	230	202	202	186	139	413	91	90
15	143	131	226	194	221	200	207	177	153	313	89	86
16	140	1880	211	191	625	275	197	172	158	169	98	77
17	181	473	197	187	434	985	193	187	145	167	101	78
18	190	320	193	187	321	532	188	168	138	181	89	73
19	532	267	191	183	387	363	186	160	134	139	89	72
20	267	242	185	183	318	321	186	161	130	211	88	75
21	214	224	178	212	283	291	189	180	130	172	97	70
22	189	237	165	186	346	275	192	307	125	159	128	74
23	175	307	163	180	354	263	184	275	136	150	447	70
24	168	236	e155	182	307	254	181	212	122	128	170	64
25	163	225	e160	273	270	249	178	192	119	121	241	63
26	158	219	e160	251	249	241	176	188	118	115	168	62
27	154	210	e160	215	243	231	173	185	117	111	142	61
28	151	205	e160	202	236	225	182	253	117	107	126	60
29	148	197	e165	293	---	246	214	440	113	107	116	60
30	146	191	e170	358	---	238	182	275	110	104	114	60
31	149	---	295	261	---	276	---	222	---	102	106	---
MEAN	253	248	196	236	304	285	203	222	146	139	125	79.6
MAX	1220	1880	321	373	660	985	259	440	203	413	447	102
MIN	140	124	155	180	204	200	173	160	110	94	88	60
IN.	3.27	3.10	2.53	3.05	3.56	3.69	2.54	2.87	1.83	1.80	1.61	1.00

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	111.0	119.9	131.2	135.1	166.6	191.7	195.6	159.7	144.8	123.4	122.7	119.1
MAX	309.3	379.3	273.0	297.4	386.0	405.3	536.2	352.9	411.6	334.5	586.5	478.9
(WY)	1977	1978	1974	1978	1960	1975	1980	1973	1976	1941	1940	1945
MIN	34.5	46.7	49.5	44.5	71.5	77.3	78.3	68.6	47.6	43.0	31.0	30.8
(WY)	1955	1982	1956	1956	1989	1940	1986	1941	1956	1986	1956	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	202.6		143.2	
HIGHEST ANNUAL MEAN			217.6	1973
LOWEST ANNUAL MEAN			67.5	1956
HIGHEST DAILY MEAN	1880	Nov 16	7600	Aug 14 1940
LOWEST DAILY MEAN	60	Sep 28	23	Aug 17 1954
INSTANTANEOUS PEAK FLOW	6710	Nov 16	27000*	Aug 14 1940
INSTANTANEOUS PEAK STAGE	11.72	Nov 16	22.02*	Aug 14 1940
INSTANTANEOUS LOW FLOW	59*	Sep 28	22	Aug 17 1954
ANNUAL RUNOFF (INCHES)	30.8		21.8	
10 PERCENTILE	299		232	
50 PERCENTILE	186		113	
95 PERCENTILE	87		51	

*See REMARKS.

PEE DEE RIVER BASIN

02112000 YADKIN RIVER AT WILKESBORO, NC

LOCATION.--Lat 36°09'09", long 81°08'45", Wilkes County, Hydrologic Unit 03040101, on right bank 150 ft upstream from bridge on State Highway 18 and 268 between North Wilkesboro and Wilkesboro, 150 ft downstream from Reddies River, 0.5 mi northeast of Wilkesboro, and 382 mi upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--504 mi^2.

PERIOD OF RECORD.--April 1903 to June 1909, October 1920 to current year. Prior to October 1928, published as "at North Wilkesboro".

REVISED RECORDS.--WSP 1433: 1903-9, 1922, 1925-26(M), 1930, 1932, 1934, 1946-48(M), drainage area at former site. WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 942.35 ft above 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 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 lower than that used 1903-09. U. S. Army Corps of Engineers gage height radio telemeter, gage height telephone telemeter, and satellite data transmitter at station.

REMARKS.--Records good except those for period May to Sept, which are fair and those for estimated daily discharges, which are poor. Flow regulated by W. Kerr Scott Reservoir (station 02111391) 5.5 mi. upstream since 1962 (station 02111391). Maximum discharge prior to regulation, 160,000 ft^3/s Aug. 14, 1940, gage height, 37.6 ft, from floodmarks, from rating curve extended above 20,000 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 110 ft^3/s Sept. 18, 19, 1956. Maximum discharge for current water year not determined, occurred during period of no gage-height record Oct. 1-3. Maximum discharge recorded for current water year, 6660 ft^3/s, Nov. 16, gage height 8.95 ft. Minimum discharge for current water also occurred Sept. 28, 29, 30.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1916 reached a stage of 34.5 ft present site and datum, from floodmark, discharge, 116,000 ft^3/s, from rating curve extended as explained above.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e5000	782	874	1990	1340	1250	1420	1020	958	564	554	610
2	e4700	744	855	2270	1200	1280	1250	1070	901	563	547	581
3	e4200	701	858	1690	1180	1950	1130	1230	865	546	512	583
4	3690	635	822	1430	1850	2150	1160	1270	878	533	511	555
5	3160	643	802	1350	1890	1570	1130	1310	830	537	524	487
6	1820	712	849	1530	1400	1380	1100	1230	797	546	1080	486
7	1530	756	841	1540	1270	1370	1190	990	791	542	1240	476
8	1030	732	1060	1940	1210	1270	1040	871	787	548	995	474
9	903	728	1160	2160	1160	1250	988	941	807	549	636	628
10	873	663	963	1690	1950	1180	1110	1570	816	544	567	614
11	822	636	994	1510	2900	1210	1320	1540	867	550	776	597
12	751	637	1360	1340	2780	1150	1150	1250	787	528	804	701
13	746	628	1610	1240	1760	1080	1030	1150	664	507	576	822
14	748	629	1700	1110	1390	1120	1000	926	669	1390	527	886
15	725	689	1620	1100	1300	1070	1150	886	741	1740	564	694
16	658	3690	1150	1070	2150	1240	1070	897	812	1400	719	574
17	835	3770	1040	1020	2940	2320	997	956	777	1060	681	446
18	983	3540	1010	1040	3480	2630	996	901	696	1130	551	365
19	2130	2900	969	995	2810	3450	952	837	672	1070	467	342
20	1980	1980	982	998	2060	3170	951	842	614	1000	490	344
21	1090	1300	983	1210	1730	2370	985	847	614	898	500	343
22	1020	1210	877	1100	1750	1910	1010	1140	610	810	634	362
23	892	1510	769	977	2200	1440	974	1160	675	755	2140	352
24	810	1300	e760	1030	2030	1330	928	911	631	690	2650	338
25	804	1040	e750	1480	1580	1380	924	894	577	613	3550	338
26	796	1030	e760	1560	1380	1250	919	864	573	586	3530	333
27	791	984	e760	1260	1300	1210	898	876	569	522	3280	330
28	774	957	e750	1170	1300	1170	906	1450	567	461	2260	327
29	703	891	e780	1320	---	1230	943	2170	561	468	1020	329
30	697	850	938	1900	---	1260	1030	1480	557	511	1000	328
31	745	---	1290	1710	---	1350	---	1060	---	552	862	---
MEAN	1497	1242	998	1411	1832	1580	1055	1114	722	733	1121	488
MAX	5000	3770	1700	2270	3480	3450	1420	2170	958	1740	3550	886
MIN	658	628	750	977	1160	1070	898	837	557	461	467	327
(†)	-13	-3	+16	-13	-4	+3	+3	-10	-2	+8	-3	-3
MEAN‡	1484	1239	1014	1398	1828	1583	1058	1104	720	725	1118	485

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD *, BY WATER YEAR (WY)

MEAN	668.8	735.9	758.2	821.0	983.9	1184	1141	957.1	869.7	665.0	692.5	616.9
MAX	1593	2571	1619	1829	1832	2341	2868	1954	1963	1191	2212	1948
(WY)	1977	1978	1974	1978	1990	1975	1980	1973	1975	1989	1970	1979
MIN	190.7	258.2	268.3	349.0	446.1	441.2	434.7	410.0	292.9	234.5	193.9	208.5
(WY)	1989	1982	1982	1989	1989	1988	1986	1988	1988	1988	1988	1988

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD*	
AVERAGE FLOW	1147	‡ 1145	840.1	‡ 819
HIGHEST ANNUAL MEAN			1220	1973
LOWEST ANNUAL MEAN			393.5	1988
HIGHEST DAILY MEAN	5000	Oct 1	7990	Aug 10 1970
LOWEST DAILY MEAN	327	Sep 28	114	Dec 8 1970
INSTANTANEOUS PEAK FLOW	NOT DETERMINED*	Oct 1	12800	Apr 10 1983
INSTANTANEOUS PEAK STAGE	NOT DETERMINED*	Oct 1	16.22	Apr 10 1983
INSTANTANEOUS LOW FLOW	321*	Sep 28	86	Dec 4 1965
ANNUAL RUNOFF (INCHES)	30.9		22.6	
10 PERCENTILE	2000		1380	
50 PERCENTILE	968		626	
95 PERCENTILE	475		265	

(†) Change in contents, equivalent in cubic feet per second, in W. Kerr Scott Reservoir; provided by U.S. Army Corps of Engineers.
(‡) Adjusted for change in W. Kerr Scott Reservoir.
* For regulated period (1963 - 1990) only. See REMARKS.

PEE DEE RIVER BASIN

02112120 ROARING RIVER NEAR ROARING RIVER, NC

LOCATION.--Lat 36°14'59", long 81°02'39", Wilkes County, Hydrologic Unit 03040101, on left bank at downstream end of old bridge pier, 800 ft upstream from bridge on Secondary Road 1990, 3.8 mi northwest of village of Roaring River, and 4.1 mi upstream from mouth.

DRAINAGE AREA.--128 mi^2.

PERIOD OF RECORD.--Occasional low-flow measurements water years 1925, 1947, 1949-56, 1963. April 1964 to current year.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 964.85 ft above 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 except those for estimated daily discharges, which are poor. Maximum discharge 26,600 ft^3/s, from rating curve extended above 2,400 ft^3/s on basis of slope-area measurement of peak flow at gage heights 22.54 ft, 14.40 ft, and 10.83 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1916 reached a stage of about 28 ft, estimated discharge, 45,000 ft^3/s and the flood of August 1940 about 24 ft, estimated discharge, 31,000 ft^3/s, from information by local residents and rating curve extended as explained above. A discharge of 24 ft^3/s was measured Sept. 18, 1956.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1260	158	174	542	262	288	291	216	268	122	111	103
2	981	148	170	290	243	306	280	257	250	126	110	102
3	533	149	166	240	238	523	272	304	243	118	110	99
4	388	144	160	270	469	405	258	386	229	115	107	95
5	313	145	161	263	323	342	248	313	212	112	106	96
6	274	150	158	311	275	314	251	258	206	107	175	95
7	242	148	154	274	263	293	288	234	199	104	115	93
8	218	146	225	497	237	281	246	219	198	105	107	88
9	201	148	193	415	229	283	238	217	191	112	110	96
10	191	141	179	314	1160	271	250	523	183	105	110	100
11	184	140	182	270	545	260	378	351	175	102	107	98
12	176	138	403	243	392	252	276	283	169	112	100	187
13	170	138	366	218	325	245	257	261	165	163	97	112
14	167	133	270	206	294	240	250	241	163	676	110	109
15	163	140	232	199	275	236	281	225	175	417	225	108
16	157	1560	205	193	888	307	249	214	192	206	163	94
17	217	484	212	188	630	976	240	217	171	162	210	89
18	220	336	198	186	443	621	226	200	163	240	126	86
19	468	275	175	179	554	456	220	191	154	175	115	88
20	279	248	168	181	438	397	219	192	146	217	111	94
21	230	215	171	222	376	356	221	215	148	293	105	89
22	204	227	e155	185	480	327	221	328	148	304	116	95
23	188	348	e145	177	506	308	212	260	156	203	247	88
24	181	246	e145	180	412	296	207	218	139	157	182	82
25	174	226	e150	326	357	290	204	206	136	141	188	81
26	168	218	e145	302	325	280	200	205	134	132	188	81
27	163	204	e140	241	313	266	197	205	136	126	179	80
28	158	198	e150	218	302	259	222	485	134	122	129	79
29	154	186	e160	323	---	284	289	763	128	122	117	80
30	152	179	156	426	---	270	221	406	124	121	113	82
31	155	---	355	302	---	353	---	304	---	121	107	---
MEAN	282	244	194	270	413	341	247	287	174	175	135	95.6
MAX	1260	1560	403	542	1160	976	378	763	268	676	247	187
MIN	152	133	140	177	229	236	197	191	124	102	97	79
IN.	2.54	2.13	1.75	2.44	3.36	3.08	2.15	2.59	1.52	1.58	1.22	.83

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	156.8	159.0	171.4	181.8	226.3	250.9	252.0	211.5	189.4	159.5	140.1	144.7
MAX	421.9	426.4	382.4	372.4	412.6	538.8	636.9	381.0	432.4	349.4	355.4	446.0
(WY)	1977	1978	1974	1978	1990	1975	1980	1973	1975	1989	1970	1971
MIN	56.9	63.3	72.1	83.8	99.5	97.4	100.2	90.7	62.2	50.8	47.3	57.9
(WY)	1989	1982	1989	1981	1989	1988	1986	1988	1988	1986	1988	1988

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	237.4		187.4	
HIGHEST ANNUAL MEAN			257.9	1974
LOWEST ANNUAL MEAN			98.5	1988
HIGHEST DAILY MEAN	1560	Nov 16	4530	Nov 6 1977
LOWEST DAILY MEAN	79	Sep 28	32	Aug 27 1988
INSTANTANEOUS PEAK FLOW	5970	Nov 16	26600*	Oct 17 1975
INSTANTANEOUS PEAK STAGE	9.95	Nov 16	22.54*	Oct 17 1975
INSTANTANEOUS LOW FLOW	77	Sep 28	31	Aug 27 1988
ANNUAL RUNOFF (INCHES)	25.2		19.9	
10 PERCENTILE	380		301	
50 PERCENTILE	206		144	
95 PERCENTILE	97		68	

*See REMARKS.

PEE DEE RIVER BASIN

02112250 YADKIN RIVER AT ELKIN, NC

LOCATION.--Lat 36°14'30", 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 downstream from Elkin River, and 362 mi upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--869 mi^2.

PERIOD OF RECORD.--April 1964 to current year.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 866.03 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 28, 1964, nonrecording gage on upstream side of bridge at same datum. U. S. Army Corps of Engineers gage-height radio telemeter and satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Considerable regulation by W. Kerr Scott Reservior (station 02111391). Maximum gage height, 24.88 ft, from graph based on hourly gage-height readings and floodmark. Minimum discharge for current water year also occurred on Sept. 26, 27.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of 36.0 ft, from information by North Carolina State Highway Commission. Flood of August 1940 reached a stage of 37.5 ft. A discharge of 172 ft^3/s was measured on Sept. 19, 1956.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6570	957	1070	3510	1990	1960	2020	1540	1570	777	824	950
2	6160	896	1080	2770	1740	1960	1880	1510	1480	789	820	928
3	5510	868	1020	2250	1710	2900	1540	2120	1350	777	800	906
4	4890	782	1020	1770	3090	3470	1460	2110	1370	752	784	899
5	4530	761	950	1860	2970	2560	1450	2030	1300	742	790	827
6	2770	777	990	1950	2150	2120	1270	1980	1210	752	1450	808
7	2230	908	1020	2060	1890	2100	1610	1650	1190	762	1590	810
8	1700	855	1270	3150	1800	1970	1310	1380	1160	761	1470	794
9	1260	863	1540	3270	1740	1930	1100	1390	1180	768	1030	836
10	1240	798	1310	2350	5520	1840	1150	2420	1190	770	867	1040
11	1150	738	1240	2040	4200	1810	2040	2510	1160	766	901	896
12	1050	727	2220	1740	4300	1810	1630	1920	1160	837	1220	1120
13	1010	718	2620	1670	2830	1650	1300	1810	962	803	892	1180
14	997	700	2130	1480	2150	1680	1050	1550	942	1970	811	1360
15	980	706	2290	1450	2050	1650	e1600	1410	1020	2900	916	1140
16	863	4960	1560	1400	4620	1710	e1500	1380	1150	2050	1030	974
17	981	5070	1360	1360	4560	5930	e1450	1420	1110	1570	1190	856
18	1270	4550	1320	1370	4960	5380	e1400	1420	983	2330	925	746
19	2500	4000	1260	1350	4490	6240	e1400	1280	943	1620	807	702
20	3110	2670	1240	1330	3370	5980	e1450	1280	864	1600	807	709
21	1460	e1900	1220	1550	2780	4310	e1500	1310	856	1410	793	698
22	1380	e1700	1140	1560	2780	3430	e1400	1570	843	1630	851	705
23	1230	2050	e880	1310	3590	2370	e1400	1960	883	1210	2460	715
24	1070	1810	e900	1330	3270	1740	e1300	1450	883	1120	2910	692
25	1040	1410	e920	2110	2540	1910	e1300	1370	804	952	4150	679
26	1010	1280	e980	2440	2230	1650	e1300	1370	791	929	4240	678
27	994	1270	e1050	1800	2040	1630	e1280	1480	814	869	4240	679
28	977	1240	1140	1700	2030	1460	e1350	2610	825	79[illegible]	3410	682
29	896	1180	1120	1830	---	1530	e1400	4240	793	781	1550	687
30	874	1060	1120	3130	---	1670	e1420	2820	780	804	1440	696
31	863	---	1460	2560	---	2130	---	1780	---	860	1390	---
MEAN	2018	1607	1305	1982	2978	2596	1442	1809	1052	1144	1528	846
MAX	6570	5070	2620	3510	5520	6240	2040	4240	1570	2900	4240	1360
MIN	863	700	880	1310	1710	1460	1050	1280	780	742	784	678
IN.	2.68	2.06	1.73	2.63	3.57	3.45	1.85	2.40	1.35	1.52	2.03	1.09

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD *, BY WATER YEAR (WY)

MEAN	1131	1185	1251	1346	1654	1890	1862	1554	1394	1088	1113	1034
MAX	2770	3871	2591	3129	2978	3885	4510	2887	2942	1922	3128	2910
(WY)	1977	1978	1974	1978	1990	1975	1980	1973	1975	1989	1970	1979
MIN	372.4	428.3	532.2	617.1	751.5	744.8	736.6	728.8	507.1	432.7	361.5	415.7
(WY)	1989	1982	1989	1966	1989	1988	1986	1988	1988	1988	1988	1988

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD*	
AVERAGE FLOW	1687		1380	
HIGHEST ANNUAL MEAN			1951	1973
LOWEST ANNUAL MEAN			698.1	1988
HIGHEST DAILY MEAN	6570	Oct 1	21500	Aug 10 1970
LOWEST DAILY MEAN	678	Sep 26	246	Aug 31 1981
INSTANTANEOUS PEAK FLOW	10400	Oct 1	28700	Apr 10 1983
INSTANTANEOUS PEAK STAGE	12.81	Oct 1	24.88*	Apr 10 1983
INSTANTANEOUS LOW FLOW	678*	Sep 25	239	Aug 31 1981
ANNUAL RUNOFF (INCHES)	26.4		21.6	
10 PERCENTILE	3000		2650	
50 PERCENTILE	1370		1070	
95 PERCENTILE	739		490	

* For regulated period (1963 - 1990) only. See REMARKS.

PEE DEE RIVER BASIN

02112360 MITCHELL RIVER NEAR STATE ROAD, NC

LOCATION.--Lat 36°18'42", long 80°48'26", Surry County, Hydrologic Unit 03040101, on right bank 280 ft upstream from bridge on Secondary Road 1001, 1.8 mi upstream from Grass Creek, and 3.3 mi east of State Road.

DRAINAGE AREA.--78.8 mi^2.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1952-58, 1963. April 1964 to current year.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 927.12 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 29, 1964, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Several measurements of water temperatures were made during the year. Maximum discharge for current water year not determined, occurred during period of no gage-height record Oct. 1-11. Maximum discharge recorded for current water year, 1,780 ft^3/s, Feb. 10, gage height 4.97 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1900, about 18 ft in August 1940, from information by local resident, estimated discharge, 9,000 ft^3/s. A discharge of 16 ft^3/s was measured on Sept. 19, 1956.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1300	124	114	380	e160	185	190	152	184	92	81	83
2	e700	121	112	182	e150	186	200	186	175	91	79	81
3	e410	121	111	158	e150	269	190	179	167	88	79	79
4	e290	117	109	165	e300	229	177	195	163	86	77	75
5	e240	116	109	165	e210	201	171	181	150	84	75	76
6	e210	117	109	171	e170	191	170	163	148	84	123	73
7	e190	120	108	161	e165	182	191	156	142	83	89	73
8	e180	118	137	308	e155	176	171	151	146	83	79	69
9	e170	118	130	244	148	176	165	150	149	88	80	74
10	e165	114	117	197	740	173	168	250	145	86	79	79
11	e145	110	117	172	317	170	239	186	135	84	77	106
12	145	109	263	162	237	165	182	166	128	114	73	174
13	141	107	214	150	202	163	173	162	126	109	69	104
14	138	107	161	142	184	163	171	156	125	218	75	98
15	132	108	144	140	174	159	196	151	154	181	109	99
16	128	432	134	136	473	165	179	148	148	128	120	84
17	146	193	127	135	317	419	171	151	131	111	245	79
18	154	156	122	135	239	273	168	145	124	259	109	76
19	358	142	121	131	298	219	165	138	116	121	102	77
20	204	138	117	128	243	206	164	136	109	112	149	75
21	171	127	114	148	216	194	159	148	111	120	102	73
22	156	125	103	131	262	185	159	231	109	154	97	73
23	146	181	e98	130	288	182	158	189	112	127	179	71
24	141	138	e98	130	240	176	156	163	103	106	141	66
25	139	132	e98	e195	211	174	155	152	103	97	156	65
26	134	130	e99	e175	199	174	156	151	100	e92	161	65
27	131	127	e99	e160	195	171	153	186	100	87	131	64
28	128	127	e100	e150	193	166	154	388	99	86	105	65
29	127	120	e100	e170	---	179	178	491	97	87	94	67
30	125	116	e105	e230	---	175	156	260	93	102	91	67
31	125	---	213	e170	---	226	---	205	---	e90	86	---
MEAN	228	137	126	173	244	196	173	189	130	111	107	80.3
MAX	1300	432	263	380	740	419	239	491	184	259	245	174
MIN	125	107	98	128	148	159	153	136	93	83	69	64
IN.	3.34	1.94	1.84	2.53	3.23	2.87	2.45	2.77	1.84	1.63	1.56	1.14

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	112.5	107.5	115.8	120.0	147.3	167.3	167.4	148.8	124.8	108.5	108.5	109.4
MAX	239.9	210.8	230.3	218.3	258.4	320.9	425.7	263.5	233.1	228.3	247.0	313.5
(WY)	1977	1980	1974	1978	1966	1975	1983	1973	1975	1989	1970	1979
MIN	40.1	48.7	47.0	48.3	64.9	72.8	69.1	69.4	50.0	35.9	32.1	54.3
(WY)	1989	1982	1989	1981	1989	1981	1981	1988	1988	1986	1981	1988

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	157.4		128.0	
HIGHEST ANNUAL MEAN			175.0	1973
LOWEST ANNUAL MEAN			66.5	1981
HIGHEST DAILY MEAN	1300	Oct 1	3260	Aug 10 1970
LOWEST DAILY MEAN	64	Sep 27	23	Aug 27 1988
INSTANTANEOUS PEAK FLOW	NOT DETERMINED*	Oct 1	7470	Sep 22 1979
INSTANTANEOUS PEAK STAGE	NOT DETERMINED*	Oct 1	16.42	Sep 22 1979
INSTANTANEOUS LOW FLOW	62	Sep 27	16	Jul 22 1986
ANNUAL RUNOFF (INCHES)	27.1		22.1	
10 PERCENTILE	227		200	
50 PERCENTILE	146		102	
95 PERCENTILE	75		47	

* See REMARKS.

PEE DEE RIVER BASIN

02113000 FISHER RIVER NEAR COPELAND, NC

LOCATION.--Lat 36°21'26", long 80°41'10", Surry County, Hydrologic Unit 03040101, on left bank 500 ft upstream from bridge on State Highway 268, 1 mi upstream from Cody Creek, and 2 mi northwest of Copeland.

DRAINAGE AREA.--128 mi^2.

PERIOD OF RECORD.--October 1931 to current year.

REVISED RECORDS.--WSP 1303: 1933(M). WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 913 ft, by barometer. Prior to Sept. 5, 1936, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some irrigation diversions at times in the growing season. Several measurements of water temperature were made during the year. Maximum discharge, 34,200 ft^3/s, from rating curve extended above 6,200 ft^3/s on basis of slope-area measurement of peak flow at gage height 18.4 ft. Minimum discharge for current water year also occurred on Sept. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1980	165	159	719	216	249	273	209	e230	e105	88	87
2	1300	158	156	277	208	253	252	245	e220	e110	85	85
3	528	157	152	226	208	416	245	211	e210	e95	85	82
4	369	153	146	231	482	340	230	256	e200	88	85	78
5	306	152	148	235	290	280	223	246	e190	86	84	79
6	273	156	146	260	242	263	222	212	e185	82	114	77
7	247	161	144	238	233	249	272	198	e180	78	95	74
8	228	160	191	606	217	239	230	188	e170	78	82	70
9	216	159	190	403	209	240	219	185	e170	87	85	78
10	207	149	170	284	1380	236	222	449	e160	86	86	93
11	200	144	176	245	501	230	334	274	e150	89	125	166
12	192	144	491	234	325	224	248	221	e145	109	87	182
13	186	141	389	218	277	220	231	211	e140	109	79	137
14	181	141	261	208	255	217	228	199	e140	426	87	116
15	176	146	220	203	241	212	291	186	e155	398	90	116
16	170	765	201	198	833	216	240	183	e170	169	155	94
17	186	329	189	193	512	917	227	205	e145	131	148	83
18	197	242	195	191	332	490	216	179	e140	285	102	77
19	534	212	171	186	497	320	208	166	e130	159	97	79
20	286	196	166	172	349	290	207	165	e120	149	104	84
21	236	178	162	199	297	266	208	185	e125	152	94	80
22	213	180	148	177	406	252	210	393	e125	161	97	84
23	199	318	e137	169	516	243	202	272	e135	140	322	84
24	191	217	e140	170	354	236	198	e206	e120	117	178	73
25	184	198	e145	307	301	233	194	e200	e115	109	133	71
26	178	190	e140	300	275	229	191	e195	e115	104	164	70
27	174	181	e137	219	267	220	188	e190	e115	100	124	71
28	171	177	e145	201	258	216	193	e410	e110	98	106	71
29	168	169	e155	222	---	239	232	e560	e110	98	97	71
30	165	162	158	349	---	236	205	e300	e110	96	94	73
31	165	---	260	237	---	335	---	e250	---	97	91	---
MEAN	323	200	187	261	374	284	228	244	151	135	112	89.5
MAX	1980	765	491	719	1380	917	334	560	230	426	322	182
MIN	165	141	137	169	208	212	188	165	110	78	79	70
IN.	2.91	1.74	1.68	2.35	3.05	2.56	1.99	2.19	1.32	1.22	1.01	.78

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	150.7	149.3	168.8	192.4	219.9	242.2	241.2	197.5	175.3	151.6	153.0	147.2
MAX	579.5	343.7	365.1	526.3	539.1	550.9	745.9	386.6	491.0	396.7	509.9	734.8
(WY)	1938	1935	1974	1936	1960	1975	1983	1950	1947	1943	1940	1979
MIN	40.2	53.7	58.1	54.4	68.7	102.6	102.6	77.6	47.5	31.3	24.6	27.9
(WY)	1942	1932	1956	1956	1934	1981	1981	1941	1956	1986	1981	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR			FOR PERIOD OF RECORD	
AVERAGE FLOW	214.8			182.2	
HIGHEST ANNUAL MEAN				281.3	1979
LOWEST ANNUAL MEAN				87.6	1956
HIGHEST DAILY MEAN	1980	Oct	1	12100	Sep 22 1979
LOWEST DAILY MEAN	70	Sep	8	13	Aug 28 1981
INSTANTANEOUS PEAK FLOW	3930	Oct	1	34200*	Sep 22 1979
INSTANTANEOUS PEAK STAGE	8.30	Oct	1	19.61	Sep 22 1979
INSTANTANEOUS LOW FLOW	67*	Sep	8	12	Aug 30 1981
ANNUAL RUNOFF (INCHES)	22.8			19.3	
10 PERCENTILE	327			295	
50 PERCENTILE	190			137	
95 PERCENTILE	82			55	

* See REMARKS.

PEE DEE RIVER BASIN

02113850 ARARAT RIVER AT ARARAT, NC

LOCATION.--Lat 36°24'16", long 80°33'43", Surry County, Hydrologic Unit 03040101, on right bank 265 ft upstream from bridge on Secondary Road 2019 at Ararat, and 300 ft downstream from Flat Shoal Creek.

DRAINAGE AREA.--231 mi^2.

PERIOD OF RECORD.--April 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 880.97 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Minimum discharge, 19 ft^3/s also occurred Aug. 30, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 14, 1947 reached a stage of 21.4 ft, result of failure of dams upstream, discharge 26,000 ft^3/s, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2700	292	e270	e880	377	469	512	428	394	190	179	185
2	2080	276	e260	e510	368	667	474	398	383	198	177	183
3	867	273	e270	e410	395	689	500	383	380	188	188	178
4	601	264	e260	e420	850	512	450	494	370	178	177	170
5	489	263	e265	e420	487	466	434	443	332	173	174	173
6	445	279	e255	e450	420	428	443	367	327	152	264	166
7	402	277	e240	e420	415	406	541	347	339	137	214	161
8	364	289	e360	e850	398	410	442	330	334	140	174	158
9	344	277	e300	e650	391	402	426	345	351	168	179	167
10	330	268	e270	e500	2680	400	411	1170	319	180	173	180
11	317	272	e290	e430	904	415	689	495	297	282	418	254
12	308	267	e840	e400	609	410	470	395	284	235	235	200
13	300	270	e500	e380	516	400	422	390	282	248	178	225
14	291	267	e410	e360	476	393	461	394	282	1480	194	424
15	283	281	e350	e350	455	395	616	393	315	1750	232	237
16	272	862	e320	e340	1630	403	462	394	323	476	254	188
17	319	396	e330	341	847	1860	426	386	290	302	394	172
18	357	319	e300	341	615	918	397	355	277	296	204	163
19	742	290	e270	335	934	580	382	334	265	253	196	166
20	465	293	e260	319	626	548	380	338	248	277	208	174
21	399	271	e260	374	541	517	385	393	259	336	197	165
22	366	e290	e240	331	935	493	376	789	245	385	201	192
23	345	e460	e240	316	822	477	364	522	265	310	1220	178
24	338	e360	e245	320	635	462	354	402	231	243	658	157
25	328	e310	e240	585	536	461	350	375	224	226	331	155
26	318	e300	e250	571	502	441	338	373	220	218	326	151
27	313	e290	e255	415	496	388	334	364	215	206	310	149
28	298	e290	e250	376	477	376	398	975	213	206	268	150
29	294	e280	e280	481	---	429	438	1290	204	211	244	151
30	283	e270	e270	571	---	404	395	561	197	211	217	152
31	283	---	e600	412	---	634	---	431	---	186	192	---
MEAN	511	313	315	447	691	524	436	486	289	324	277	184
MAX	2700	862	840	880	2680	1860	689	1290	394	1750	1220	424
MIN	272	263	240	316	368	376	334	330	197	137	173	149
IN.	2.55	1.51	1.57	2.23	3.11	2.62	2.10	2.42	1.40	1.62	1.38	.89

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	246.6	243.9	281.4	311.8	372.7	416.2	425.3	359.5	316.4	256.9	243.9	239.3
MAX	587.3	469.4	584.2	743.0	690.6	850.7	1048	590.7	736.2	554.5	536.4	879.1
(WY)	1977	1972	1974	1978	1990	1975	1980	1973	1982	1989	1985	1979
MIN	103.5	111.1	124.3	119.7	186.7	172.5	170.4	166.9	109.6	81.9	45.4	98.2
(WY)	1987	1982	1989	1981	1989	1981	1967	1988	1988	1986	1981	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	398.3		309.4	
HIGHEST ANNUAL MEAN			461.7	1979
LOWEST ANNUAL MEAN			150.0	1981
HIGHEST DAILY MEAN	2700	Oct 1	13600	Sep 22 1979
LOWEST DAILY MEAN	137	Jul 7	21	Aug 29 1981
INSTANTANEOUS PEAK FLOW	5890	Feb 10	35000	Sep 22 1979
INSTANTANEOUS PEAK STAGE	9.99	Feb 10	24.46	Sep 22 1979
INSTANTANEOUS LOW FLOW	126	Jul 7	19*	Aug 29 1981
ANNUAL RUNOFF (INCHES)	23.4		18.2	
10 PERCENTILE	603		504	
50 PERCENTILE	339		237	
95 PERCENTILE	168		101	

* See REMARKS.

PEE DEE RIVER BASIN

02114450 LITTLE YADKIN RIVER AT DALTON, NC

LOCATION.--Lat 36°17'56", long 80°25'53", Stokes County, Hydrologic Unit 03040101, on left bank 1,200 ft downstream from bridge on U.S. Highway 52, 1.0 mi southwest of Dalton, 1.3 mi downstream from Southern Railway bridge, and 2.0 mi downstream from Danbury Creek.

DRAINAGE AREA.--42.8 mi^2.

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 above National Geodetic Vertical Datum of 1929 (North Carolina State Highway Commission bench mark).

REMARKS.--Records good except those for estimated daily discharges, which are fair. A Soil Conservation Service flood-control dam on upstream tributary, drainage area 4.7 mi^2 with flood storage of 695 acre-ft, was completed on June 21, 1977. Maximum discharge, 9,400 ft^3/s, from rating curve extended above 2,700 ft^3/s on basis of slope-area measurement at gage height 17.86 ft. Minimum discharge for current water year also occurred several days in Sept.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	821	26	27	384	54	57	94	58	56	e18	20	17
2	489	26	27	93	51	62	196	79	51	e19	20	17
3	131	27	26	59	49	111	139	84	47	e18	19	17
4	73	26	26	79	222	87	87	190	46	e18	19	16
5	51	26	26	83	101	67	78	292	41	e17	20	16
6	44	29	28	133	67	63	74	179	39	e16	37	16
7	39	32	26	87	63	55	121	86	38	e14	23	16
8	35	29	60	416	52	53	80	70	38	e15	20	15
9	33	30	46	161	50	55	64	65	36	e16	20	20
10	33	27	39	86	1160	51	58	411	34	e18	20	20
11	31	26	46	64	327	51	154	144	32	34	30	18
12	30	26	304	57	129	49	71	77	32	42	22	17
13	30	26	179	48	80	48	59	65	32	28	20	24
14	28	28	91	45	65	48	63	55	32	330	19	21
15	28	30	64	45	58	45	468	49	e30	417	20	20
16	27	63	53	42	531	46	121	47	e31	80	33	18
17	30	38	e50	40	210	1910	78	44	e28	43	37	16
18	33	33	40	41	100	457	66	40	e27	100	22	15
19	58	31	39	41	181	254	58	39	e26	132	38	16
20	36	31	36	38	102	142	57	38	e24	44	59	18
21	31	29	e35	56	76	104	55	47	e25	36	26	17
22	31	36	e30	46	263	92	53	82	e24	35	24	19
23	28	111	e25	41	212	83	51	56	e26	29	27	18
24	28	50	31	41	101	73	46	43	e23	27	25	15
25	27	43	32	297	75	74	44	42	e22	25	24	15
26	27	42	35	198	65	70	45	43	e22	24	25	14
27	26	43	34	91	65	68	42	63	e21	23	24	14
28	26	35	36	68	61	66	44	136	e21	22	20	14
29	27	29	34	77	---	73	60	583	e20	22	19	15
30	28	27	36	114	---	71	49	135	e19	22	21	15
31	27	---	130	68	---	119	---	71	---	21	18	---
MEAN	77.0	35.2	54.5	101	163	149	89.2	110	31.4	55.0	24.9	17.0
MAX	821	111	304	416	1160	1910	468	583	56	417	59	24
MIN	26	26	25	38	49	45	42	38	19	14	18	14
IN.	2.07	.92	1.47	2.73	3.97	4.00	2.32	2.97	.82	1.48	.67	.44

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	35.7	31.5	46.6	55.9	69.1	78.7	60.4	48.2	40.7	34.5	31.0	28.4
MAX	114.4	79.9	113.1	136.3	163.2	250.2	216.6	153.6	155.4	127.7	120.5	171.6
(WY)	1965	1986	1974	1978	1990	1975	1987	1984	1962	1978	1970	1979
MIN	7.47	11.2	16.4	17.2	25.0	20.1	18.0	14.0	7.15	4.27	6.48	5.08
(WY)	1987	1968	1966	1981	1977	1967	1967	1986	1986	1986	1986	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	75.2		46.4	
HIGHEST ANNUAL MEAN			75.2	1990
LOWEST ANNUAL MEAN			22.1	1967
HIGHEST DAILY MEAN	1910	Mar 17	3350	Jun 21 1972
LOWEST DAILY MEAN	14	Jul 7	1.6	Aug 2 1977
INSTANTANEOUS PEAK FLOW	6240	Mar 17	9400*	Sep 22 1979
INSTANTANEOUS PEAK STAGE	15.33	Mar 17	20.29	Sep 22 1979
INSTANTANEOUS LOW FLOW	14*	Sep 8	1.3	Aug 2 1977
ANNUAL RUNOFF (INCHES)	23.9		14.7	
10 PERCENTILE	131		73	
50 PERCENTILE	41		27	
95 PERCENTILE	17		8.4	

*See REMARKS.

PEE DEE RIVER BASIN

02115360 YADKIN RIVER AT ENON, NC

LOCATION.--Lat 36°07'55", long 80°26'39", Forsyth County, Hydrologic Unit 03040101, on left bank 50 ft upstream from bridge on Secondary Road 1525, 1.5 mi east of Enon, 4 mi upstream from Forbush Creek, and 324 mi upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--1,694 mi^2.

PERIOD OF RECORD.--July 1964 to current year.

REVISED RECORDS.--WDR NC-72-1: 1970 (M). WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 701.71 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 6, 1968, nonrecording gage on downstream side of bridge at same site and datum. U. S. Army Corps of Engineers gage height radio telemeter and satellite data transmitter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some regulation by W. Kerr Scott Reservoir (station 02111391). Minimum discharge for period of record also occurred Sept. 1, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 15, 1940 reached a stage of 737.5 ft above National Geodetic Vertical Datum of 1929 (35.8 ft above gage datum), from information by U. S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14300	2260	2310	e6000	e4000	3820	4230	3100	3460	1700	e1430	1930
2	22900	2260	2310	e4400	e3500	3730	4000	3640	3170	1680	e1350	1590
3	9120	2190	2260	e4200	e3400	4520	4130	4030	3020	1650	e1330	1540
4	7180	2130	e2200	e3800	e5800	5890	3540	4210	2910	1570	e1330	1510
5	6280	2040	2160	e3800	e6800	4810	3460	4650	2790	1520	e1400	1470
6	5120	2060	2150	e4300	e4700	4190	3350	4510	2670	1500	1950	1390
7	3910	2230	2180	e4800	e3800	3940	3830	3510	2610	1490	2540	1370
8	3500	2230	2460	e6200	e3700	3800	3580	3060	2580	1460	2330	1350
9	2870	2240	2990	e7400	e3550	3690	3250	2870	2650	1520	2030	1330
10	2710	2140	2610	5200	14800	3630	3180	7240	2590	1570	1650	e1330
11	2610	2030	2560	3610	6300	3520	4470	5600	2500	1660	1880	e1350
12	2510	1990	e3600	3350	e5500	3500	4010	4040	2470	1860	1870	e1500
13	2410	1980	e6400	3040	e4700	3380	3510	3590	2340	1750	1790	e2400
14	2370	1960	e5000	2810	e4300	3290	3300	3340	2190	3360	1520	e2000
15	2340	2000	e4200	2670	3910	3300	6360	2980	2220	10100	1600	e2050
16	2270	4870	e3500	2620	8970	3260	4150	2870	2570	4430	1880	e1600
17	2210	7280	e3000	2570	10500	15000	3570	2880	2470	3180	2770	e1400
18	2690	5830	e2700	2520	7030	12100	3340	2880	2350	3670	2010	e1280
19	4330	5380	e2600	2530	7520	e7800	3200	2700	2230	3270	1610	e1200
20	4960	4340	e2400	2440	6270	e7200	3120	2600	2120	2830	1710	e1220
21	3620	3530	e2350	2740	4990	e6200	3110	2680	2030	e2500	1600	1260
22	2960	2880	e2200	2880	5210	e5400	3160	3050	2030	e2450	1540	1250
23	2760	4140	e1900	2560	7280	e4500	3120	4200	2010	e2600	2510	1310
24	2570	3420	e1800	2440	5720	e4000	3020	3190	2040	e2000	5060	1220
25	2440	2700	e1700	e5500	4260	e3500	2930	2820	1940	e1750	4540	1160
26	2390	2780	e2000	e7800	3660	e3600	2900	2780	1850	e1600	5200	1150
27	2350	2720	e2300	e5000	3990	e3400	2860	2840	1810	e1550	5070	1150
28	2320	2640	e2100	e3900	3900	3380	2830	5280	1820	e1500	4440	1130
29	2280	2550	e2150	e3500	---	3420	3320	11800	1770	e1450	3180	1130
30	2190	2400	e2200	e4600	---	3640	3120	6310	1730	e1400	2190	1150
31	2190	---	e2350	e5000	---	4190	---	4080	---	e1400	2110	---
MEAN	4344	2973	2666	4006	5645	4826	3532	3978	2365	2322	2368	1424
MAX	22900	7280	6400	7800	14800	15000	6360	11800	3460	10100	5200	2400
MIN	2190	1960	1700	2440	3400	3260	2830	2600	1730	1400	1330	1130
IN.	2.96	1.96	1.81	2.73	3.47	3.29	2.33	2.71	1.56	1.58	1.61	.94

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD *, BY WATER YEAR (WY)

MEAN	2082	2065	2323	2546	3044	3455	3358	2868	2497	1975	2009	1881
MAX	4741	5128	4814	5725	5645	7848	7337	4989	5435	3485	5611	5810
(WY)	1977	1978	1974	1978	1990	1975	1980	1973	1972	1989	1970	1979
MIN	688.5	896.5	1107	1051	1560	1443	1390	1298	748.3	654.1	622.9	815.0
(WY)	1989	1982	1966	1981	1989	1981	1985	1988	1988	1986	1988	1988

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	3361		2502	
HIGHEST ANNUAL MEAN			3605	1973
LOWEST ANNUAL MEAN			1332	1988
HIGHEST DAILY MEAN	22900	Oct 2	48400	Sep 22 1979
LOWEST DAILY MEAN	1130	Sep 28	368	Sep 1 1981
INSTANTANEOUS PEAK FLOW	33300	Oct 2	73300	Jun 21 1972
INSTANTANEOUS PEAK STAGE	21.89	Oct 2	29.52	Sep 22 1979
INSTANTANEOUS LOW FLOW	1130	Sep 29	363*	Aug 31 1981
ANNUAL RUNOFF (INCHES)	26.9		20.1	
10 PERCENTILE	5460		4230	
50 PERCENTILE	2800		1920	
95 PERCENTILE	1360		894	

* For regulated period (1963 - 1990) only. See REMARKS.

PEE DEE RIVER BASIN

02115860 MUDDY CREEK NEAR MUDDY CREEK, NC

LOCATION.--Lat 36°00'01", long 80°20'25", Forsyth County, Hydrologic Unit 03040101, on right bank 100 ft upstream from bridge on Secondary Road 2995, 0.2 mi downstream from Salem Creek, and 1.8 mi east of community of Muddy Creek.

DRAINAGE AREA.--178 mi^2.

PERIOD OF RECORD.--July 1964 to September 1979, February 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 682.67 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Records on falling stages following peaks above 14 ft, may be affected by backwater and 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 about 31.0 ft^3/s from Salem Lake in the basin and 46.0 ft^3/s from the Yadkin River for water supply. An average of about 25.0 ft^3/s sewage effluent was returned to Salem Creek 3.5 mi above the station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2770	126	122	1420	191	208	293	165	211	92	86	80
2	5790	124	117	388	184	214	349	222	182	98	85	77
3	1430	126	113	220	176	547	242	672	170	92	84	77
4	418	120	113	281	1180	342	207	832	168	87	78	81
5	291	119	118	264	534	243	191	731	158	87	76	81
6	232	151	117	517	269	224	198	763	153	84	387	80
7	196	144	114	314	226	207	438	448	150	80	186	82
8	175	138	264	1460	202	195	225	235	146	80	106	77
9	170	139	189	869	189	201	197	204	136	86	99	108
10	161	127	193	338	1510	192	192	1070	129	88	98	91
11	154	122	241	234	874	183	230	706	127	87	178	92
12	150	115	1310	202	326	182	186	255	125	96	102	122
13	147	117	1340	170	249	180	173	185	123	104	93	500
14	142	120	485	159	221	179	170	157	125	346	94	120
15	137	144	272	157	206	176	1270	132	126	375	104	98
16	136	753	211	154	1730	180	391	115	121	141	272	87
17	148	231	174	152	1400	789	251	109	116	112	299	85
18	370	150	164	157	416	907	210	107	118	107	117	78
19	1350	129	160	150	758	301	189	104	117	196	101	79
20	314	128	153	149	416	312	183	105	113	110	107	86
21	195	127	146	520	285	230	180	118	113	101	102	84
22	165	188	135	224	640	206	178	1070	111	108	102	89
23	156	669	120	179	903	197	175	289	107	99	105	87
24	149	213	125	176	373	187	169	174	100	97	117	79
25	141	159	121	1130	259	181	165	167	100	93	99	79
26	136	145	124	1160	229	179	162	152	102	91	116	83
27	130	139	121	395	222	178	156	196	102	90	102	82
28	125	135	122	250	214	174	154	746	104	86	95	81
29	122	130	119	256	---	339	256	2220	101	81	91	79
30	125	125	122	372	---	240	174	578	96	84	91	74
31	127	---	356	226	---	371	---	268	---	86	87	---
MEAN	524	178	245	408	514	272	252	429	128	115	124	99.9
MAX	5790	753	1340	1460	1730	907	1270	2220	211	375	387	500
MIN	122	115	113	149	176	174	154	104	96	80	76	74
IN.	3.25	1.07	1.52	2.53	2.88	1.69	1.51	2.66	.77	.71	.77	.60

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	222.5	158.9	237.2	290.3	307.4	288.0	222.5	269.5	216.2	180.5	189.6	174.0
MAX	532.0	330.5	518.8	697.2	670.0	543.1	380.4	546.2	784.0	644.3	704.9	499.8
(WY)	1965	1973	1974	1978	1979	1979	1973	1972	1972	1975	1970	1979
MIN	71.3	78.8	75.6	117.2	120.7	116.8	102.6	119.8	88.0	81.8	82.2	50.6
(WY)	1968	1968	1989	1966	1968	1967	1967	1988	1967	1967	1968	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	273.4		233.8	
HIGHEST ANNUAL MEAN			336.2	1979
LOWEST ANNUAL MEAN			117.9	1967
HIGHEST DAILY MEAN	5790	Oct 2	8130	Jun 22 1972
LOWEST DAILY MEAN	74	Sep 30	35	Oct 6 1968
INSTANTANEOUS PEAK FLOW	6350	Oct 2	1450	Jun 22 1972
INSTANTANEOUS PEAK STAGE	17.61	Oct 2	21.26	Jun 22 1972
INSTANTANEOUS LOW FLOW	69	Sep 8	21	Oct 6 1968
ANNUAL RUNOFF (INCHES)	20.0		17.1	
10 PERCENTILE	527		378	
50 PERCENTILE	158		146	
95 PERCENTILE	82		72	

PEE DEE RIVER BASIN

02115900 SOUTH FORK MUDDY CREEK NEAR CLEMMONS, NC

LOCATION.--Lat 36°00'22", long 80°18'07, Forsyth County, Hydrologic Unit 03040101, on right bank 5 ft upstream from bridge on Secondary Road 2902, 1.9 mi downstream from Leak Creek, and 4.2 mi southeast of Clemmons.

DRAINAGE AREA.--42.2 mi^2.

PERIOD OF RECORD.--July 1964 to September 1979. February 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 684 ft, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--In the period 1930-64, three floods equalled or exceeded 15 ft. The highest was about 16.3 ft on Aug. 13, 1959 as a result of dam failure (from information by local resident).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	707	36	35	313	96	56	72	39	69	24	e20	12
2	1330	33	35	239	83	57	63	42	65	25	e19	12
3	194	34	33	182	74	153	58	142	64	24	e19	12
4	106	32	32	124	373	91	52	195	63	23	e18	12
5	77	32	32	62	329	67	50	131	60	23	e18	12
6	69	36	31	120	224	61	51	159	60	22	e84	12
7	55	37	30	78	176	55	98	148	60	21	e40	12
8	47	47	63	236	144	52	59	68	59	20	e26	11
9	42	56	54	132	120	54	54	57	56	21	e22	31
10	40	36	54	81	319	51	55	122	55	19	e22	17
11	37	32	68	65	302	49	62	67	52	19	e35	16
12	35	32	332	58	161	47	60	51	48	20	e23	16
13	34	31	311	49	100	46	56	46	43	23	e21	118
14	34	31	126	45	64	44	54	41	40	e74	e22	31
15	33	35	81	43	57	43	284	38	38	e82	e23	22
16	31	254	66	41	476	44	106	36	37	e31	e60	19
17	33	84	57	40	302	121	76	35	37	e24	e66	18
18	116	58	52	41	110	88	63	32	37	e23	e26	18
19	448	48	48	39	196	61	57	30	34	e43	e23	18
20	102	45	44	38	108	65	54	31	31	e25	e24	19
21	65	42	41	110	82	57	53	32	30	e23	e23	17
22	53	48	e37	57	150	54	52	125	29	e24	e23	18
23	46	160	e36	47	156	52	47	59	29	e22	e24	18
24	43	65	e35	46	92	49	44	43	27	e21	e26	16
25	40	52	e34	237	71	48	42	43	25	e21	e22	16
26	37	47	e34	347	64	47	40	44	22	e20	e25	16
27	36	43	e32	224	61	46	39	53	22	e20	e22	15
28	35	42	32	159	59	44	38	182	25	e19	e15	15
29	34	38	31	127	---	82	49	328	24	e19	e14	15
30	34	35	34	126	---	62	41	117	24	e20	13	15
31	34	---	75	111	---	105	---	79	---	e20	13	---
MEAN	130	53.4	64.7	117	162	62.9	64.3	84.4	42.2	26.3	26.8	20.0
MAX	1330	254	332	347	476	153	284	328	69	82	84	118
MIN	31	31	30	38	57	43	38	30	22	19	13	11
IN.	3.49	1.39	1.74	3.14	3.94	1.69	1.67	2.27	1.10	.71	.72	.52

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	42.5	30.7	50.1	62.6	70.7	68.8	45.7	52.3	41.5	35.5	37.4	32.2
MAX	129.9	57.3	98.9	152.8	162.5	202.7	92.8	116.2	114.7	139.2	137.3	92.8
(WY)	1990	1973	1974	1978	1990	1975	1973	1971	1972	1975	1970	1979
MIN	12.8	13.8	17.3	24.0	27.2	25.0	18.7	19.9	14.2	11.0	10.1	6.33
(WY)	1968	1968	1966	1966	1968	1967	1967	1967	1967	1967	1977	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	70.7		48.4	
HIGHEST ANNUAL MEAN			74.3	1975
LOWEST ANNUAL MEAN			24.0	1967
HIGHEST DAILY MEAN	1330	Oct 2	1920	Aug 10 1970
LOWEST DAILY MEAN	11	Sep 8	3.1	Aug 19 1988
INSTANTANEOUS PEAK FLOW	2000	Oct 2	2980	Aug 10 1970
INSTANTANEOUS PEAK STAGE	14.04	Oct 2	16.30	Aug 10 1970
INSTANTANEOUS LOW FLOW	9.4	Sep 7	2.5	Aug 20 1988
ANNUAL RUNOFF (INCHES)	22.4		15.3	
10 PERCENTILE	139		80	
50 PERCENTILE	44		29	
95 PERCENTILE	17		12	

PEE DEE RIVER BASIN

02116500 YADKIN RIVER AT YADKIN COLLEGE, NC
(National stream-quality accounting network station)

LOCATION.--Lat 35°51'23", long 80°23'14", Davie County, Hydrologic Unit 03040101, on right bank on downstream side of new bridge on U.S. Highway 64, 1.5 mi south of Yadkin College, 6.2 mi downstream from Reedy Creek, and 295 mi upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--2,280 mi^2.

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 638.45 ft above National Geodetic Vertical Datum of 1929. Prior to July 26, 1957 at site on left bank 100 ft downstream at same datum. July 27, 1957 to Sept. 19, 1984 at site 20 ft downstream on bridge pier near left bank, at same datum. U. S. Army Corps of Engineers satellite data transmitter, and Yadkin, Inc. gage-height telephone telemeter, at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diurnal fluctuation and occasionally some regulation during low flow caused by small hydroelectric plant with little storage capacity 10 mi upstream. Since August 1962, some regulation by W. Kerr Scott Reservoir (station 02111391). Maximum discharge prior to regulation, 80,200 ft^3/s Aug. 15, 1940 gage height, 33.75 ft; minimum observed, 177 ft^3/s Oct. 12, 1954, gage height, -0.42 ft. Minimum discharge for period of record, result of regulation.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916, reached a stage of 36.3 ft, from floodmarks, discharge, 94,300 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10500	e2950	3070	9160	5240	4700	5750	3230	e5000	1940	1700	2230
2	28200	e2920	3040	6670	4500	4530	5470	3880	4410	1940	1610	1880
3	25400	e2870	3030	5600	4130	5560	5350	6030	4130	1980	1600	1730
4	10100	e2800	2920	4740	7300	7410	4560	6290	3930	1950	1570	1580
5	7980	e2690	2910	4850	9180	6480	4320	6890	3790	e1930	1540	1650
6	7010	e2700	2850	5290	6250	5360	4200	7040	3580	e1910	1950	1560
7	5310	2850	2860	5800	5040	4830	4830	5450	3440	e1900	3190	1490
8	4610	2950	3180	7880	4580	4660	4820	4410	3320	e1880	2440	1470
9	3970	2910	3940	9680	4260	4500	4190	3800	3430	e1900	2510	1460
10	3440	2810	3850	7220	8980	4460	3970	6660	3320	e2000	2140	1520
11	3380	2650	3770	5430	18200	4310	4910	10900	3230	e2200	e2200	1770
12	3280	2560	5270	4730	9900	4270	5370	6070	3080	e2500	e2000	1770
13	3100	2560	8600	4190	7570	4170	4420	4800	3140	e2450	e1950	3180
14	3030	2520	6720	3930	5900	3960	4070	4490	2840	e6500	e1820	2530
15	3000	2570	5430	3670	5010	3970	8700	3980	2820	e13000	e1850	2660
16	2950	3910	5050	3560	7910	3920	6690	3680	3070	e7200	e1950	2190
17	2840	8810	3990	3480	18100	7350	4930	3630	3150	e4500	3390	1760
18	3310	6950	3610	3420	9540	24400	4300	3590	3000	e5100	2830	e1630
19	7630	e6500	3510	3440	9580	11400	4070	3420	2750	e4600	2000	1420
20	6780	e6000	3370	3340	9170	8510	3900	3250	2610	e4100	1810	1440
21	5700	e4800	3250	4250	6770	7630	3830	3270	2460	3010	1880	1510
22	4000	3790	3170	4160	6400	6360	3870	4970	2420	3000	1680	1510
23	3730	5290	2620	3790	10300	5670	3860	5420	2380	3150	e3000	1520
24	3460	5310	2420	3400	7940	4960	3730	4520	2380	2550	e5200	1510
25	3220	4300	2400	5820	6580	4570	3610	3710	2310	2230	e6300	1450
26	3130	3780	e2400	10100	5520	4660	3450	3540	2170	1990	e6200	1390
27	3070	3550	e2400	6400	5050	4340	3160	3760	2110	1910	e6000	1420
28	3020	3470	e2420	4730	4790	4170	2960	e9000	2150	1810	e5000	1420
29	2980	3380	e2450	4300	---	4370	3500	e15000	2120	1720	4090	1420
30	2870	3240	e2700	6390	---	4630	3570	e9500	2060	1650	2500	1430
31	e2850	---	3340	6490	---	5020	---	e7400	---	1660	2430	---
MEAN	5931	3813	3566	5352	7632	5972	4479	5535	3020	3102	2785	1717
MAX	28200	8810	8600	10100	18200	24400	8700	15000	5000	13000	6300	3180
MIN	2840	2520	2400	3340	4130	3920	2960	3230	2060	1650	1540	1390
IN.	3.00	1.87	1.80	2.71	3.49	3.02	2.19	2.80	1.48	1.57	1.41	.84

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD *, BY WATER YEAR (WY)

MEAN	2494	2501	2881	3238	3836	4478	3965	3424	2943	2361	2299	2192
MAX	6392	5437	5784	7580	7632	10380	9419	6277	7755	4622	7191	7314
(WY)	1965	1978	1974	1978	1990	1975	1987	1984	1972	1984	1970	1979
MIN	997.8	1091	1338	1354	2060	1798	1691	1565	1048	749.0	707.7	930.8
(WY)	1987	1982	1966	1981	1981	1981	1985	1986	1988	1986	1981	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD*	
AVERAGE FLOW	4395		3046	
HIGHEST ANNUAL MEAN			4524	1973
LOWEST ANNUAL MEAN			1591	1981
HIGHEST DAILY MEAN	28200	Oct 2	66000	Jun 22 1972
LOWEST DAILY MEAN	1390	Sep 26	350	Aug 28 1988
INSTANTANEOUS PEAK FLOW	33500	Oct 3	75200	Jun 22 1972
INSTANTANEOUS PEAK STAGE	22.14	Oct 3	33.75	Jun 22 1972
INSTANTANEOUS LOW FLOW	1130	Sep 26	110*	Aug 28 1988
10 PERCENTILE	7370		5000	
50 PERCENTILE	3680		2260	
95 PERCENTILE	1580		964	

* For regulated period (1963 - 1990) only. See REMARKS.

PEE DEE RIVER BASIN

02116500 YADKIN RIVER AT YADKIN COLLEGE, NC--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, February 1979 to current year.
WATER TEMPERATURE: October 1943 to September 1944, October 1950 to September 1951, October 1955 to September 1967, October 1970 to current year.
SUSPENDED-SEDIMENT DISCHARGE: January 1951 to current year.

INSTRUMENTATION.--Water-quality monitor from October 1970 to September 1975.

REMARKS.--Station operated as part of NASQAN network from March 1979 to present. Miscellaneous chemical data published for water years 1947-49, 1955. Daily records of specific conductance for water years 1956-64 are available in files of district office in Raleigh, NC.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 815 microsiemens Aug. 26, 1971; minimum recorded, 20 microsiemens Nov. 2, 16, 28, Dec. 1, 6, 7, 1971.
WATER TEMPERATURE: Maximum daily, 35.0°C July 20, 1986; minimum daily, 0.0°C on many days during most winter months.
SEDIMENT CONCENTRATION: Maximum daily mean, 2,970 mg/L May 26, 1952; minimum daily mean, 1 mg/L Dec. 3, 1953.
SEDIMENT LOAD: Maximum daily, 182,000 tons June 22, 1972; minimum daily, 3 tons Dec. 3, 1953.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION: Maximum daily mean, 1,240 mg/L May 29; minimum daily mean, 16 mg/L Dec. 7.
SEDIMENT LOAD: Maximum daily, 63,200 tons Mar. 18; minimum daily, 73 tons Sep. 29.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
NOV 14...	1000	2530	95	7.0	15.0	7.5	743	10.7	110	86	5.0	1.6
JAN 22...	1045	4200	79	6.5	--	30	--	--	200	290	4.7	1.6
MAR 27...	0945	4380	92	8.4	12.0	6.0	747	8.4	160	88	4.0	1.2
MAY 29...	1015	15000	55	6.7	20.0	440	732	--	2500	460	6.1	2.0
JUL 17...	0900	3930	55	6.9	23.5	25	755	7.2	--	--	3.8	1.5
SEP 11...	1000	1800	108	7.5	25.0	19	747	7.5	310	K90	5.0	1.6

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 WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	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)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)
NOV 14...	9.0	47	0.9	2.3	29	24	7.0	7.9	0.10	12	89	0.750
JAN 22...	6.4	40	0.7	2.1	17	14	7.0	5.7	<0.10	13	58	--
MAR 27...	5.6	42	0.6	1.5	15	12	5.0	5.1	<0.10	12	42	0.690
MAY 29...	3.5	22	0.3	3.0	17	14	5.4	3.9	<0.10	11	58	0.680
JUL 17...	5.0	36	0.5	2.8	2	2	4.5	5.0	<0.10	11	103	0.670
SEP 11...	12	54	1	2.6	22	18	8.2	9.5	<0.10	13	71	--

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)
NOV 14...	0.020	0.770	0.050	0.050	0.06	0.06	0.85	0.90	0.130	0.080	0.090	0.28
JAN 22...	<0.010	0.810	0.100	0.090	0.13	0.12	0.30	0.40	0.080	0.060	0.070	0.21
MAR 27...	0.010	0.700	0.050	0.050	0.06	0.06	0.35	0.40	0.090	0.010	0.020	0.06
MAY 29...	0.120	0.800	0.360	0.170	0.46	0.22	1.7	2.1	0.690	0.200	0.240	0.74
JUL 17...	0.030	0.700	0.060	<0.010	0.08	--	1.0	1.1	0.360	0.120	0.080	0.25
SEP 11...	<0.010	0.600	0.140	0.130	0.18	0.17	0.66	0.80	0.170	0.150	0.160	0.49

PEE DEE RIVER BASIN

02116500 YADKIN RIVER AT YADKIN COLLEGE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)
NOV 14...	20	<1	14	<0.5	1.0	1	<3	9	170	1	<4	20
JAN 22...	80	<1	18	<0.5	<1.0	<1	<3	<10	120	<10	<4	14
MAR 27...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 29...	2100	<1	97	<0.5	1.0	3	20	22	3500	20	<4	350
JUL 17...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 11...	70	<1	14	<0.5	<1.0	<1	<3	5	170	1	<4	8

DATE	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 14...	--	<10	1	<1	<1.0	38	<6	11	25	171	57
JAN 22...	<0.1	<10	<10	<1	<1.0	41	<6	8	98	1110	43
MAR 27...	--	--	--	--	--	--	--	--	1550	18300	2
MAY 29...	<0.1	<10	4	<1	<1.0	48	14	42	1380	55900	51
JUL 17...	--	--	--	--	--	--	--	--	359	3810	43
SEP 11...	<0.1	<10	1	<1	<1.0	40	<6	5	58	282	56

PEE DEE RIVER BASIN

02116500 YADKIN RIVER AT YADKIN COLLEGE, NC--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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	426	16200	139	1110	35	290	585	15400	169	2390	89	1130
2	468	35600	181	1430	29	238	220	3960	105	1280	90	1100
3	241	16500	112	868	33	270	200	3020	81	903	234	3510
4	209	5700	41	310	29	229	145	1860	464	12400	330	6600
5	169	3640	27	196	21	165	150	1960	660	16400	219	3830
6	109	2060	34	248	17	131	190	2710	200	3380	130	1880
7	100	1430	95	731	16	124	220	3450	130	1770	112	1460
8	91	1130	90	717	25	215	658	18600	100	1240	140	1760
9	65	697	43	338	40	426	970	25400	72	828	115	1400
10	37	344	47	357	37	385	460	8970	645	26500	95	1140
11	27	246	31	222	43	438	180	2640	1050	50700	89	1040
12	51	452	20	138	329	6080	139	1780	450	12000	86	991
13	77	644	21	145	588	13700	89	1010	260	5310	75	844
14	68	556	30	204	230	4170	60	637	260	4140	66	706
15	49	397	29	201	206	3020	59	585	185	2500	65	697
16	43	342	228	2670	146	1990	59	567	906	29300	62	656
17	44	337	719	17100	69	743	52	489	790	39400	317	11100
18	73	652	325	6100	61	595	50	462	380	9790	960	63200
19	599	12300	170	2980	50	474	50	464	375	9700	399	12300
20	438	8020	122	1980	39	355	49	442	330	8170	260	5970
21	172	2650	113	1460	26	228	148	1700	230	4200	251	5170
22	142	1530	110	1130	33	282	100	1120	370	6390	190	3260
23	101	1020	198	2830	27	191	61	624	980	27300	150	2300
24	36	336	203	2910	18	118	38	349	350	7500	119	1590
25	41	356	123	1430	31	201	283	5920	290	5150	129	1590
26	30	254	59	602	51	330	432	11800	158	2350	171	2150
27	28	232	45	431	59	382	158	2730	132	1800	171	2000
28	60	489	43	403	35	229	110	1400	100	1290	178	2000
29	104	837	45	411	30	198	69	801	---	---	181	2140
30	130	1010	39	341	21	153	299	6010	---	---	178	2230
31	159	1220	---	---	27	243	387	6780	---	---	239	3240
TOTAL	---	117181	---	49993	---	36593	---	133640	---	294081	---	148984

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)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	330	5120	58	506	175	2360	25	131	40	184	91	548
2	250	3690	82	859	160	1910	30	157	39	170	68	345
3	203	2930	448	7290	140	1560	30	160	40	173	52	243
4	168	2070	537	9120	155	1640	30	158	39	165	52	222
5	119	1390	436	8110	120	1230	21	109	40	166	40	178
6	72	816	515	9790	85	822	20	103	71	374	33	139
7	121	1580	289	4250	80	743	20	103	230	1980	30	121
8	111	1440	205	2440	80	717	20	102	119	784	31	123
9	113	1280	138	1420	120	1110	19	97	79	535	30	118
10	120	1290	588	16100	90	807	22	119	60	347	48	197
11	204	2700	840	24700	90	785	20	119	65	386	47	225
12	209	3030	310	5080	81	674	45	304	68	367	65	311
13	140	1670	168	2180	69	585	104	688	80	421	292	2740
14	99	1090	181	2190	70	537	230	4040	68	334	143	977
15	823	21200	138	1480	67	510	760	26700	58	290	104	747
16	575	10400	99	984	77	638	560	10900	60	316	65	384
17	340	4530	70	686	80	680	300	3650	242	2220	50	238
18	119	1380	70	679	78	632	180	2480	164	1250	31	136
19	111	1220	90	831	60	445	205	2550	116	626	31	119
20	95	1000	72	632	55	388	195	2160	71	347	29	113
21	83	858	55	486	50	332	185	1500	70	355	25	102
22	75	784	314	4340	40	261	178	1440	69	313	25	102
23	110	1150	251	3670	39	251	195	1660	69	559	21	86
24	80	806	150	1830	46	296	125	857	430	6040	20	82
25	69	673	135	1350	40	249	108	650	545	9270	20	78
26	89	829	95	908	39	229	70	376	380	6360	21	79
27	111	947	120	1220	30	171	60	309	320	5180	20	77
28	86	687	600	14600	30	174	50	246	340	4590	20	77
29	115	1090	1240	50200	30	172	40	186	280	3090	19	73
30	88	848	610	15600	30	167	34	152	121	817	21	81
31	---	---	280	5590	---	---	40	180	91	597	---	---
TOTAL	---	78498	---	199121	---	21075	---	62386	---	48606	---	9061

TOTAL LOAD FOR YEAR: 1199219 TONS.

PEE DEE RIVER BASIN

02118000 SOUTH YADKIN RIVER NEAR MOCKSVILLE, NC

LOCATION.--Lat 35°50'41", long 80°39'34", Rowan County, Hydrologic Unit 03040102, on right bank 90 ft downstream from bridge on Secondary Road 1972, 1 mi upstream from Little Creek, 4 mi downstream from Fifth Creek, 4.5 mi upstream from Hunting Creek, and 6.5 mi southwest of Mocksville.

DRAINAGE AREA.--306 mi^2.

PERIOD OF RECORD.--October 1938 to current year.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 663.62 ft above National Geodetic Vertical Datum of 1929. Yadkin Inc. stage telephone telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. The city of Statesville diverted an average of 8.5 ft^3/s for water supply and waste treatment dilution. The Alexander Water Corporation withdrew an average of 2.4 ft^3/s for water supply. Maximum discharge, 11,800 ft^3/s, also occurred Mar. 2, 1987. Minimum discharge, 21 ft^3/s, also occurred July 24, 1986. Minimum discharge for current water year also occurred Sept. 9.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Oct. 3, 1929 reached a stage of 22.6 ft, from floodmark established by local resident (discharge, about 22,000 ft^3/s).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1950	262	273	884	680	525	759	401	458	217	174	160
2	4010	250	263	807	579	513	679	564	408	231	168	161
3	3950	247	253	562	518	786	648	1520	391	226	177	157
4	1060	248	254	484	1290	900	587	902	384	206	176	153
5	575	249	249	569	1520	678	558	1130	358	202	161	143
6	443	247	249	731	844	590	517	723	336	194	201	150
7	386	301	249	860	667	542	610	570	328	193	567	139
8	345	287	357	1290	573	512	575	477	335	188	291	131
9	317	265	596	1810	506	489	489	428	318	193	223	139
10	309	254	420	995	1420	482	485	993	370	189	207	144
11	286	246	389	742	2670	469	550	1850	405	189	196	149
12	276	247	1010	617	2190	441	607	788	317	183	189	293
13	274	240	2140	520	842	438	494	595	295	211	181	395
14	263	235	1280	457	680	417	476	517	288	355	178	320
15	255	252	741	426	597	414	852	457	319	728	174	216
16	252	367	579	407	1190	410	775	419	460	579	176	184
17	252	361	471	404	2510	1230	602	404	351	347	239	166
18	491	288	416	388	1840	4410	524	380	302	304	179	155
19	1960	262	393	395	1170	3110	469	359	283	508	177	154
20	817	260	383	372	1070	975	445	350	270	296	187	162
21	458	255	357	675	788	763	453	357	270	259	197	158
22	370	257	330	610	885	681	450	873	257	249	178	159
23	334	658	257	452	1300	644	424	799	273	239	254	165
24	323	569	e263	418	924	608	402	489	256	228	372	155
25	297	385	e268	1140	715	578	395	404	243	212	250	147
26	285	341	e266	1670	625	568	375	382	236	206	237	144
27	275	318	e270	983	579	565	364	435	233	198	220	149
28	278	311	305	729	561	530	359	992	233	191	194	142
29	265	294	297	626	---	605	448	1960	225	188	177	139
30	257	273	312	983	---	646	433	1070	218	188	172	142
31	262	---	370	911	---	754	---	581	---	180	170	---
MEAN	706	301	460	739	1062	815	527	715	314	261	214	172
MAX	4010	658	2140	1810	2670	4410	852	1960	460	728	567	395
MIN	252	235	249	372	506	410	359	350	218	180	161	131
IN.	2.66	1.10	1.73	2.79	3.61	3.07	1.92	2.70	1.15	.98	.81	.63

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	248.4	257.8	339.6	401.1	505.3	527.9	456.5	367.9	298.1	236.6	227.3	240.6
MAX	1246	791.2	738.5	1088	1458	1485	1110	885.3	774.4	628.2	706.3	880.1
(WY)	1965	1958	1962	1978	1960	1975	1958	1984	1972	1941	1970	1979
MIN	70.4	99.7	101.7	97.7	181.1	220.0	158.8	126.8	75.0	47.3	61.2	45.7
(WY)	1955	1956	1956	1956	1941	1955	1986	1986	1986	1986	1956	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	521.6		341.3	
HIGHEST ANNUAL MEAN			592.1	1960
LOWEST ANNUAL MEAN			171.2	1986
HIGHEST DAILY MEAN	4410	Mar 18	9750	Mar 2 1987
LOWEST DAILY MEAN	131	Sep 8	22	Jul 22 1986
INSTANTANEOUS PEAK FLOW	5700	Mar 18	11800*	Oct 17 1964
INSTANTANEOUS PEAK STAGE	14.43	Mar 18	18.88	Mar 2 1987
INSTANTANEOUS LOW FLOW	129*	Sep 8	21*	Jul 22 1986
ANNUAL RUNOFF (INCHES)	23.1		15.1	
10 PERCENTILE	946		585	
50 PERCENTILE	376		239	
95 PERCENTILE	157		100	

* See REMARKS.

PEE DEE RIVER BASIN

02118500 HUNTING CREEK NEAR HARMONY, NC

LOCATION.--Lat 36°00'00", long 80°44'44", Iredell County, Hydrologic Unit 03040102, on right bank 52 ft downstream from bridge on Secondary Road 2115, 0.8 mi downstream from Kennedy Creek, 1 mi east of Houstonville, 2 mi downstream from U.S. Highway 21, and 3.5 mi northeast of Harmony.

DRAINAGE AREA.--155 mi^2.

PERIOD OF RECORD.--October 1950 to current year. Monthly discharge only for some periods, published in WSP 1723.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 734.78 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 5, 1951, nonrecording gage on upstream side of bridge at same datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Maximum gage height, 25.05 ft, from floodmark in gage house. Minimum discharge for current water year also occurred Sept. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2440	133	138	863	360	300	476	262	309	e165	131	119
2	2110	131	136	403	315	302	439	266	279	e160	131	118
3	602	131	135	285	288	485	364	770	270	e150	133	117
4	341	128	126	256	1040	498	324	1150	259	e145	129	115
5	231	127	126	285	638	378	306	721	236	e140	126	113
6	191	141	128	398	437	333	296	482	227	e135	717	112
7	176	171	129	380	373	311	356	358	220	e130	322	111
8	162	150	207	1030	323	299	308	306	211	e140	185	108
9	154	148	234	786	299	298	294	286	216	e130	165	106
10	150	135	181	452	2800	297	292	1380	214	e130	150	118
11	146	127	179	329	1140	286	447	638	209	e140	140	125
12	142	126	726	280	552	278	347	398	195	142	134	158
13	137	126	873	234	410	271	316	340	190	150	128	382
14	135	126	483	209	348	263	304	313	189	382	127	166
15	132	133	329	204	303	258	772	288	231	543	125	140
16	128	216	262	200	1380	259	471	274	264	270	134	128
17	131	182	211	199	1160	3560	366	264	209	182	150	122
18	166	150	197	200	544	1290	328	256	197	591	128	118
19	579	140	184	200	601	607	304	244	187	281	127	118
20	296	135	177	195	475	455	296	240	176	385	162	121
21	205	135	168	302	409	368	292	246	175	206	130	123
22	179	137	155	244	528	341	290	401	171	182	143	125
23	163	364	e140	211	695	326	278	343	170	173	262	126
24	156	226	e142	208	464	312	280	269	165	159	219	120
25	148	187	e143	706	366	308	276	253	e165	150	178	118
26	143	174	e147	731	328	304	262	253	e160	146	168	117
27	139	167	e165	429	318	294	255	304	e160	140	151	116
28	137	161	172	330	310	280	258	1920	e150	137	139	114
29	135	154	168	323	---	310	319	2110	e150	136	129	114
30	133	141	161	971	---	312	276	618	e160	135	127	115
31	133	---	202	482	---	403	---	373	---	137	122	---
MEAN	330	157	223	398	614	471	340	527	204	200	171	130
MAX	2440	364	873	1030	2800	3560	772	2110	309	591	717	382
MIN	128	126	126	195	288	258	255	240	150	130	122	106
IN.	2.45	1.13	1.66	2.96	4.13	3.50	2.45	3.92	1.47	1.49	1.27	.94

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	152.6	157.8	196.8	220.0	282.3	313.4	294.1	227.3	192.5	147.5	139.4	150.7
MAX	653.5	507.5	372.9	584.7	751.7	958.9	712.6	526.6	636.1	355.0	382.6	615.0
(WY)	1965	1978	1974	1978	1960	1975	1987	1990	1972	1987	1970	1979
MIN	50.0	56.9	53.1	56.4	131.5	122.8	101.6	92.8	63.3	41.2	43.5	40.4
(WY)	1955	1956	1956	1956	1977	1956	1985	1981	1956	1986	1956	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	312.3		206.8	
HIGHEST ANNUAL MEAN			346.3	1960
LOWEST ANNUAL MEAN			101.0	1956
HIGHEST DAILY MEAN	3560	Mar 17	10400	Sep 22 1979
LOWEST DAILY MEAN	106	Sep 9	22	Sep 16 1956
INSTANTANEOUS PEAK FLOW	6970	Mar 17	14800	Sep 22 1979
INSTANTANEOUS PEAK STAGE	16.50	Mar 17	25.05*	Sep 22 1979
INSTANTANEOUS LOW FLOW	106*	Sep 8	18	Oct 8 1954
ANNUAL RUNOFF (INCHES)	27.4		18.1	
10 PERCENTILE	538		338	
50 PERCENTILE	209		147	
95 PERCENTILE	120		60	

* See REMARKS.

PEE DEE RIVER BASIN

02120780 SECOND CREEK NEAR BARBER, NC

LOCATION.--Lat 35°43'05", long 80°35'45", Rowan County, Hydrologic Unit 03040102, on right bank 70 ft upstream from bridge on U. S. Highway 70, 1.3 mi downstream from Withrow Creek, and 2.7 mi east of Barber.

DRAINAGE AREA.--118 mi^2.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1949-57, 1961-63. April 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 642.31 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those above 200 ft^3/s, which are fair, and those for estimated daily discharges, which are poor. Some diurnal fluctuation caused by industry 0.7 mi upstream. Minimum daily discharge for period of record also occurred Oct. 7, 1986. Minimum discharge for current water year also occurred on Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1090	e80	79	244	144	e150	153	115	102	50	29	31
2	3210	78	77	132	139	148	157	150	97	51	29	30
3	665	77	76	119	134	566	136	1070	94	46	29	29
4	212	75	74	116	329	279	127	268	90	45	28	28
5	157	75	75	119	239	194	123	262	85	44	29	28
6	130	77	74	187	165	171	121	178	82	42	93	28
7	114	81	73	161	152	157	156	227	80	41	64	29
8	101	81	161	415	141	149	126	150	78	41	39	27
9	92	86	183	245	137	148	121	138	76	41	40	27
10	87	76	138	167	799	143	120	238	73	39	39	32
11	83	74	184	143	415	140	134	158	70	43	42	26
12	80	73	715	132	210	136	119	134	66	41	37	52
13	77	72	1290	121	176	133	115	127	65	46	35	29
14	76	73	280	116	160	130	114	120	65	69	46	31
15	74	79	182	114	150	129	1700	114	98	60	37	28
16	72	368	148	111	872	130	437	109	95	48	38	24
17	75	135	129	110	1090	170	212	104	71	45	70	23
18	156	109	122	109	260	179	173	98	68	44	40	22
19	1510	98	117	108	508	139	153	94	64	43	38	22
20	288	94	111	106	278	141	144	95	62	43	36	22
21	161	91	106	275	207	129	139	94	61	41	35	21
22	129	97	99	162	440	126	137	99	60	40	39	22
23	114	311	e95	134	415	124	127	98	59	39	44	23
24	106	131	e95	130	228	122	121	91	57	36	43	21
25	100	108	e90	683	188	120	118	90	55	35	45	20
26	97	100	e90	547	e160	119	114	88	54	36	59	21
27	94	93	92	218	e140	117	110	89	54	33	40	21
28	e90	90	93	172	e140	114	110	220	53	32	36	19
29	e88	85	92	172	---	153	154	443	49	33	34	19
30	e85	81	97	217	---	147	125	151	48	32	34	19
31	e83	---	120	156	---	188	---	113	---	30	32	---
MEAN	306	105	173	192	301	161	197	178	71.0	42.2	41.3	25.8
MAX	3210	368	1290	683	1090	566	1700	1070	102	69	93	52
MIN	72	72	73	106	134	114	110	88	48	30	28	19
IN.	3.02	.99	1.69	1.87	2.65	1.57	1.86	1.74	.67	.41	.40	.24

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	82.1	98.2	113.6	131.4	193.8	180.0	148.2	92.9	85.3	53.5	48.9	59.0
MAX	309.4	246.5	221.9	233.7	300.6	334.3	390.5	178.2	195.9	98.3	126.4	196.2
(WY)	1990	1986	1984	1980	1990	1987	1987	1990	1979	1989	1985	1979
MIN	15.8	33.3	54.1	38.9	70.7	67.2	45.5	29.6	13.0	13.2	16.7	11.7
(WY)	1987	1982	1985	1981	1986	1981	1986	1986	1986	1986	1983	1986

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	148.9		104.5	
HIGHEST ANNUAL MEAN			148.9	1990
LOWEST ANNUAL MEAN			62.1	1981
HIGHEST DAILY MEAN	3290	Oct 2	4470	Mar 1 1987
LOWEST DAILY MEAN	19	Sep 28	5.0*	Oct 6 1986
INSTANTANEOUS PEAK FLOW	3880	Oct 2	5820	Apr 16 1987
INSTANTANEOUS PEAK STAGE	15.36	Oct 2	16.92	Apr 16 1987
INSTANTANEOUS LOW FLOW	18*	Sep 29	4.4	Oct 1 1986
ANNUAL RUNOFF (INCHES)	17.1		12.0	
10 PERCENTILE	232		173	
50 PERCENTILE	101		64	
95 PERCENTILE	27		16	

* See REMARKS.

PEE DEE RIVER BASIN

02121180 NORTH POTTS CREEK AT LINWOOD, NC

LOCATION.--Lat 35°45'28", long 80°19'24", Davidson County, Hydrologic Unit 03040103, near center of span on downstream side of bridge on Secondary Road 1134, 0.3 mi upstream from mouth, and 0.5 mi northeast of Linwood.

DRAINAGE AREA.--9.62 mi^2.

PERIOD OF RECORD.--May 1979 to September 1990 (discontinued).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 630 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Slight diurnal fluctuation at low flows in growing season. Minimum discharge for period of record also occurred Aug. 20, 1988. Minimum discharge for current water year also occurred Sept. 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	343	6.1	6.7	21	14	10	13	12	13	4.6	1.9	1.4
2	169	6.2	6.6	12	13	11	10	20	11	4.5	1.8	1.6
3	26	6.5	6.4	11	13	68	9.0	48	10	4.4	1.8	1.6
4	16	6.5	6.3	11	35	25	8.5	22	9.2	4.2	1.9	1.6
5	12	6.7	6.5	11	24	16	7.9	22	8.3	4.1	1.9	1.6
6	11	7.4	6.7	18	18	14	7.7	15	8.1	3.9	2.2	1.7
7	9.2	8.0	6.1	14	16	12	13	13	7.8	3.8	2.5	1.4
8	8.0	8.1	23	42	15	11	8.0	9.5	7.3	4.4	2.0	1.2
9	7.1	8.6	16	22	14	11	7.4	8.9	6.8	4.1	2.1	1.6
10	6.5	7.5	17	17	129	10	7.6	26	6.5	4.4	2.1	2.0
11	6.1	7.3	18	15	30	9.8	8.4	11	5.5	3.7	3.1	2.5
12	5.8	7.1	124	13	18	9.6	7.1	8.6	5.3	3.6	2.1	2.1
13	5.5	7.0	82	12	15	9.4	6.9	8.1	5.3	3.9	1.9	3.6
14	5.5	7.3	26	11	12	9.0	6.8	7.8	5.5	5.5	2.1	2.5
15	5.7	8.4	18	11	11	8.7	199	7.2	7.7	5.0	1.9	2.1
16	5.8	46	14	11	203	8.7	27	6.5	7.9	3.8	4.3	1.9
17	6.6	16	11	11	44	14	18	6.6	7.0	3.9	6.0	1.6
18	67	11	10	11	21	12	14	6.0	7.0	3.9	2.7	1.6
19	211	9.4	9.9	11	38	9.4	11	5.9	6.9	3.9	2.2	1.7
20	22	8.4	10	10	21	9.5	10	6.0	6.8	3.2	2.1	1.8
21	14	7.3	8.8	28	16	8.5	10	5.8	6.4	3.1	2.2	1.6
22	11	15	8.1	15	50	8.3	10	9.3	6.4	2.9	2.3	2.0
23	9.3	28	e8.0	13	33	8.2	8.4	6.8	6.3	2.8	2.2	2.0
24	8.2	12	e8.0	14	19	8.1	8.1	5.7	6.2	2.5	2.1	2.0
25	7.5	9.3	e7.5	57	14	8.2	7.3	6.3	6.1	2.5	2.1	3.3
26	7.1	8.8	7.5	44	12	8.1	7.0	5.5	5.9	2.4	2.1	3.2
27	7.0	8.2	7.4	23	12	7.9	6.8	23	5.7	2.2	1.9	2.0
28	6.8	7.8	8.2	18	11	7.6	7.2	568	5.7	2.2	1.7	2.0
29	6.6	7.1	8.6	17	---	17	11	162	5.4	2.3	1.5	2.0
30	6.5	6.7	9.2	17	---	12	8.2	25	5.0	2.1	1.4	2.2
31	6.5	---	15	15	---	23	---	16	---	2.0	1.3	---
MEAN	33.5	10.3	16.8	17.9	31.1	13.1	16.1	35.6	7.07	3.54	2.24	1.98
MAX	343	46	124	57	203	68	199	568	13	5.5	6.0	3.6
MIN	5.5	6.1	6.1	10	11	7.6	6.8	5.5	5.0	2.0	1.3	1.2
IN.	4.02	1.20	2.01	2.15	3.37	1.57	1.87	4.27	.82	.42	.27	.23

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	7.28	9.01	9.77	11.4	20.0	15.1	13.1	11.7	6.33	4.62	4.76	3.82
MAX	33.5	21.6	23.0	18.4	37.8	27.7	33.2	35.6	12.4	9.88	15.8	9.19
(WY)	1990	1986	1984	1980	1984	1989	1987	1990	1982	1984	1985	1989
MIN	2.22	2.62	5.07	3.93	5.76	5.95	4.20	3.09	2.29	1.44	1.70	1.92
(WY)	1987	1982	1989	1981	1986	1985	1986	1986	1986	1986	1987	1986

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	15.7		9.69	
HIGHEST ANNUAL MEAN			15.7	1990
LOWEST ANNUAL MEAN			5.21	1981
HIGHEST DAILY MEAN	568	May 28	568	May 28 1990
LOWEST DAILY MEAN	1.2	Sep 8	.64	Aug 19 1988
INSTANTANEOUS PEAK FLOW	1540	May 28	1540	May 28 1990
INSTANTANEOUS PEAK STAGE	9.51	May 28	9.51	May 28 1990
INSTANTANEOUS LOW FLOW	.90*	Aug 31	.41*	Aug 19 1988
ANNUAL RUNOFF (INCHES)	22.2		13.7	
10 PERCENTILE	23		16	
50 PERCENTILE	8.0		5.3	
95 PERCENTILE	1.7		1.7	

*See REMARKS.

PEE DEE RIVER BASIN

02121500 ABBOTTS CREEK AT LEXINGTON, NC

LOCATION.--Lat 35°48'23", long 80°14'05", Davidson County, Hydrologic Unit 03040103, on right bank 150 ft upstream from bridge on Secondary Road 1243, 1.5 mi southeast of Lexington, and 4.5 mi downstream from Rich Fork Creek.

DRAINAGE AREA.--174 mi^2.

PERIOD OF RECORD.--March 1940 to December 1957. October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 630 ft from topographic map. March 1, 1940 to December 1957 at site 100 ft upstream at different datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. The city of Lexington diverts an average of 5.8 ft^3/s for water supply. City of High Point discharges an average of 5.8 ft^3/s of sewage effluent, diverted from Deep River, into Rich Fork Creek above station. Maximum discharge, 14,800 ft^3/s, at former site, from floodmark. Minimum discharge, 0.4 ft^3/s, at former site. Minimum discharge for current water year also occurred on Sept. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1460	e88	e100	553	e420	164	373	117	195	35	17	5.4
2	7120	e82	95	530	e310	143	292	123	148	29	13	4.2
3	3470	e82	93	253	e280	536	218	944	113	29	12	3.3
4	488	e83	85	205	e950	707	173	493	96	24	9.6	2.7
5	277	e82	85	214	e1400	350	155	657	83	23	9.7	2.7
6	232	e82	85	309	e560	264	142	812	75	20	12	4.1
7	194	e100	84	413	e400	216	223	618	73	20	15	4.9
8	139	e95	201	533	e340	175	213	393	70	20	18	5.4
9	99	e90	334	700	e280	158	160	201	73	27	14	18
10	80	e85	217	411	e1500	152	145	522	71	21	18	20
11	66	e82	305	304	e2500	134	158	712	67	25	36	17
12	69	e82	808	253	e1050	127	145	290	60	22	16	42
13	67	e80	3040	202	e600	121	130	204	53	22	13	54
14	66	e78	1400	171	e400	115	125	160	51	59	11	140
15	63	e88	485	158	e640	115	1880	123	51	70	16	75
16	61	e140	340	149	e839	131	1760	104	216	108	11	50
17	59	e130	255	142	3370	188	467	93	91	82	22	34
18	151	e100	199	139	904	374	294	84	69	91	30	25
19	4530	e90	173	140	613	235	209	75	62	66	16	19
20	2760	e88	159	132	633	250	167	71	55	42	10	15
21	e200	e85	145	352	351	244	145	74	47	34	8.0	15
22	e140	e95	133	401	392	229	138	118	45	30	11	15
23	e115	e300	108	198	829	206	124	162	59	36	11	16
24	e110	e240	113	e380	543	175	114	104	54	27	11	18
25	e100	e160	109	e740	315	142	105	93	42	21	10	13
26	e98	e135	115	e1100	250	122	98	92	38	18	10	13
27	e95	e120	115	e580	218	116	93	346	36	17	41	12
28	e94	e120	114	e380	191	109	88	1840	34	17	17	13
29	e90	e110	114	e300	---	228	133	2920	32	18	11	11
30	e88	e105	120	e650	---	368	139	1430	31	17	7.5	10
31	e88	---	151	e560	---	354	---	297	---	19	6.6	---
MEAN	731	110	319	373	753	224	287	460	73.0	35.1	14.9	22.6
MAX	7120	300	3040	1100	3370	707	1880	2920	216	108	41	140
MIN	59	78	84	132	191	109	88	71	31	17	6.6	2.7
IN.	4.85	.70	2.11	2.47	4.51	1.49	1.84	3.05	.47	.23	.10	.14

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	411.1	160.0	201.6	240.1	625.2	464.6	255.4	487.8	127.6	62.3	58.3	90.5
MAX	731.3	210.1	318.7	372.6	752.8	705.2	286.9	515.2	182.1	89.5	101.8	158.4
(WY)	1990	1989	1990	1990	1990	1989	1990	1989	1989	1989	1989	1989
MIN	90.9	109.9	84.6	107.7	497.7	224.1	223.9	460.4	73.0	35.1	14.9	22.6
(WY)	1989	1990	1989	1989	1989	1990	1989	1990	1990	1990	1990	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	281.4		*****	
HIGHEST ANNUAL MEAN			281.4	1990
LOWEST ANNUAL MEAN			245.8	1989
HIGHEST DAILY MEAN	7120	Oct 2	7120	Oct 2 1989
LOWEST DAILY MEAN	2.7	Sep 4	2.7	Sep 4 1990
INSTANTANEOUS PEAK FLOW	8380	Oct 2	14800*	Sep 25 1947
INSTANTANEOUS PEAK STAGE	18.39	Oct 2	22.12*	Sep 25 1947
INSTANTANEOUS LOW FLOW	2.4*	Sep 4	.4*	Oct 8 1954
ANNUAL RUNOFF (INCHES)	22.0		*****	
10 PERCENTILE	593		525	
50 PERCENTILE	112		104	
95 PERCENTILE	11		15	

***** Indicates not enough data, therefore statistic is not computed

* See REMARKS.

PEE DEE RIVER BASIN

02123567 DUTCHMANS CREEK NEAR UWHARRIE, NC

LOCATION.--Lat 35°22'05", long 80°01'49", Montgomery County, Hydrologic Unit 03040103, near midstream at upstream end of two 6 ft corrugated metal pipe culverts on Secondary Road 1150, 1.0 mi upstream from mouth and 3.0 mi southwest of Uwharrie.

DRAINAGE AREA.--3.44 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1981 to September 1983, October 1985 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 340 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Minimum discharge and minimum daily discharge for period of record also occurred periodically in July and Oct. 1986. Minimum discharge for current water year also occurred Sept. 7-10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	1.5	2.1	2.6	3.1	3.9	11	2.7	2.5	.88	.20	.09
2	98	1.8	2.1	1.9	3.1	3.8	19	2.9	2.3	.95	.17	.09
3	e4.0	2.1	2.1	1.8	3.0	28	7.6	28	2.3	.83	.17	.09
4	e3.5	1.7	2.0	1.8	3.0	8.6	5.6	5.3	2.1	.80	.16	.08
5	e2.7	1.6	2.1	1.8	2.7	5.7	4.8	12	1.9	.72	.14	.08
6	e2.3	1.6	2.0	5.7	2.5	4.9	4.3	3.9	1.9	.65	.66	.08
7	e2.2	1.6	2.0	3.0	2.5	4.2	6.7	3.1	1.8	.62	.88	.08
8	e2.0	1.7	14	17	2.4	4.0	4.6	2.6	1.7	.60	.39	.07
9	e1.9	2.3	10	9.4	2.5	4.1	4.2	2.7	1.6	.64	.40	.07
10	e1.8	1.9	6.8	6.5	47	3.8	4.0	20	1.6	.55	.39	.23
11	e1.7	1.8	7.7	5.2	12	3.6	4.0	4.9	1.5	.51	.46	.85
12	e1.6	1.7	12	4.7	6.0	3.4	3.6	3.3	1.4	.80	.36	1.1
13	e1.6	1.6	24	4.1	4.5	3.3	3.5	2.9	1.4	1.1	.28	.37
14	e1.5	1.7	7.4	3.8	4.0	3.2	3.5	2.6	1.4	.99	.24	.45
15	e1.5	2.2	3.7	3.7	3.6	3.3	7.0	2.3	1.5	.91	.23	.37
16	e1.5	3.4	2.9	3.7	48	4.2	11	2.2	1.5	.73	.36	.28
17	e1.4	2.2	2.5	3.6	17	10	6.1	2.2	1.4	.71	.56	.23
18	2.4	1.9	2.3	3.6	6.4	10	4.5	2.0	1.3	.79	.36	.20
19	10	1.8	2.2	3.5	25	5.4	3.9	1.9	1.3	.78	.27	.21
20	2.8	1.8	2.2	3.4	8.3	4.5	3.7	1.9	1.2	.70	.23	.24
21	2.1	1.8	2.1	13	5.5	3.8	3.7	1.9	1.2	.66	.88	.27
22	1.8	1.8	2.0	6.4	17	3.6	3.6	3.1	1.4	.64	.74	.30
23	1.7	7.5	2.0	5.0	16	3.4	3.3	2.2	1.3	.57	.41	.34
24	1.6	3.3	2.0	4.6	7.1	3.3	3.1	1.9	1.1	.44	.38	.23
25	1.6	2.7	2.0	12	5.0	3.1	2.9	1.8	1.0	.39	.38	.16
26	1.5	2.6	2.1	30	4.3	3.1	2.8	1.8	1.0	.37	.32	.17
27	1.5	2.4	2.1	7.3	4.0	3.0	2.7	1.9	.97	.32	.27	.13
28	1.5	2.4	1.9	4.6	3.8	2.9	2.7	32	.96	.31	.23	.10
29	1.5	2.2	1.7	4.3	---	19	4.6	37	.91	.29	.16	.10
30	1.5	2.1	1.8	4.6	---	9.5	3.0	5.2	.86	.27	.13	.09
31	1.5	---	1.9	3.5	---	28	---	3.1	---	.24	.09	---
MEAN	6.88	2.22	4.31	6.00	9.62	6.60	5.17	6.49	1.48	.64	.35	.24
MAX	98	7.5	24	30	48	28	19	37	2.5	1.1	.88	1.1
MIN	1.4	1.5	1.7	1.8	2.4	2.9	2.7	1.8	.86	.24	.09	.07
IN.	2.31	.72	1.45	2.01	2.91	2.21	1.68	2.18	.48	.21	.12	.08

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	2.04	2.55	2.74	4.46	6.83	6.67	4.70	3.30	1.23	.835	.919	.735
MAX	6.88	8.69	4.31	7.59	9.62	12.3	9.36	6.49	1.77	1.58	1.40	1.46
(WY)	1990	1986	1990	1982	1990	1989	1987	1990	1982	1982	1982	1988
MIN	.194	.820	1.40	1.95	1.83	3.05	1.41	.819	.241	.256	.352	.195
(WY)	1987	1987	1989	1986	1986	1988	1986	1986	1986	1986	1990	1986

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	4.14		3.06	
HIGHEST ANNUAL MEAN			4.14	1990
LOWEST ANNUAL MEAN			1.60	1988
HIGHEST DAILY MEAN	98	Oct 2	127	Apr 15 1987
LOWEST DAILY MEAN	.07	Sep 8	.01*	Jul 15 1986
INSTANTANEOUS PEAK FLOW	445	Oct 2	405	Apr 15 1987
INSTANTANEOUS PEAK STAGE	7.54	Oct 2	7.12	Apr 15 1987
INSTANTANEOUS LOW FLOW	.07*	Sep 6	.01*	Jul 15 1986
ANNUAL RUNOFF (INCHES)	16.3		12.1	
10 PERCENTILE	7.6		5.4	
50 PERCENTILE	2.1		1.2	
95 PERCENTILE	.16		.17	

* See REMARKS

PEE DEE RIVER BASIN

0212429930 WIBERLY BRANCH NEAR WILGROVE, NC

LOCATION.--Lat 35°13'40", long 80°41'34", Mecklenburg County, Hydrologic Unit 03050103, on left bank 1700 ft above mouth and 0.3 mi from Secondary Road 2805 and 4.0 mi northwest of Mint Hill. Located within Harrisburg Road Landfill.

DRAINAGE AREA.--0.35 mi^2.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--December 1984 to current year.

REVISED RECORDS.--WDR NC-87-1: Drainage area.

GAGE.--Water-stage recorder and wooden V-notch sharp-crested weir. Datum of gage is 675.01 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Smith Lake acts as a sediment basin for the landfill runoff and has a surface area of 1.83 acres. Maximum discharge and gage height for period of record also occurred on Sept. 7, 1987 and Aug. 28, 1988. Minimum discharge for period of record, no flow, occurs most water years. Minimum discharge for current water year also occurred Sept. 3, 4, 7, 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	.10	.10	1.7	.16	.17	6.9	.13	.10	.06	.05	.05
2	8.1	.10	.10	.42	.16	.33	2.8	.30	.09	.06	.05	.05
3	.86	.10	.10	.27	.16	11	.50	.38	.11	.05	.05	.04
4	.41	.10	.10	.21	.18	.69	.29	.28	.14	.05	.05	.04
5	.23	.10	.10	.21	.13	.31	.23	.29	.11	.05	.04	.05
6	.15	.10	.10	2.1	.11	.23	.22	.13	.08	.05	.53	.04
7	.12	.10	.11	.60	.13	.27	.30	.12	.10	.04	.08	.04
8	.10	.14	3.9	3.7	.11	.16	.21	.09	.07	.19	.06	.04
9	.08	.19	1.6	.72	.28	.19	.19	.18	.07	.09	.06	.06
10	.08	.10	1.1	.35	8.1	.22	.11	2.1	.07	.07	.05	.05
11	.08	.10	.53	.24	1.1	.19	.12	.34	.07	.07	.05	.20
12	.08	.10	2.8	.19	.41	.19	e.10	.17	.06	.06	.05	.07
13	.08	.10	2.4	.14	.30	.22	e.09	.11	.06	.08	.05	1.7
14	.08	.10	.54	.12	.18	.20	.66	.10	.06	.14	.40	.38
15	.08	.30	.33	.11	.13	.17	2.7	.15	.90	.08	.10	.27
16	.08	.51	.23	.11	17	.19	.35	.09	.22	.10	.12	.11
17	.09	.11	.20	.11	2.1	1.6	.12	.10	.18	.09	.10	.07
18	.15	.10	.19	.11	.55	.60	e.11	.08	.10	.08	.11	.07
19	2.3	.10	.21	.10	4.3	.23	e.10	.08	.08	.08	.06	.08
20	.41	.10	.18	.12	.66	.16	e.09	.09	.06	.08	.05	.07
21	.23	.10	.16	9.3	.39	.12	e.10	.10	.06	.08	.06	.07
22	.15	.63	.11	.57	.61	.11	e.09	.14	.06	.07	.06	.09
23	.11	1.4	e.09	.32	.50	.11	e.08	.09	.06	.06	.06	.06
24	.11	.33	e.10	.32	.27	.11	e.08	.09	.06	.06	.06	.06
25	.10	.22	e.10	2.1	.19	.11	e.08	.09	.06	.06	.05	.06
26	.10	.17	e.10	1.4	.16	.13	e.08	.09	.06	.06	.05	.06
27	.10	.14	e.11	.37	.30	.13	e.08	.18	.06	.05	.05	.06
28	.10	.12	.11	.25	.22	.11	e.10	5.0	.05	.06	.05	.06
29	.10	.11	.12	.23	---	1.1	e.15	2.9	.05	.05	.05	.05
30	.10	.10	.17	.20	---	.54	e.10	.39	.05	.05	.05	.06
31	.10	---	1.5	.16	---	.92	---	.17	---	.05	.04	---
MEAN	1.22	.20	.57	.87	1.39	.67	.57	.47	.11	.072	.087	.14
MAX	23	1.4	3.9	9.3	17	11	6.9	5.0	.90	.19	.53	1.7
MIN	.08	.10	.09	.10	.11	.11	.08	.08	.05	.04	.04	.04
IN.	4.02	.65	1.87	2.85	4.13	2.21	1.82	1.55	.35	.24	.29	.44

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	.572	.491	.496	.713	.905	.883	.489	.496	.205	.376	.654	.689
MAX	1.22	.926	.737	.916	1.39	1.51	.618	.875	.328	.751	1.48	.967
(WY)	1990	1988	1988	1988	1990	1989	1989	1989	1989	1988	1988	1988
MIN	.085	.202	.185	.357	.386	.469	.278	.144	.110	.072	.087	.137
(WY)	1988	1990	1989	1989	1988	1988	1988	1988	1990	1990	1990	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	.53		.51	
HIGHEST ANNUAL MEAN			.61	1988
LOWEST ANNUAL MEAN			.53	1990
HIGHEST DAILY MEAN	23	Oct 1	23	Oct 1 1989
LOWEST DAILY MEAN	.04	Jul 7	0	Oct 3 1987
INSTANTANEOUS PEAK FLOW	102	Oct 1	125*	Jul 5 1987
INSTANTANEOUS PEAK STAGE	2.44	Oct 1	2.59*	Jul 5 1987
INSTANTANEOUS LOW FLOW	.03*	Aug 31	0*	May 1 1986
ANNUAL RUNOFF (INCHES)	20.4		19.8	
10 PERCENTILE	.63		1.1	
50 PERCENTILE	.10		.12	
95 PERCENTILE	.05		.05	

* See REMARKS.

PEE DEE RIVER BASIN

0212429930 WIBERLY BRANCH NEAR WILGROVE, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1985 to September 1990 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1984 to September 1990.
WATER TEMPERATURE: December 1984 to September 1990.

INSTRUMENTATION.--Water-quality monitor since Dec. 1984. Continuous water-quality monitor was removed Nov. 1990.

REMARKS.--Station operated as part of the Charlotte-Mecklenburg County Water-Quality Study.

COOPERATION.--Chemical samples were collected by the U.S. Geological Survey. Laboratory analyses, other than organics, were performed by the Mecklenburg County Department of Environmental Health Laboratory.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 458 microsiemens, Nov. 24, 1987; minimum, <28 microsiemens, Aug. 28, 1988.
WATER TEMPERATURE: Maximum, 37.2°C, Aug. 7, 1988; minimum, 0.0°C, Dec. 12, 13, 18, 1988.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 306 microsiemens, Feb. 24; minimum, 34 microsiemens, Feb. 16.
WATER TEMPERATURE: Maximum, 30.1°C, June 17; minimum, 0.7°C, Dec. 22, 23.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K)
JAN									
03...	1445	--	--	--	--	--	260	300	--
JUN									
28...	1030	148	7.0	23.5	6.0	1.0	1500	820	1.8
28...	1035	148	6.9	23.5	6.0	1.1	2900	840	1.8

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	PHOSPHORUS TOTAL (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)
JAN									
03...	--	--	--	--	--	--	--	--	--
JUN									
28...	0.070	<0.040	--	<0.050	900	<2	200	<2	<6
28...	0.070	0.040	0.05	<0.050	860	<2	100	<2	13

DATE	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN									
03...	--	--	--	--	--	--	--	--	--
JUN									
28...	<50	2100	4	560	0.20	<2	<2	120	1.5
28...	<50	2100	3	550	0.30	<2	<2	60	1.5

0212429930 WIBERLY BRANCH NEAR WILGROVE, NC--Continued

SPECIFIC CONDUCTANCE, US/CM ‡ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	199	38	131	149	146	148	129	127	128	131	106	122
2	144	45	108	151	147	149	130	128	128	144	132	138
3	183	146	167	149	146	148	128	125	127	147	141	143
4	241	183	205	150	147	148	127	125	126	160	143	151
5	295	243	269	151	147	149	129	126	127	163	159	162
6	304	230	270	151	149	150	128	126	127	161	100	121
7	229	218	223	152	148	151	127	122	125	168	121	147
8	217	199	206	154	148	151	126	84	99	131	65	90
9	204	199	201	151	148	150	128	96	110	152	110	131
10	202	187	194	154	149	151	135	112	121	177	150	162
11	208	188	197	155	151	152	152	137	145	204	175	188
12	228	209	218	155	152	153	183	100	142	210	204	208
13	235	177	215	155	152	154	156	105	129	212	206	208
14	174	157	165	155	152	153	170	141	153	210	204	206
15	160	153	156	154	143	150	166	155	158	206	200	203
16	157	153	155	149	121	130	165	157	159	203	195	199
17	159	148	154	141	130	136	167	163	165	207	194	200
18	154	113	148	144	138	141	171	167	169	197	189	193
19	100	78	90	145	141	143	172	168	170	191	179	186
20	98	90	93	149	144	146	173	167	170	182	161	178
21	109	95	102	152	146	148	168	163	166	112	39	75
22	122	107	112	150	97	142	166	161	163	114	85	100
23	124	117	121	112	94	108	168	159	164	125	113	118
24	130	124	127	122	111	116	168	159	163	153	127	139
25	135	129	132	126	118	122	163	143	156	150	108	133
26	137	134	136	124	121	123	151	138	145	140	110	121
27	141	136	138	129	122	125	148	138	144	182	141	160
28	142	139	140	132	128	130	142	136	139	206	178	190
29	144	140	142	130	125	128	147	136	140	224	207	215
30	146	142	144	131	125	127	147	143	144	229	213	221
31	149	146	147	---	---	---	167	90	139	234	221	227
MONTH	304	38	161	155	94	141	183	84	143	234	39	162
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	223	216	220	267	253	261	229	34	176	157	108	144
2	222	204	213	272	172	262	126	80	102	147	125	140
3	220	196	207	117	51	82	139	127	133	147	98	121
4	225	194	205	137	109	125	156	140	148	127	109	118
5	204	181	193	173	139	161	163	157	160	133	124	129
6	195	180	185	201	174	187	166	161	163	139	129	135
7	185	170	179	197	117	160	199	152	178	145	134	141
8	186	164	176	191	151	175	180	167	173	145	141	143
9	179	107	173	199	179	192	168	160	164	144	116	138
10	86	60	72	179	158	167	161	156	160	135	63	100
11	116	86	102	167	150	160	162	157	160	128	103	118
12	132	117	127	151	130	142	161	154	158	144	128	136
13	139	119	131	141	133	137	157	151	155	147	140	143
14	161	135	148	162	134	148	152	99	141	154	143	148
15	173	161	166	164	146	156	117	81	101	161	138	146
16	176	34	106	168	162	165	151	112	131	148	144	146
17	123	73	101	166	106	140	158	151	155	146	137	142
18	175	124	139	145	126	137	150	137	146	144	142	143
19	152	86	118	152	144	147	164	136	156	143	137	141
20	166	146	153	150	138	144	152	147	149	142	137	140
21	176	155	163	162	143	151	149	146	148	141	131	138
22	238	178	213	164	152	157	162	146	151	139	122	135
23	297	239	266	158	154	156	189	164	176	140	136	138
24	306	279	294	160	154	156	199	190	195	139	134	137
25	286	270	276	156	154	155	211	159	193	135	132	134
26	285	269	276	157	153	155	168	159	164	136	129	133
27	265	230	240	162	155	158	169	158	165	135	94	132
28	262	233	247	160	155	157	163	143	159	120	41	99
29	---	---	---	161	128	144	156	146	154	104	53	90
30	---	---	---	149	128	138	162	155	159	118	105	112
31	---	---	---	192	142	163	---	---	---	128	116	121
MONTH	306	34	182	272	51	159	229	34	156	161	41	132

PEE DEE RIVER BASIN

0212429930 WIBERLY BRANCH NEAR WILGROVE, NC--Continued

SPECIFIC CONDUCTANCE, US/CM ‡ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	136	125	130	149	138	145	174	161	170	166	154	162
2	137	132	135	146	136	143	172	159	168	167	151	161
3	142	134	138	146	136	142	170	156	166	168	151	163
4	139	135	137	148	135	142	167	152	163	167	148	159
5	140	137	138	147	135	142	165	149	160	173	161	165
6	144	140	142	145	132	140	163	80	136	166	149	161
7	145	140	142	146	131	138	124	96	112	168	151	161
8	145	138	142	144	116	136	135	118	129	168	148	161
9	151	135	143	129	114	120	143	133	137	188	165	167
10	150	136	143	131	124	127	147	140	143	168	151	162
11	152	135	144	132	128	130	151	145	149	166	98	152
12	152	137	144	138	131	134	150	146	148	142	123	134
13	150	133	142	147	135	140	152	146	150	148	41	118
14	152	136	143	156	125	141	151	101	139	71	60	64
15	150	86	125	146	134	141	145	114	131	84	72	79
16	114	92	103	156	132	144	161	144	152	97	84	91
17	128	114	121	144	132	139	164	147	156	109	96	103
18	132	119	126	147	138	142	169	154	159	123	108	116
19	138	127	134	148	138	142	191	161	179	139	122	131
20	143	133	139	148	138	143	203	191	199	159	139	150
21	148	140	144	148	138	142	207	199	203	176	159	168
22	152	143	148	150	139	146	200	191	197	195	175	186
23	154	146	151	152	143	147	191	186	189	207	190	198
24	158	147	153	152	137	145	188	184	186	220	200	209
25	157	147	152	157	144	151	185	176	182	232	212	222
26	150	135	146	155	140	150	179	173	177	240	224	232
27	148	135	144	154	140	148	174	168	173	248	234	240
28	150	132	143	154	140	148	172	166	168	257	241	248
29	150	132	143	161	145	149	173	159	169	263	249	256
30	148	135	143	171	158	162	171	159	167	270	257	263
31	---	---	---	175	160	168	167	150	161	---	---	---
MONTH	158	86	139	175	114	143	207	80	162	270	41	166
YEAR	306	34	154									

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.4	18.1	18.6	16.9	13.5	15.2	10.2	5.9	7.8	11.2	6.4	9.0
2	23.2	19.0	20.8	13.8	12.1	12.8	8.9	6.0	7.4	9.0	5.1	6.8
3	26.3	19.3	22.1	14.6	11.4	12.6	7.3	4.2	5.9	10.2	5.8	7.7
4	24.7	17.8	20.8	13.3	9.5	11.4	6.8	2.7	4.5	10.8	8.5	9.7
5	22.3	15.3	18.6	13.7	9.0	11.3	8.9	4.4	6.3	11.6	10.7	11.2
6	24.2	17.0	20.2	13.5	11.6	12.5	10.4	6.8	8.5	12.3	9.8	10.9
7	24.1	19.4	21.3	16.7	13.0	14.4	10.3	8.1	9.3	10.0	8.8	9.5
8	21.4	17.7	19.4	16.6	14.4	15.4	8.6	4.8	6.2	8.8	7.7	8.3
9	18.9	14.2	16.6	18.9	14.8	16.6	5.1	2.9	3.8	9.4	7.6	8.3
10	17.6	12.7	15.2	15.2	11.8	13.5	7.0	3.4	4.8	10.7	7.1	8.4
11	19.9	13.2	16.2	14.5	10.1	12.6	8.0	5.4	6.7	10.9	5.6	8.1
12	20.7	14.3	17.3	17.2	11.4	13.9	7.7	4.8	6.8	9.7	6.1	8.1
13	21.4	15.9	18.5	16.3	11.8	14.0	6.9	4.5	5.4	8.8	4.0	6.2
14	21.0	18.0	19.3	15.7	12.8	14.4	7.4	3.7	5.2	8.5	4.4	6.3
15	22.1	16.7	19.2	15.7	14.0	14.8	7.0	4.4	5.7	10.6	5.7	7.8
16	22.6	17.8	20.1	16.3	11.8	14.8	6.3	3.3	4.7	10.7	7.8	8.9
17	21.3	19.5	20.4	12.2	9.1	10.5	4.7	2.9	3.8	12.6	7.1	9.4
18	20.9	19.8	20.6	10.4	7.7	9.0	5.4	4.1	4.6	13.0	9.5	11.1
19	19.1	15.3	17.4	9.4	7.1	8.1	4.6	3.7	4.2	11.5	10.2	10.9
20	14.8	12.1	13.5	11.5	7.2	9.1	6.0	2.5	3.9	11.5	9.8	10.5
21	14.5	9.4	11.9	13.0	9.0	10.6	5.7	2.5	4.0	12.7	9.9	11.0
22	17.6	9.8	13.3	9.3	5.1	7.9	3.2	.7	1.9	13.2	7.6	9.7
23	15.8	10.3	13.0	10.0	5.0	7.2	2.6	.7	1.5	10.9	7.0	8.9
24	15.3	10.2	12.6	8.0	4.4	6.1	3.7	1.0	2.2	10.0	9.1	9.6
25	16.2	9.4	12.4	8.0	4.2	6.0	3.9	1.4	2.7	12.4	9.4	10.6
26	15.9	9.8	12.6	11.5	7.4	9.0	5.4	2.4	3.7	10.6	7.1	9.2
27	15.7	10.3	12.7	11.3	9.8	10.4	5.0	2.2	3.5	10.0	5.1	7.4
28	15.8	10.7	13.1	14.3	10.2	12.2	6.3	2.9	4.5	11.1	5.2	8.0
29	17.2	11.4	14.1	12.5	8.3	10.8	7.6	3.1	5.2	11.9	8.4	10.1
30	17.3	12.7	15.1	10.2	6.6	8.2	8.5	6.4	7.5	10.9	7.1	9.2
31	18.2	14.6	16.3	---	---	---	12.3	7.5	9.2	12.3	7.2	9.6
MONTH	26.3	9.4	16.9	18.9	4.2	11.5	12.3	.7	5.2	13.2	4.0	9.0

0212429930 WIBERLY BRANCH NEAR WILGROVE, NC--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	13.0	6.9	9.5	13.2	9.1	11.0	21.3	7.7	14.1	26.2	18.8	22.2
2	13.7	9.7	11.6	11.9	9.7	10.5	21.0	12.3	15.9	26.1	17.1	21.3
3	16.2	12.0	13.9	12.9	9.7	10.7	17.9	12.1	14.9	21.5	18.6	19.8
4	16.8	12.7	14.8	15.4	7.8	10.8	17.9	9.4	13.1	23.9	18.5	20.8
5	13.2	8.4	10.8	16.9	8.3	11.5	19.9	10.2	14.8	24.6	18.8	21.2
6	11.7	7.2	9.3	18.2	7.9	12.0	19.1	13.5	16.3	20.8	14.8	17.8
7	14.6	10.0	11.7	13.2	8.4	10.6	18.8	11.3	15.1	22.1	13.7	17.5
8	13.5	7.8	10.7	10.5	7.5	8.8	18.1	8.7	13.3	22.4	14.1	18.0
9	13.2	9.9	11.7	12.2	8.4	10.1	17.3	9.3	13.2	21.4	17.3	19.2
10	14.4	11.8	13.4	20.2	10.2	14.1	17.0	13.2	14.7	25.8	17.7	21.3
11	14.9	9.6	11.9	22.2	11.7	16.0	19.2	14.0	16.2	25.3	14.9	19.3
12	15.3	8.3	11.2	23.0	13.3	17.2	18.6	9.8	14.0	24.5	16.2	19.4
13	13.3	7.9	10.6	23.4	14.1	18.0	18.0	9.7	13.8	23.9	18.1	20.6
14	16.5	9.6	12.5	21.9	14.5	17.6	15.8	11.8	14.1	25.0	17.1	20.8
15	17.7	12.0	14.4	19.7	13.8	16.6	21.6	13.4	16.9	26.5	18.2	22.3
16	15.8	15.2	15.5	20.2	16.2	17.7	23.0	15.1	18.6	24.6	19.9	21.9
17	18.1	12.8	15.3	19.2	16.2	17.3	23.5	13.6	18.4	23.8	19.2	21.1
18	12.3	9.7	11.1	21.3	13.2	16.6	19.7	12.6	16.3	22.6	15.7	18.9
19	13.7	8.0	10.8	18.3	12.0	14.8	18.6	9.6	14.5	22.8	14.7	18.6
20	14.5	8.6	11.1	15.5	9.8	12.4	20.6	14.6	17.1	23.9	17.7	20.4
21	13.3	6.9	10.1	16.1	7.4	11.3	20.9	15.6	18.4	24.6	19.3	21.4
22	15.2	10.1	12.3	17.0	8.2	12.2	22.5	15.4	19.0	21.9	16.3	19.5
23	14.7	11.3	13.4	19.3	10.4	14.6	24.2	14.7	19.3	22.1	15.2	18.1
24	13.6	7.8	10.4	19.7	11.7	15.3	24.8	17.1	20.8	22.4	16.8	19.2
25	12.2	5.0	8.0	18.2	12.2	14.8	25.7	18.5	21.9	23.3	18.1	20.3
26	10.6	3.1	6.5	15.0	13.1	13.9	26.0	18.8	22.6	24.4	18.5	21.0
27	13.4	5.5	8.8	17.7	10.7	14.0	25.9	18.8	22.6	25.0	20.1	22.1
28	14.6	7.7	10.5	16.3	10.0	13.0	22.2	17.1	20.0	23.3	20.1	21.9
29	---	---	---	13.0	10.2	11.6	21.8	16.3	18.6	24.6	20.4	22.3
30	---	---	---	12.9	10.3	11.5	25.8	16.7	20.8	28.8	17.8	22.9
31	---	---	---	15.5	11.0	12.9	---	---	---	27.4	19.9	23.2
MONTH	18.1	3.1	11.5	23.4	7.4	13.5	26.0	7.7	17.0	28.8	13.7	20.5

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.6	21.1	23.9	27.7	24.2	26.1	26.6	23.3	25.2	25.9	20.8	23.4
2	25.7	22.6	24.0	26.6	22.1	24.7	26.3	23.2	24.7	26.1	21.2	23.7
3	27.8	22.4	24.7	25.8	19.2	22.9	25.7	22.0	23.9	27.2	23.0	25.0
4	28.5	22.8	25.5	26.5	21.4	24.1	26.3	22.4	24.4	26.2	22.3	24.2
5	25.7	19.3	22.8	27.4	22.5	25.2	26.2	22.8	24.5	25.3	20.0	22.7
6	25.8	19.2	22.6	27.6	23.0	25.5	26.3	22.9	24.3	26.4	21.9	24.1
7	28.0	22.1	25.1	27.7	22.5	25.3	27.6	21.4	24.4	27.2	23.4	25.3
8	28.3	24.0	26.2	27.5	24.8	26.1	25.3	21.1	23.2	27.4	23.9	25.8
9	28.0	23.5	25.8	27.6	23.5	25.4	25.7	22.5	23.8	26.9	24.7	25.9
10	27.3	22.9	25.3	28.4	24.5	26.4	25.2	20.5	22.7	27.0	23.2	25.2
11	26.6	20.6	24.0	28.0	24.4	26.5	25.3	19.8	22.6	26.6	23.8	25.1
12	25.9	19.4	23.0	27.7	24.4	26.2	25.4	20.3	22.9	26.5	23.2	24.7
13	25.8	18.8	22.3	27.5	23.5	25.6	26.4	22.9	24.6	25.5	22.9	24.1
14	27.4	22.0	24.8	27.5	23.5	25.3	25.9	22.9	24.2	25.1	23.0	24.0
15	26.8	24.0	25.3	26.9	23.3	24.9	27.1	21.1	23.8	26.3	23.5	24.6
16	28.1	22.3	24.9	27.3	22.8	25.0	27.1	21.6	24.1	24.9	21.1	22.9
17	30.1	20.4	24.8	26.9	23.5	25.2	26.4	21.5	23.9	23.2	20.0	21.5
18	28.6	21.1	24.9	25.9	23.2	24.5	29.3	20.7	24.0	21.8	18.3	20.0
19	28.2	23.1	26.0	25.8	22.3	24.1	26.8	21.4	23.9	21.9	19.0	20.2
20	26.9	21.0	24.4	25.6	22.7	24.2	26.9	22.4	24.7	24.0	20.1	21.7
21	27.9	22.8	25.4	26.9	22.9	24.8	27.1	23.6	25.2	22.8	21.2	21.9
22	27.2	24.1	25.9	26.8	23.0	24.9	26.6	22.8	24.5	23.8	20.9	21.8
23	26.8	22.8	25.0	27.4	24.2	25.9	26.2	22.8	24.5	21.8	19.2	20.5
24	26.3	20.5	23.6	26.9	23.8	25.4	26.0	22.9	24.3	20.1	16.6	18.4
25	26.3	20.1	23.4	25.6	22.8	23.9	26.5	21.8	24.0	20.0	16.1	17.9
26	25.4	20.7	23.1	25.6	20.3	23.0	26.4	22.2	24.3	20.4	16.6	18.3
27	25.9	20.9	23.5	25.5	19.7	22.8	27.1	22.1	24.5	20.6	17.1	18.9
28	26.7	21.9	24.4	26.2	23.0	24.5	27.5	22.1	24.9	20.7	17.4	19.1
29	26.9	22.3	24.9	26.0	20.9	23.5	27.1	23.1	25.4	20.5	17.8	19.3
30	27.2	23.1	25.3	26.6	22.9	24.7	26.5	22.5	24.7	20.2	18.2	19.2
31	---	---	---	26.9	23.1	25.0	26.4	22.4	24.3	---	---	---
MONTH	30.1	18.8	24.5	28.4	19.2	24.9	29.3	19.8	24.2	27.4	16.1	22.3
YEAR	30.1	.7	16.8									

PEE DEE RIVER BASIN

0212429960 REEDY CREEK TRIBUTARY °2 BELOW WIBERLY BRANCH NEAR MINT HILL, NC

LOCATION.--Lat 35°13'52",long 80°41'32", Mecklenburg County, Hydrologic Unit 03050103, on left bank 700 ft downstream from Wiberly Branch, 1.0 mi upstream from bridge on Secondary Road 2822, and 4.4 mi northwest of Mint Hill.

DRAINAGE AREA.--1.0 mi^2.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--April 1988 to current year.

GAGE.--Water-stage recorder and wooden V-notch sharp-crested weir.

REMARKS.--No estimated daily discharges. Records fair except for period July 8-27, which are poor. Minimum daily discharge for period of record also occurred Sept. 4, 7, 8, 1990.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	.39	.35	4.4	.49	.58	10	.55	.80	.27	.18	.13
2	19	.40	.36	1.0	.49	.97	7.2	.79	.54	.27	.17	.13
3	2.2	.41	.34	.69	.55	17	1.4	.90	.48	.27	.18	.12
4	1.3	.39	.34	.56	.59	1.9	.89	.63	.45	.26	.18	.12
5	.97	.38	.34	.56	.54	1.1	.70	.62	.43	.26	.18	.13
6	.62	.40	.34	4.8	.49	.82	.64	.43	.39	.26	1.0	.13
7	.49	.40	.35	1.6	.48	.76	.82	.38	.40	.25	.23	.12
8	.41	.45	8.2	9.6	.45	.64	.62	.36	.36	.50	.20	.12
9	.36	.51	3.4	2.2	.60	.60	.50	.44	.35	.24	.20	.15
10	.53	.39	2.4	1.2	17	.59	.46	3.5	.34	.22	.19	.13
11	.32	.38	1.4	.96	3.8	.55	.51	.83	.31	.21	.19	.30
12	.31	.38	6.9	.76	1.3	.52	.38	.49	.30	.21	.18	.16
13	.29	.38	6.2	.63	.99	.51	.43	.48	.30	.21	.18	3.4
14	.26	.39	1.5	.58	.71	.45	1.2	.45	.30	.23	.98	.76
15	.26	.66	.90	.55	.62	.44	5.1	.44	1.9	.26	.31	.40
16	.24	1.2	.61	.51	32	.46	1.2	.42	.80	.29	.29	.23
17	.24	.42	.49	.49	5.5	2.5	.70	.43	.55	.27	.22	.19
18	.40	.37	.46	.46	1.4	1.2	.55	.39	.45	.21	.20	.18
19	4.6	.34	.46	.43	11	.59	.48	.35	.39	.19	.18	.18
20	.84	.34	.43	.45	2.0	.48	.41	.37	.36	.18	.17	.19
21	.60	.34	.41	20	1.2	.42	.40	.40	.34	.18	.17	.19
22	.47	1.2	.36	1.8	1.5	.40	.40	.53	.33	.19	.17	.20
23	.45	3.3	.32	1.1	1.4	.39	.39	.41	.30	.19	.17	.20
24	.45	.76	.32	.91	1.0	.38	.37	.39	.29	.20	.17	.19
25	.43	.49	.33	4.6	.74	.38	.40	.39	.28	.20	.16	.18
26	.41	.44	.34	3.5	.66	.41	.37	.38	.27	.20	.15	.17
27	.41	.43	.33	1.2	.84	.42	.35	.52	.28	.19	.15	.17
28	.41	.44	.34	.92	.64	.38	.47	7.3	.28	.18	.14	.17
29	.41	.39	.34	.77	---	1.9	.72	8.9	.25	.19	.14	.17
30	.42	.36	.37	.64	---	1.2	.41	1.5	.27	.18	.14	.17
31	.41	---	3.6	.54	---	2.3	---	1.0	---	.18	.13	---
MEAN	2.79	.57	1.38	2.21	3.18	1.33	1.28	1.13	.44	.23	.24	.30
MAX	48	3.3	8.2	20	32	17	10	8.9	1.9	.50	1.0	3.4
MIN	.24	.34	.32	.43	.45	.38	.35	.35	.25	.18	.13	.12
IN.	3.22	.64	1.59	2.54	3.31	1.53	1.43	1.30	.49	.27	.27	.34

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	1.67	.595	.880	1.48	2.78	2.40	1.07	1.14	.511	.623	1.10	1.04
MAX	2.79	.620	1.38	2.21	3.18	3.47	1.36	1.94	.705	1.09	2.26	1.62
(WY)	1990	1989	1990	1990	1990	1989	1989	1989	1989	1988	1988	1989
MIN	.559	.571	.380	.753	2.38	1.33	.582	.355	.391	.230	.235	.303
(WY)	1989	1990	1989	1989	1989	1990	1988	1988	1988	1990	1990	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	1.25		*****	
HIGHEST ANNUAL MEAN			1.25	1989
LOWEST ANNUAL MEAN			1.25	1989
HIGHEST DAILY MEAN	48	Oct 1	48	Oct 1 1989
LOWEST DAILY MEAN	.12	Sep 3	.12*	Sep 3 1990
INSTANTANEOUS PEAK FLOW	228	Oct 1	281	Aug 28 1988
INSTANTANEOUS PEAK STAGE	4.35	Oct 1	4.96	Aug 28 1988
INSTANTANEOUS LOW FLOW	.09	Sep 3	.09	Sep 3 1990
ANNUAL RUNOFF (INCHES)	17.0		*****	
10 PERCENTILE	1.8		2.1	
50 PERCENTILE	.39		.39	
95 PERCENTILE	.17		.17	

***** Indicates not enough data, therefore statistic is not computed

* See REMARKS.

PEE DEE RIVER BASIN

0212429960 REEDY CREEK TRIBUTARY °2 BELOW WIBERLY BRANCH NEAR MINT HILL, NC

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1988 to September 1990 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1988 to September 1990.
WATER TEMPERATURE: April 1988 to September 1990.

INSTRUMENTATION.--Water-quality monitor since Apr. 1988. Continuous water-quality monitor was removed Nov. 1990.

REMARKS.--Station operated as part of the Charlotte-Mecklenburg County Water-Quality Study. Interruptions in the daily record were due to malfunctions of the monitor and probes being covered with sand.

COOPERATION.--Chemical samples were collected by the U.S. Geological Survey. Laboratory analyses, other than organics, were performed by the Mecklenburg County Department of Environmental Health Laboratory.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 303 microsiemens, Aug. 4, 1988; minimum, 31 microsiemens, Sept. 4, 1988.
WATER TEMPERATURE: Maximum, 27.9°C, Aug. 5, 1988; minimum, 0.0°C, Dec. 22-25, 1989.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 234 microsiemens, Sept. 15, 16; minimum, 43 microsiemens, Oct 2.
WATER TEMPERATURE: Maximum, 26.6°C, July 11; minimum, 0.0°C, Dec. 22-25.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	POTAS-SIUM, TOTAL RECOV-ERABLE (MG/L AS K)
OCT									
17...	1435	--	--	--	--	--	1100	3200	--
NOV									
29...	0825	--	--	--	--	--	450	160	--
DEC									
21...	0930	118	6.0	3.0	--	--	270	130	--
28...	1030	--	--	--	--	--	--	--	--
JAN									
16...	1510	--	--	--	--	--	1400	380	--
FEB									
16...	0755	--	--	--	--	--	150	160	--
MAR									
20...	1537	--	--	--	--	--	1100	290	--
27...	1345	120	7.9	17.0	12.2	0.3	1800	710	1.1
MAY									
16...	1455	--	--	--	--	--	840	2700	--
JUN									
26...	1200	88	6.9	20.5	--	<0.1	940	1300	1.2
JUL									
24...	1415	--	--	--	--	--	1000	3300	--
SEP									
05...	1330	--	--	--	--	--	400	1100	--

DATE	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	PHOS-PHORUS TOTAL (MG/L AS P)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	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)
OCT									
17...	--	--	--	--	--	--	--	--	--
NOV									
29...	--	--	--	--	--	--	--	--	--
DEC									
21...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
JAN									
16...	--	--	--	--	--	--	--	--	--
FEB									
16...	--	--	--	--	--	--	--	--	--
MAR									
20...	--	--	--	--	--	--	--	--	--
27...	0.150	0.070	0.09	0.030	870	<2	200	<2	4
MAY									
16...	--	--	--	--	--	--	--	--	--
JUN									
26...	0.110	<0.040	--	<0.050	810	<2	300	<2	11
JUL									
24...	--	--	--	--	--	--	--	--	--
SEP									
05...	--	--	--	--	--	--	--	--	--

PEE DEE RIVER BASIN

0212429960 REEDY CREEK TRIBUTARY °2 BELOW WIBERLY BRANCH NEAR MINT HILL, NC

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (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)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
17...	--	--	--	--	--	--	--	--	--
NOV									
29...	--	--	--	--	--	--	--	--	--
DEC									
21...	--	--	--	--	--	--	--	--	3.5
28...	--	--	--	--	--	--	--	--	--
JAN									
16...	--	--	--	--	--	--	--	--	--
FEB									
16...	--	--	--	--	--	--	--	--	--
MAR									
20...	--	--	--	--	--	--	--	--	--
27...	<50	1700	8	230	<0.20	<2	<2	200	3.1
MAY									
16...	--	--	--	--	--	--	--	--	--
JUN									
26...	<50	1400	<2	160	<0.20	<2	<2	<50	1.1
JUL									
24...	--	--	--	--	--	--	--	--	--
SEP									
05...	--	--	--	--	--	--	--	--	--

PEE DEE RIVER BASIN

0212429960 REEDY CREEK TRIBUTARY °2 BELOW WIBERLY BRANCH NEAR MINT HILL, NC

SPECIFIC CONDUCTANCE, US/CM ‡ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	137	45	100	---	---	---	138	133	136	---	---	---
2	102	43	90	---	---	---	138	132	136	---	---	---
3	124	102	108	---	---	---	141	134	137	---	---	---
4	129	108	120	---	---	---	144	137	140	---	---	---
5	140	120	130	---	---	---	141	136	139	---	---	---
6	157	130	144	---	---	---	141	135	139	---	---	---
7	157	148	153	---	---	---	140	135	139	---	---	---
8	158	156	157	---	---	---	136	103	120	---	---	---
9	156	151	154	---	---	---	141	112	127	---	---	---
10	161	130	151	---	---	---	160	133	144	---	---	---
11	138	128	131	---	---	---	181	154	170	---	---	---
12	152	138	144	---	---	---	210	174	186	---	---	---
13	169	153	160	---	---	---	---	---	---	---	---	---
14	206	171	185	---	---	---	---	---	---	---	---	---
15	215	194	206	---	---	---	---	---	---	---	---	---
16	192	152	169	---	---	---	---	---	---	---	---	---
17	151	139	145	120	114	117	---	---	---	134	129	133
18	139	89	124	125	121	122	---	---	---	141	134	136
19	---	---	---	127	125	125	134	132	133	145	137	139
20	---	---	---	131	127	128	147	130	136	142	112	138
21	---	---	---	136	131	133	139	130	135	102	47	61
22	---	---	---	136	90	130	141	130	135	67	57	62
23	---	---	---	108	81	101	153	136	142	72	67	70
24	---	---	---	122	109	114	148	133	141	107	72	78
25	---	---	---	128	123	126	148	133	139	116	103	108
26	---	---	---	131	127	129	137	129	133	124	112	121
27	---	---	---	132	128	130	136	129	132	129	125	126
28	---	---	---	133	116	127	137	126	132	130	125	128
29	---	---	---	134	120	129	136	126	131	133	128	130
30	---	---	---	138	134	136	136	125	129	142	134	137
31	---	---	---	---	---	---	129	97	122	150	142	146
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	148	140	144	227	222	224	142	60	124	135	109	128
2	146	142	144	228	218	227	92	75	83	142	106	134
3	147	131	140	184	138	149	106	93	101	190	125	167
4	132	122	128	138	132	134	111	106	109	194	161	186
5	130	120	122	135	131	133	119	110	113	161	144	154
6	150	132	139	136	132	134	121	113	116	142	128	135
7	168	151	160	135	134	134	129	107	118	140	127	132
8	171	165	168	133	131	132	124	112	116	145	136	139
9	167	157	164	132	131	132	121	116	118	145	140	143
10	117	54	75	133	129	132	124	118	121	169	142	154
11	88	82	85	137	131	134	126	112	120	168	153	161
12	95	89	92	137	134	136	128	119	124	158	153	154
13	107	94	100	137	135	136	125	103	118	178	159	169
14	105	102	104	137	135	136	124	92	116	158	145	150
15	123	107	117	135	133	134	123	77	102	148	129	138
16	122	89	108	133	131	132	119	107	113	137	130	133
17	158	114	136	131	126	130	128	119	123	139	130	135
18	175	160	168	126	124	125	127	119	123	141	133	137
19	173	153	158	125	124	125	133	118	127	149	141	145
20	168	160	164	127	121	123	125	121	123	149	139	145
21	174	168	170	130	123	127	124	118	122	148	140	144
22	193	174	182	137	122	127	122	118	120	152	133	145
23	200	193	195	129	121	125	122	119	121	155	152	153
24	201	198	200	128	119	125	123	117	120	161	156	158
25	203	201	202	126	118	123	120	110	117	167	160	161
26	207	202	204	124	116	121	123	116	119	165	162	163
27	215	207	211	125	116	121	123	118	121	168	125	165
28	222	216	218	129	120	125	126	117	123	160	73	138
29	---	---	---	137	118	128	143	117	135	96	81	89
30	---	---	---	131	116	125	139	132	135	108	96	102
31	---	---	---	141	107	135	---	---	---	107	101	104
MONTH	222	54	150	228	107	136	143	60	118	194	73	144

PEE DEE RIVER BASIN

0212429960 REEDY CREEK TRIBUTARY °2 BELOW WIBERLY BRANCH NEAR MINT HILL, NC

SPECIFIC CONDUCTANCE, US/CM ‡ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	115	107	111	146	142	144	159	154	157	155	150	152
2	121	115	118	144	139	142	160	154	158	156	150	153
3	124	120	122	142	136	140	159	153	157	156	151	153
4	130	123	126	151	135	138	159	151	155	167	152	156
5	141	127	130	137	133	136	161	149	154	158	149	154
6	132	128	130	147	133	137	158	107	145	166	150	154
7	137	129	131	139	133	135	165	146	158	158	151	155
8	133	128	131	140	125	133	173	163	168	159	153	156
9	142	131	133	131	124	127	178	172	175	161	153	157
10	140	132	134	143	132	137	178	175	176	161	155	157
11	153	133	136	145	140	142	179	175	177	167	132	156
12	140	135	137	149	143	146	180	174	176	168	148	160
13	137	134	135	156	146	149	178	173	175	169	107	157
14	140	133	136	160	134	146	174	144	169	196	133	167
15	138	105	125	147	135	141	196	171	186	234	197	215
16	126	108	118	158	136	147	193	184	190	234	211	218
17	132	127	130	159	152	155	197	189	194	217	201	208
18	138	132	135	---	---	---	201	194	196	209	200	205
19	142	138	138	---	---	---	199	188	192	201	193	196
20	146	139	140	---	---	---	191	185	187	209	198	203
21	145	140	141	---	---	---	186	178	181	205	175	192
22	144	142	143	---	---	---	182	175	177	176	171	174
23	155	142	146	---	---	---	175	170	172	176	166	171
24	145	142	143	---	---	---	170	165	167	175	128	157
25	147	142	144	122	101	108	168	163	165	137	120	132
26	146	143	145	135	110	120	164	161	163	138	129	134
27	156	144	146	161	132	145	161	158	160	152	137	147
28	149	142	145	153	148	151	161	148	157	161	143	150
29	146	143	145	153	148	151	153	146	150	149	137	145
30	145	143	144	157	150	154	160	147	150	145	138	142
31	---	---	---	160	154	157	153	147	150	---	---	---
MONTH	156	105	135	---	---	---	201	107	169	234	107	166

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.1	19.0	19.4	15.6	12.4	14.1	8.9	5.3	6.9	10.5	5.9	8.0
2	23.9	19.8	21.5	12.5	11.8	12.2	9.3	5.5	7.3	7.3	4.3	5.9
3	24.6	19.4	21.8	13.7	10.4	12.0	7.1	3.6	5.5	8.2	5.3	6.9
4	21.9	17.6	19.7	12.1	8.7	10.3	5.8	2.0	3.8	10.1	7.7	9.0
5	20.0	14.2	17.3	12.4	8.3	10.4	7.8	4.1	5.8	11.6	10.0	10.7
6	21.5	17.3	19.2	13.5	10.9	12.3	9.9	6.5	8.1	11.6	9.7	10.5
7	21.6	18.9	20.1	16.0	13.1	14.4	9.9	7.6	8.9	9.8	8.4	9.5
8	18.5	15.9	17.4	16.9	14.2	15.5	8.6	5.3	6.6	9.0	7.7	8.3
9	15.4	12.2	13.9	17.7	12.9	15.9	5.9	4.1	4.7	9.4	7.6	8.3
10	16.6	10.7	13.4	13.9	10.1	12.0	6.6	4.1	5.3	9.6	7.3	8.2
11	16.8	11.7	14.2	13.5	8.9	11.1	7.7	6.1	6.9	10.0	6.2	8.2
12	17.5	13.0	15.2	15.2	10.7	12.5	7.7	5.7	7.0	9.2	6.7	8.0
13	18.5	14.3	16.4	15.3	10.8	12.8	7.0	5.3	6.1	7.5	4.8	6.1
14	19.5	17.0	17.9	15.2	12.0	13.6	6.7	4.5	5.6	8.2	5.0	6.5
15	19.6	15.2	17.3	15.9	13.4	14.6	7.1	4.9	6.1	10.1	6.5	8.0
16	20.1	16.6	18.2	16.7	9.9	13.9	6.7	3.6	4.6	11.1	8.0	9.1
17	20.7	18.0	19.2	10.0	7.5	8.9	4.6	3.1	3.9	11.8	7.0	9.2
18	20.3	19.4	19.7	9.8	7.0	8.3	5.7	4.1	4.6	13.2	9.2	10.9
19	19.6	15.7	17.4	9.2	6.8	7.8	4.4	3.8	4.1	11.3	10.0	10.6
20	15.2	11.3	13.0	11.0	7.1	9.0	4.4	1.9	3.2	11.4	9.7	10.7
21	12.5	9.2	10.9	11.6	8.1	9.8	4.9	1.4	3.0	12.6	9.9	11.3
22	13.9	9.7	11.8	8.5	5.8	7.5	3.0	.0	1.1	11.2	7.8	9.5
23	13.7	9.5	11.9	8.9	5.7	7.2	1.0	.0	.2	10.6	7.1	8.9
24	13.7	10.4	12.0	7.2	4.3	5.8	1.4	.0	.3	10.0	9.3	9.6
25	13.7	9.3	11.6	7.8	4.2	6.0	3.3	.0	1.6	12.7	9.5	10.7
26	13.8	9.3	11.6	11.1	7.3	9.2	4.5	1.6	2.8	11.0	7.1	9.1
27	14.0	9.8	12.0	11.2	9.8	10.6	4.4	1.3	2.8	9.4	5.9	7.4
28	14.4	10.6	12.5	14.0	10.5	12.3	5.7	1.8	3.5	9.9	5.8	7.9
29	15.3	10.9	13.1	12.2	6.9	9.9	6.5	2.1	4.4	11.7	8.5	10.1
30	16.5	12.1	14.4	8.7	5.3	6.7	8.8	6.2	7.2	10.2	6.7	8.7
31	17.3	14.1	15.8	---	---	---	11.3	6.8	8.7	11.0	6.8	8.7
MONTH	24.6	9.2	15.8	17.7	4.2	10.9	11.3	.0	4.9	13.2	4.3	8.9

PEE DEE RIVER BASIN

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WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.2	6.3	8.5	12.1	8.6	10.1	21.7	11.8	14.8	22.2	17.4	19.8
2	13.6	9.0	11.2	10.6	8.8	9.7	20.9	13.3	16.4	23.1	16.5	19.6
3	15.6	11.3	13.1	12.0	9.1	10.4	17.6	12.7	15.0	19.4	18.0	18.6
4	16.2	11.5	13.8	13.3	7.2	9.9	17.6	10.3	13.3	21.1	17.9	19.4
5	11.3	7.6	9.6	14.0	8.0	10.4	20.0	10.7	14.5	21.9	18.2	19.8
6	11.1	6.3	8.5	15.4	7.8	11.1	19.4	12.9	15.6	17.4	14.0	15.9
7	13.5	9.4	11.0	12.0	8.7	10.2	18.2	11.4	14.4	18.3	12.7	15.5
8	12.5	7.2	9.8	9.5	7.3	8.6	17.8	9.4	12.9	19.8	13.0	16.5
9	12.7	9.0	11.0	11.3	8.4	9.7	18.4	9.2	13.0	17.9	16.3	17.1
10	13.8	11.5	13.1	17.5	9.9	13.1	17.0	12.0	14.4	23.4	16.7	19.4
11	12.7	9.1	10.9	20.1	11.8	15.3	19.2	12.4	15.7	19.8	13.6	16.6
12	12.5	8.1	10.0	21.7	13.4	16.8	17.9	9.3	12.8	19.9	14.2	16.9
13	12.5	7.5	9.8	22.3	13.8	17.3	18.2	9.0	12.9	19.9	16.6	18.1
14	14.2	9.1	11.4	21.4	14.0	17.1	16.1	11.0	13.6	21.3	16.5	18.8
15	16.5	11.1	13.3	19.1	14.3	16.6	20.7	13.9	16.8	22.4	16.4	19.3
16	14.8	13.8	14.1	19.9	16.5	17.8	22.0	15.4	18.1	21.8	18.3	20.1
17	16.0	11.5	13.7	19.5	16.5	17.5	22.8	13.9	17.9	20.5	17.9	19.4
18	11.1	8.9	10.0	20.1	13.0	16.0	19.1	12.5	15.2	19.9	14.8	17.0
19	12.0	8.0	9.8	17.8	11.9	14.4	18.8	9.9	13.8	19.5	13.0	16.2
20	12.2	8.4	10.0	15.0	8.6	11.4	19.1	13.7	16.0	20.6	15.8	17.9
21	11.6	6.1	8.9	15.8	6.7	10.4	19.9	15.1	17.3	22.2	17.7	19.6
22	13.5	9.2	11.3	17.4	8.0	12.0	21.2	14.6	17.5	19.5	14.9	17.5
23	13.4	11.0	12.4	19.7	10.5	14.2	22.8	13.3	17.5	17.3	13.6	15.4
24	12.0	7.4	9.6	19.0	11.4	14.4	23.7	15.5	18.9	18.2	15.1	16.6
25	9.8	5.5	7.0	18.0	11.3	14.0	24.3	16.8	19.9	19.2	16.4	17.7
26	8.4	3.6	5.8	14.9	12.5	13.4	24.4	17.2	20.4	21.7	17.2	19.3
27	11.0	4.8	7.5	17.2	10.6	13.3	24.8	17.4	20.5	22.4	19.2	20.6
28	11.9	6.9	9.3	16.7	8.7	12.2	19.9	17.3	18.4	21.8	19.6	20.8
29	---	---	---	12.3	11.0	11.8	19.3	16.3	17.6	22.4	19.5	21.2
30	---	---	---	13.1	10.8	11.8	21.6	16.2	18.7	22.5	16.6	19.5
31	---	---	---	15.4	11.8	13.4	---	---	---	21.9	17.5	19.7
MONTH	16.5	3.6	10.5	22.3	6.7	13.0	24.8	9.0	16.1	23.4	12.7	18.4

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.4	18.3	20.3	26.1	21.8	23.2	23.9	20.4	22.1	22.7	18.4	20.4
2	21.2	19.8	20.5	23.6	20.0	21.7	23.0	20.3	21.4	23.6	18.7	20.9
3	23.2	19.8	21.4	22.4	17.0	19.8	22.7	19.0	20.7	24.4	20.6	22.2
4	23.4	20.6	22.0	24.1	18.8	21.2	23.6	19.4	21.4	22.9	19.8	21.2
5	20.6	17.2	19.0	25.1	20.2	22.4	24.0	20.9	22.3	22.2	17.6	19.9
6	21.4	16.4	19.0	24.4	20.8	22.6	24.8	21.0	22.6	23.8	19.5	21.5
7	23.7	19.0	21.2	24.3	20.4	22.5	23.6	20.4	22.1	25.2	21.1	22.8
8	24.6	20.9	22.6	26.1	21.5	23.2	22.5	20.1	21.2	25.0	21.4	23.1
9	24.3	20.9	22.4	25.6	21.9	23.7	22.7	20.0	21.3	23.5	22.0	22.7
10	23.1	20.2	21.7	26.2	22.8	24.2	21.9	18.6	20.0	25.1	21.0	22.7
11	22.1	18.0	20.0	26.6	22.0	23.9	22.8	17.9	20.2	24.0	21.1	22.5
12	21.0	16.6	18.6	25.8	22.4	23.7	22.8	17.9	20.4	23.3	21.0	22.2
13	20.5	15.4	18.1	24.4	21.5	22.8	24.5	20.5	22.1	22.6	21.1	21.9
14	22.9	18.4	20.6	24.0	21.7	22.7	23.9	20.6	22.2	23.8	21.6	22.5
15	25.7	20.3	22.7	24.4	21.7	22.8	23.8	20.4	22.2	24.2	21.9	22.9
16	24.6	22.3	23.5	23.6	20.1	21.8	23.6	20.6	22.2	21.7	17.8	19.9
17	24.6	20.1	22.4	23.8	20.9	22.2	22.7	20.9	21.8	19.2	16.3	17.9
18	25.0	20.1	22.7	---	---	---	24.7	19.6	21.8	17.1	13.8	15.8
19	25.9	22.0	23.7	---	---	---	23.9	20.5	22.3	18.9	15.2	16.9
20	23.4	19.2	21.6	---	---	---	24.3	21.1	22.7	21.3	17.6	19.3
21	25.6	20.7	22.9	---	---	---	24.4	22.1	22.9	20.8	19.2	19.9
22	24.7	21.8	23.2	---	---	---	23.0	21.1	22.1	21.2	18.6	19.6
23	25.1	21.4	23.1	---	---	---	22.5	21.0	21.7	20.1	15.8	17.3
24	22.9	18.6	20.8	---	---	---	22.4	21.0	21.6	15.9	12.0	14.1
25	22.9	17.9	20.3	21.4	20.1	20.6	23.4	20.7	22.0	16.2	11.4	13.6
26	22.1	18.4	20.4	23.1	18.4	20.5	23.3	21.0	22.1	17.1	12.7	14.7
27	23.1	18.9	21.0	23.0	17.5	20.2	24.7	20.7	22.5	17.8	13.4	15.7
28	24.0	19.8	21.8	23.4	20.6	21.6	24.9	20.7	22.6	17.8	13.9	16.1
29	24.7	21.0	22.7	23.3	18.9	21.1	24.4	21.0	22.5	18.0	14.6	16.4
30	25.0	20.9	22.8	24.3	20.4	22.0	23.3	20.4	21.8	17.6	15.3	16.5
31	---	---	---	24.8	20.4	22.3	23.4	20.0	21.4	---	---	---
MONTH	25.9	15.4	21.4	---	---	---	24.9	17.9	21.8	25.2	11.4	19.4

PEE DEE RIVER BASIN

02125000 BIG BEAR CREEK NEAR RICHFIELD, NC

LOCATION.--Lat 35°20'02", long 80°20'09", Stanly County, Hydrologic Unit 03040105, on left bank 300 ft downstream from Little Creek, 400 ft upstream from bridge on Secondary Road 1134, and 10 mi southwest of Richfield.

DRAINAGE AREA.--55.6 mi^2.

PERIOD OF RECORD.--May 1954 to current year.

REVISED RECORDS.--WSP 1503: 1955, 1956(M). WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 426.62 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. No flow occurs periodically. Minimum discharge for current water year, no flow, occurred all or part of each day Aug. 30 to Sept. 14, Sept. 16-30.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1921 reached a stage of about 19 ft, from information by North Carolina State Highway Commission.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2640	15	21	383	55	57	151	14	42	1.3	.26	0
2	2130	14	19	117	49	52	326	16	32	1.2	.23	0
3	297	14	18	71	45	1060	110	303	26	1.1	.21	0
4	120	14	16	56	44	341	65	88	22	1.0	.22	0
5	69	13	16	49	41	152	47	48	18	.92	.20	0
6	49	12	16	294	34	100	38	32	15	.85	.18	0
7	39	12	15	189	32	74	49	25	14	.79	.26	0
8	32	13	307	632	29	59	39	20	12	1.2	.26	0
9	26	16	369	281	28	57	31	17	10	7.5	.32	0
10	22	16	206	144	1080	54	28	421	9.2	4.2	.33	0
11	20	13	218	93	431	46	30	113	7.9	1.7	.32	0
12	18	12	396	70	171	40	25	48	6.7	1.2	.29	0
13	17	11	814	52	97	36	22	33	6.3	2.7	.23	0
14	16	10	229	43	71	33	20	26	5.8	4.9	1.3	.13
15	15	13	126	40	55	31	177	21	6.2	4.6	.95	.13
16	14	39	84	37	1510	32	165	18	6.6	2.6	.46	.02
17	13	32	60	34	767	43	87	15	5.8	1.9	7.7	0
18	19	21	51	32	208	95	49	13	5.1	2.5	.61	0
19	629	17	45	30	667	48	36	11	4.5	2.5	.30	0
20	155	16	42	28	287	38	31	10	3.7	1.8	.17	0
21	72	15	36	1070	147	31	28	9.4	3.4	1.5	.14	0
22	47	14	31	245	289	28	27	17	3.0	1.1	.16	0
23	35	270	38	120	437	26	23	24	2.9	.95	.21	0
24	29	93	40	84	186	23	20	14	2.5	.71	.15	0
25	25	53	44	330	106	22	17	11	2.1	.56	.15	0
26	22	41	22	697	77	21	15	10	2.0	.50	.34	0
27	20	34	22	223	66	19	14	9.0	1.7	.45	.13	0
28	18	30	21	126	60	18	13	913	1.7	.41	.08	0
29	17	27	20	97	---	77	20	1810	1.5	.36	.06	0
30	16	23	22	96	---	118	18	170	1.3	.33	.01	0
31	16	---	29	68	---	112	---	69	---	.30	0	---
MEAN	215	30.8	109	188	252	94.9	57.4	140	9.36	1.73	.52	.009
MAX	2640	270	814	1070	1510	1060	326	1810	42	7.5	7.7	.13
MIN	13	10	15	28	28	18	13	9.0	1.3	.30	0	0
IN.	4.45	.62	2.27	3.90	4.73	1.97	1.15	2.91	.19	.04	.01	0

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	33.0	27.8	58.0	102.7	140.7	119.2	72.6	41.4	29.7	30.1	26.3	17.9
MAX	261.6	212.2	185.6	293.5	284.2	266.8	247.3	234.2	139.6	220.1	222.9	116.1
(WY)	1965	1986	1977	1978	1984	1980	1958	1975	1957	1984	1967	1975
MIN	.010	.340	2.12	4.38	16.2	13.2	6.87	1.32	.240	.312	0	.010
(WY)	1962	1962	1966	1981	1986	1981	1967	1986	1986	1986	1980	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	91.1		58.1	
HIGHEST ANNUAL MEAN			112.0	1984
LOWEST ANNUAL MEAN			27.3	1976
HIGHEST DAILY MEAN	2640	Oct 1	3740	Oct 16 1964
LOWEST DAILY MEAN	0	Aug 31	0	Sep 12 1954
INSTANTANEOUS PEAK FLOW	8030	Oct 1	11100	Aug 22 1967
INSTANTANEOUS PEAK STAGE	14.88	Oct 1	15.95	Aug 22 1967
INSTANTANEOUS LOW FLOW	0*	Aug 30	0*	Sep 12 1954
ANNUAL RUNOFF (INCHES)	22.2		14.2	
10 PERCENTILE	204		122	
50 PERCENTILE	22		11	
95 PERCENTILE	0		.10	

* See REMARKS.

PEE DEE RIVER BASIN

02126000 ROCKY RIVER NEAR NORWOOD, NC
(National stream-quality accounting network station)

LOCATION.--Lat 35°08'54", long 80°10'33", Stanly County, Hydrologic Unit 03040105, on left bank 1,000 ft downstream from Lanes Creek, 1.5 mi upstream from bridge on Secondary Road 1935, 6 mi southwest of Norwood, and 11.2 mi upstream from mouth.

DRAINAGE AREA.--1,372 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1929 to current year.

REVISED RECORDS.--WSP 852: 1937. WSP 1052: 1936(M). WSP 1503: 1935, 1945. WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 212.91 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers).

REMARKS.--No estimated daily discharges. Records good. Maximum gage height for period of record derived from floodmark.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1908 reached a stage of 35 ft, from information by local residents, discharge, 67,600 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11100	385	509	1980	1270	1230	3830	524	1100	134	92	93
2	55100	375	472	2170	1130	1150	7260	490	806	132	90	86
3	36900	387	443	1200	1080	8320	3970	2070	642	130	97	81
4	8500	376	407	958	1050	9500	2100	2250	559	132	89	74
5	2660	359	394	862	1230	3970	1350	1520	491	126	86	72
6	1670	347	392	1760	1270	2330	1090	1180	422	121	82	74
7	1220	345	389	4220	968	1700	1090	758	352	142	102	79
8	1010	358	2070	7300	863	1340	1110	587	387	144	186	82
9	835	414	8600	8180	802	1220	895	486	362	191	166	84
10	711	498	5930	3940	12900	1180	769	2380	296	221	327	82
11	603	412	4740	2390	13200	1100	742	2530	263	175	247	110
12	576	356	3900	1710	5270	1010	772	1120	243	149	148	195
13	545	345	13300	1300	2700	922	650	734	228	164	129	169
14	492	333	8980	1080	1860	844	572	594	220	164	108	487
15	436	332	3730	959	1450	798	1180	517	220	214	258	380
16	406	535	2350	897	3520	824	3120	454	266	269	311	208
17	401	1550	1620	842	19600	899	1890	385	413	198	208	126
18	535	1060	1270	800	13400	2620	1120	375	277	259	265	100
19	5300	638	1150	753	11600	1930	830	365	229	231	173	94
20	5340	497	1100	691	10900	1140	686	306	204	158	124	88
21	2000	454	999	4490	4280	950	600	281	193	150	105	83
22	1130	425	895	5730	3610	828	600	300	184	142	112	85
23	884	2070	724	2190	8790	748	539	495	176	139	140	83
24	741	3070	548	1390	5040	688	494	444	170	146	151	83
25	641	1390	584	1830	2870	631	456	327	155	131	126	80
26	575	973	618	8240	1920	600	425	299	144	122	132	82
27	494	813	590	5140	1500	634	401	282	142	118	126	80
28	453	702	567	2630	1330	587	375	4180	142	114	137	75
29	427	637	544	1830	---	896	431	19400	149	106	136	76
30	404	569	540	1840	---	2850	668	9600	141	95	111	72
31	388	---	581	1660	---	3880	---	2260	---	92	100	---
MEAN	4596	700	2224	2612	4836	1849	1334	1855	319	155	150	119
MAX	55100	3070	13300	8240	19600	9500	7260	19400	1100	269	327	487
MIN	388	332	389	691	802	587	375	281	141	92	82	72
IN.	3.86	.57	1.87	2.20	3.67	1.55	1.08	1.56	.26	.13	.13	.10

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	805.5	752.3	1333	2391	2811	2676	1734	854.8	677.2	759.3	751.2	677.5
MAX	5675	4763	4564	7263	7922	6663	7097	3998	3017	3443	2917	8262
(WY)	1965	1949	1933	1936	1960	1980	1936	1975	1982	1941	1967	1945
MIN	45.9	54.1	104.7	151.6	321.4	411.9	234.3	142.3	88.5	95.6	82.4	41.0
(WY)	1931	1942	1934	1934	1938	1981	1967	1981	1986	1986	1957	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	1716		1345	
HIGHEST ANNUAL MEAN			2492	1975
LOWEST ANNUAL MEAN			449.0	1951
HIGHEST DAILY MEAN	55100	Oct 2	85600	Sep 18 1945
LOWEST DAILY MEAN	72	Sep 5	19	Oct 28 1931
INSTANTANEOUS PEAK FLOW	61300	Oct 2	105000	Sep 18 1945
INSTANTANEOUS PEAK STAGE	32.81	Oct 2	46.37*	Sep 18 1945
INSTANTANEOUS LOW FLOW	67	Sep 30	17	Oct 8 1954
ANNUAL RUNOFF (INCHES)	17.0		13.3	
10 PERCENTILE	4100		3000	
50 PERCENTILE	562		399	
95 PERCENTILE	85		81	

* See REMARKS.

PEE DEE RIVER BASIN

02126000 ROCKY RIVER NEAR NORWOOD, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948, 1956-73, 1977-80, October 1986 to September 1987.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1955 to September 1967, October 1976 to September 1980.
WATER TEMPERATURE: October 1947 to September 1948, October 1955 to September 1967, October 1976 to September 1980.

REMARKS.--Station operated as part of NASQAN network from October 1986 to September 1987. 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, NC. For water years 1958-67, data were published as Rocky River at Gaddy, near Norwood. (station 02125681)

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,050 microsiemens September 9, 10, 11, 1966; minimum daily, 38 microsiemens January 31, 1960.
WATER TEMPERATURE: Maximum daily, 35.0°C July 18, 1977, Aug. 6, 1980; minimum daily, 0.0°C on several days during most winters.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS-SOLVED (MG/L AS CA)
NOV											
14...	1000	340	255	6.6	15.0	1.6	763	8.6	90	36	13
JAN											
11...	1100	2390	134	6.3	7.5	2.3	742	10.9	150	460	8.0
MAR											
22...	1000	822	165	6.0	12.0	12	767	9.5	180	63	9.0
MAY											
17...	0930	380	91	6.8	25.0	2.0	755	6.0	200	54	7.0
JUL											
11...	1145	166	340	7.6	30.0	6.5	742	6.9	880	330	11
SEP											
11...	1000	89	560	7.9	25.0	3.0	762	4.3	110	820	12

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 WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	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)
NOV											
14...	4.8	30	53	2	4.5	76	62	29	17	0.20	8.6
JAN											
11...	3.8	10	35	0.7	3.2	27	22	14	10	0.10	12
MAR											
22...	4.1	15	43	1	2.6	32	26	17	12	<0.10	11
MAY											
17...	2.6	5.9	30	0.5	1.7	59	48	7.3	6.3	<0.10	11
JUL											
11...	4.9	50	66	3	7.4	66	54	38	46	0.40	7.3
SEP											
11...	5.2	110	79	7	9.9	149	122	84	58	0.50	2.7

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (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,NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
NOV											
14...	197	--	<0.010	0.630	--	0.020	0.010	--	0.03	0.01	0.48
JAN											
11...	173	1.58	0.020	1.60	--	0.110	0.120	--	0.14	0.15	0.59
MAR											
22...	113	--	<0.010	1.00	--	0.020	0.040	--	0.03	0.05	2.2
MAY											
17...	57	1.49	0.010	1.50	4.0	0.030	0.020	6.7	0.04	0.03	0.37
JUL											
11...	216	2.37	0.030	2.40	--	0.050	0.050	--	0.06	0.06	1.2
SEP											
11...	363	1.29	0.010	1.30	--	0.030	0.030	--	0.04	0.04	0.97

PEE DEE RIVER BASIN

02126000 ROCKY RIVER NEAR NORWOOD, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	PHOSPHORUS TOTAL IN BOT. MAT. (MG/KG AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)
NOV 14...	0.50	--	0.140	0.110	0.110	0.34	--	20	2	21
JAN 11...	0.70	--	0.130	0.700	0.190	0.58	--	160	<1	21
MAR 22...	2.2	--	0.090	0.070	0.070	0.21	--	--	--	--
MAY 17...	0.40	130	0.170	0.160	0.140	0.43	390	20	<1	16
JUL 11...	1.2	--	0.450	0.420	0.460	1.4	--	--	--	--
SEP 11...	1.0	--	0.630	0.040	0.580	1.8	--	30	6	27

DATE	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)
NOV 14...	<0.5	2.0	<1	<3	4	190	<1	7	10	<0.1
JAN 11...	<0.5	<1.0	<1	3	<10	320	<10	<4	10	<0.1
MAR 22...	--	--	--	--	--	--	--	--	--	--
MAY 17...	<0.9	<1.0	<1	<3	3	55	1	<4	3	<0.2
JUL 11...	--	--	--	--	--	--	--	--	--	--
SEP 11...	<0.5	<1.0	<1	<3	10	61	1	18	14	<0.1

DATE	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 14...	<10	2	<1	<1.0	100	<6	15	2	1.8	85
JAN 11...	<10	<10	<1	<1.0	65	<6	7	29	187	88
MAR 22...	--	--	--	--	--	--	--	9	20	93
MAY 17...	<10	<1	<1	<1.0	45	<6	<3	11	11	86
JUL 11...	--	--	--	--	--	--	--	20	9.0	78
SEP 11...	10	5	<1	<1.0	130	<6	20	14	3.4	70

PEE DEE RIVER BASIN

02128000 LITTLE RIVER NEAR STAR, NC

LOCATION.--Lat 35°23'11", long 79°49'56", Montgomery County, Hydrologic Unit 03040104, on left bank 9 ft downstream from bridge on Secondary Road 1340, 50 ft upstream from Black Rock Branch, 0.2 mi upstream from Norfolk Southern Railway bridge, 0.3 mi downstream from West Fork Little River, and 3 mi west of Star.

DRAINAGE AREA.--106 mi^2.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1949-54. April 1954 to current year.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 409.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Minimum discharge for period of record also occured Oct. 5, 1968, as a result of upstream withdrawals for water supply. Minimum discharge for current water year also occurred Sept. 10 and 11.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1945 reached a stage of about 20 ft, from information by by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	995	47	65	171	116	139	515	157	116	25	7.4	5.0
2	4400	50	61	137	109	134	405	122	100	24	7.0	4.4
3	415	70	59	87	107	976	235	1310	93	24	6.4	4.1
4	159	59	55	78	106	589	185	319	90	23	6.0	3.4
5	103	51	55	76	106	244	160	253	83	20	5.7	2.8
6	82	48	55	125	95	187	151	300	73	19	7.2	2.6
7	70	47	54	184	91	162	227	180	71	18	13	2.4
8	61	49	310	315	87	148	211	144	69	17	16	2.2
9	55	64	497	316	85	146	152	114	91	18	14	1.9
10	51	78	209	160	999	145	142	637	79	16	10	2.0
11	49	57	274	120	654	137	137	370	63	15	8.7	2.1
12	48	50	494	104	226	130	129	159	57	14	7.8	3.5
13	47	47	1280	90	155	124	118	128	54	19	7.6	6.3
14	46	46	362	81	133	119	108	117	54	18	6.5	8.2
15	46	53	193	78	118	116	216	108	53	19	5.8	6.4
16	45	132	143	77	626	134	299	101	63	19	5.9	7.1
17	44	111	115	76	1670	189	204	94	72	16	25	6.3
18	77	68	101	75	282	541	138	95	56	78	15	5.1
19	622	57	96	74	594	207	117	83	50	43	10	4.6
20	196	54	94	71	358	156	111	82	45	25	8.6	4.3
21	96	53	88	733	201	138	111	80	42	20	11	3.8
22	72	51	83	305	315	130	114	170	46	18	21	3.4
23	62	443	82	153	952	129	106	168	69	19	15	7.1
24	58	178	94	119	325	126	98	101	52	15	12	4.5
25	55	100	83	136	206	120	93	82	40	12	10	3.5
26	52	82	73	1280	158	116	88	81	36	11	9.3	3.1
27	51	75	72	364	144	115	86	79	33	10	15	2.7
28	50	70	68	189	139	111	81	682	31	9.5	13	2.9
29	49	89	67	152	---	591	103	2370	29	8.8	9.6	3.0
30	47	74	69	178	---	641	217	338	27	8.6	7.7	2.7
31	47	---	74	139	---	1120	---	159	---	8.0	6.2	---
MEAN	266	81.8	175	201	327	260	169	296	61.2	19.7	10.4	4.05
MAX	4400	443	1280	1280	1670	1120	515	2370	116	78	25	8.2
MIN	44	46	54	71	85	111	81	79	27	8.0	5.7	1.9
IN.	2.90	.86	1.90	2.19	3.21	2.83	1.77	3.22	.64	.21	.11	.04

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	63.7	65.1	102.0	162.8	221.4	213.5	167.8	105.3	71.5	63.2	55.6	45.0
MAX	266.1	365.7	361.1	463.0	467.4	449.6	429.5	296.2	272.9	465.4	249.3	261.5
(WY)	1990	1986	1973	1978	1960	1989	1958	1990	1972	1975	1985	1979
MIN	4.03	10.7	18.7	26.7	56.1	47.0	38.0	30.3	12.8	6.37	4.80	.759
(WY)	1987	1962	1966	1981	1986	1967	1967	1981	1967	1977	1983	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	155.4		111.3	
HIGHEST ANNUAL MEAN			209.0	1975
LOWEST ANNUAL MEAN			42.4	1967
HIGHEST DAILY MEAN	4400	Oct 2	5640	Mar 24 1989
LOWEST DAILY MEAN	1.9	Sep 9	.27	Oct 4 1968
INSTANTANEOUS PEAK FLOW	6930	Oct 2	10400	Oct 15 1954
INSTANTANEOUS PEAK STAGE	12.32	Oct 2	16.46	Oct 15 1954
INSTANTANEOUS LOW FLOW	1.8*	Sep 9	.24*	Oct 4 1968
ANNUAL RUNOFF (INCHES)	19.9		14.3	
10 PERCENTILE	314		203	
50 PERCENTILE	81		51	
95 PERCENTILE	3.6		5.9	

* See REMARKS.

PEE DEE RIVER BASIN

02129000 PEE DEE RIVER NEAR ROCKINGHAM, NC

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 upstream from Falling Creek, 3.3 mi downstream from Blewett Falls hydroelectric plant, 6 mi west of Rockingham, and 192 mi upstream from mouth in Winyah Bay.

DRAINAGE AREA.--6,863 mi^2.

PERIOD OF RECORD.--August 1906 to January 1912, October 1927 to current year. Published as Yadkin River near Pee Dee, N.C., August 1906 to January 1912.

REVISED RECORDS.--WSP 1203: 1928-37. WSP 1303: 1928-42 (monthly and yearly runoff), 1943-46 (adjusted monthly runoff). WSP 1503: 1906-12, 1928-32(m). WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Carolina Power and Light Co. Handar telemetry unit installed Nov. 1989. Datum of gage is 120.68 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers). Aug. 1906 to Jan. 1912 nonrecording gage at site 3.3 mi upstream at different datum. Sept. 1927 to Sept. 30, 1931, water-stage recorder at present site at datum 1.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1928 by Blewett Falls Lake and five other reservoirs upstream (see p. 301). Maximum discharge prior to regulation, 276,000 ft^3/s Aug. 27, 1908, gage height, 31.28 ft, present site and datum, from records of State Highway Commission; minimum discharge prior to regulation, 2,210 ft^3/s Sept. 3 1907; minimum discharge during regulation, 50 ft^3/s Dec. 2, 3, 1951; minimum daily, 58 ft^3/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 ft^3/s Oct. 25, 1943; minimum daily, 120 ft^3/s Oct. 8, 1961.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14200	8330	7280	3110	13200	12600	21600	7670	15100	1080	920	3670
2	77400	7600	7310	8370	11900	13300	23700	8470	14800	677	1270	1400
3	127000	8140	7230	9000	13200	18600	21700	10300	10600	2780	1200	478
4	95100	4500	7180	9390	14400	29100	16000	19600	10600	3560	5250	4670
5	37300	3890	7220	10200	12100	21800	12300	17600	11600	743	3010	5530
6	24000	2940	7980	13600	12900	15000	13800	17900	11000	582	997	3170
7	15900	6610	8650	13300	12900	13900	9880	14400	9420	504	2690	5730
8	10700	4830	7140	18100	11500	13400	9790	13200	7450	544	3180	2620
9	13500	8170	13300	22000	10900	12600	8400	10600	3070	2010	5070	326
10	10600	6070	19500	18300	22900	13400	7340	13500	1170	1380	4260	4910
11	10200	3070	16100	15500	41200	14300	8810	21400	2860	2740	787	2480
12	7490	4600	14400	11400	35200	12300	9910	17700	6560	4490	998	3240
13	7150	7770	24400	13500	29400	11300	9210	14900	7090	2600	2700	3850
14	9200	5360	34600	12300	16900	12500	8550	10400	4140	534	3370	5010
15	4600	6360	27000	11200	15000	10900	5330	11200	5490	3890	7290	1660
16	1920	8530	15400	10800	14000	14000	9140	10700	4300	4900	7230	3050
17	6930	7180	14400	10600	55100	16200	12700	10700	769	7000	1550	575
18	5760	7930	12600	9770	61400	12900	15100	10200	3500	6500	447	2010
19	7820	6240	12500	9540	41100	13900	11500	8570	6470	6890	325	6370
20	21400	8430	11000	9900	42100	21300	11800	5150	4500	8680	3180	6330
21	22400	5320	13000	9830	30400	14000	11200	2380	5170	3180	1760	5130
22	15600	7220	11000	18900	20800	12100	9380	4040	6480	782	5940	1990
23	10900	7570	10100	16400	27800	11500	7580	7000	4990	3220	6850	508
24	12100	9230	10400	12200	31200	13400	8060	6740	890	4060	2070	388
25	9780	9940	10100	13100	24100	11700	8270	8580	2180	5880	2590	1440
26	9590	8440	9370	20400	12900	10700	7680	7270	3910	6420	437	4080
27	9010	8630	10500	24200	12000	10700	7060	7940	3480	6880	2970	5930
28	5180	8090	9110	20100	12000	10400	578	8350	2460	3430	4070	3050
29	3690	7450	8990	14600	---	16500	2580	58500	2960	2380	7650	982
30	5780	7340	9030	13300	---	18300	6130	63200	3470	3110	7650	359
31	8630	---	6320	12500	---	19800	---	34200	---	2720	7830	---
MEAN	20030	6859	12360	13400	23520	14590	10500	14910	5883	3360	3405	3031
MAX	127000	9940	34600	24200	61400	29100	23700	63200	15100	8680	7830	6370
MIN	1920	2940	6320	3110	10900	10400	578	2380	769	504	325	326
†	-463	+55.4	-827	+1290	+390	-501	+344	+453	-977	+147	-4.7	-732

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD*, BY WATER YEAR (WY)

MEAN	5802	5480	7619	10730	12670	13200	10730	7319	5944	5382	5546	5588
MAX	23510	16120	20300	31270	36040	33010	31340	15630	15210	16790	19180	35690
(WY)	1930	1958	1933	1937	1960	1929	1936	1958	1972	1975	1928	1928
MIN	1293	1607	2640	2475	3704	4117	2692	2026	1853	1692	1456	1008
(WY)	1954	1954	1940	1956	1934	1981	1981	1986	1986	1986	1954	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD*	
AVERAGE FLOW	10930	‡ 10859	7979	(UNADJUSTED)
HIGHEST ANNUAL MEAN			13000	1975
LOWEST ANNUAL MEAN			3944	1981
HIGHEST DAILY MEAN	127000	Oct 3	242000	Sep 18 1945
LOWEST DAILY MEAN	325	Aug 19	58	Dec 2 1951
INSTANTANEOUS PEAK FLOW	132000	Oct 3	270000	Sep 18 1945
INSTANTANEOUS PEAK STAGE	18.45	Oct 3	30.80	Sep 18 1945
INSTANTANEOUS LOW FLOW	144	Oct 16	50.0*	Dec 2 1951
10 PERCENTILE	20100		14300	
50 PERCENTILE	8570		5730	
95 PERCENTILE	850		832	

† Change in contents, equivalent in cubic feet per second, in W. Kerr Scott Reservoir; provided by U.S. Army Corps of Engineers; High Rock Lake, Tuckertown Reservoir, and Badin Lake, provided by Yadkin, Inc.; and Lake Tillery and Blewett Falls Lake, provided by Carolina Power and Light Co.
‡ Adjusted for change in contents.
* Regulated period only (1928-1990). See REMARKS.

PEE DEE RIVER BASIN

0213228795 JORDAN CREEK NEAR SILVER HILL, NC
(National Acid Precipitation Assessment Program)

LOCATION.--Lat 34°58'12", long 79°31'34", Scotland County, Hydrologic Unit 03040204, on right bank 8 ft upstream from culvert on Gardner Farm Road Extension in State Sandhills Game Management Area, 0.15 mi west of Secondary Road 1328, 3.5 mi east of Marston, 4.9 mi south of Hoffman, and 6.0 mi southwest of Silver Hill.

DRAINAGE AREA.--0.36 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1983 to current year.

GAGE.--Water-stage recorder. V-notch sharp-crested weir since Nov. 8, 1984. Elevation of gage is 385 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Diurnal fluctuation at low flows in the growing season. Maximum discharge, since installation of weir on Nov. 8, 1984; 7.9 ft^3/s July 31, 1987. Minimum discharge for period of record occurred many times in June, July and Aug 1988, and at times in July and Aug. 1990.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	.27	.25	.29	.25	.25	.26	.25	.19	.14	.14	.13
2	.77	.59	.26	.25	.28	.26	.51	.23	.20	.14	.15	.12
3	.38	.38	.26	.25	.27	.39	.29	.27	.20	.14	.14	.12
4	.34	.31	.25	.25	.27	.27	.27	.23	.18	.14	.13	.13
5	.33	.29	.26	.25	.25	.25	.25	.25	.18	.12	.14	.13
6	.32	.29	.25	.29	.25	.25	.25	.22	.18	.12	.22	.13
7	.32	.29	.26	.26	.25	.25	.30	.22	.17	.12	.27	.12
8	.32	.29	.56	.42	.25	.25	.25	.21	.18	.13	.15	.13
9	.31	.38	.36	.30	.27	.25	.25	.22	.18	.13	.17	.14
10	.30	.29	.37	.29	.34	.25	.25	.40	.17	.15	.15	.15
11	.30	.27	.34	.27	.25	.25	.25	.23	.17	.51	.13	.16
12	.29	.27	.37	.27	.23	.24	.25	.20	.16	.25	.12	.15
13	.29	.27	.36	.27	.23	.24	.24	.20	.17	.20	.12	.15
14	.29	.27	.30	.27	.23	.24	.25	.19	.17	.23	.12	.15
15	.28	.36	.29	.27	.23	.24	.29	.17	.26	.21	.12	.14
16	.29	.34	.29	.27	.30	.24	.25	.17	.20	.19	.16	.13
17	.29	.28	.29	.26	.27	.29	.25	.24	.17	.18	.16	.13
18	.30	.27	.29	.26	.24	.29	.23	.20	.16	.18	.13	.13
19	.33	.27	.29	.26	.47	.25	.23	.16	.15	.17	.12	.14
20	.29	.27	.29	.26	.28	.24	.23	.17	.15	.16	.12	.14
21	.29	.27	.28	.28	.25	.24	.23	.17	.15	.16	.64	.15
22	.29	.27	.27	.26	.27	.23	.24	.23	.16	.16	.37	.15
23	.28	.38	.27	.25	.29	.23	.23	.19	.16	.15	.20	.14
24	.28	.28	.26	.25	.28	.23	.22	.17	.15	.15	.18	.13
25	.27	.27	.26	.27	.25	.23	.22	.17	.14	.14	.16	.13
26	.27	.27	.27	.32	.25	.24	.22	.16	.14	.14	.15	.13
27	.27	.27	.26	.27	.25	.24	.21	.16	.15	.14	.14	.13
28	.27	.27	.26	.26	.25	.23	.21	.35	.15	.15	.13	.13
29	.27	.27	.25	.28	---	.35	.26	.30	.14	.14	.13	.13
30	.28	.25	.26	.29	---	.27	.25	.21	.14	.14	.14	.14
31	.29	---	.26	.26	---	.32	---	.20	---	.13	.13	---
MEAN	.32	.30	.29	.27	.27	.26	.25	.22	.17	.17	.17	.14
MAX	.77	.59	.56	.42	.47	.39	.51	.40	.26	.51	.64	.16
MIN	.27	.25	.25	.25	.23	.23	.21	.16	.14	.12	.12	.12
IN.	1.03	.94	.94	.88	.77	.83	.79	.70	.52	.54	.55	.42

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	.266	.272	.269	.267	.268	.281	.283	.257	.249	.275	.304	.270
MAX	.361	.411	.405	.368	.332	.391	.458	.403	.436	.581	.548	.457
(WY)	1986	1986	1986	1986	1985	1984	1984	1984	1984	1984	1984	1984
MIN	.159	.165	.154	.161	.165	.202	.196	.166	.146	.146	.170	.136
(WY)	1987	1987	1987	1989	1989	1988	1988	1988	1988	1988	1988	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	.24		.27	
HIGHEST ANNUAL MEAN			.40	1984
LOWEST ANNUAL MEAN			.20	1988
HIGHEST DAILY MEAN	.77	Oct 2	2.1	Jul 17 1984
LOWEST DAILY MEAN	.12	Jul 5	.11	Nov 24 1986
INSTANTANEOUS PEAK FLOW	3.7	Aug 21	NOT DETERMINED	Jul 17 1984
INSTANTANEOUS PEAK STAGE	1.77	Aug 21	2.70	Jul 17 1984
INSTANTANEOUS LOW FLOW	.09*	Jul 5	.09*	Jun 19 1988
ANNUAL RUNOFF (INCHES)	8.90		10.3	
10 PERCENTILE	.30		.42	
50 PERCENTILE	.24		.25	
95 PERCENTILE	.13		.13	

* See REMARKS.

0213228795 JORDAN CREEK NEAR SILVER HILL, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1984 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1983 to current year.
pH: October 1983 to current year.
WATER TEMPERATURE: October 1983 to current year.

INSTRUMENTATION.--Water-quality monitor since Oct. 1983. Automatic water sampler from May 1987 to Apr. 1988.

REMARKS.--Station operated as a continuous record index station in the National Acid Precipitation Assessment Program for defining effects of atmospheric deposition on surface-water chemistry. Precipitation monitoring station, which is part of the National Atmospheric Deposition Program/National Trends Network, is co-located with this station.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 63 microsiemens, Aug. 21, 1990; minimum, 7 microsiemens, Nov. 5-15, 1986.
pH: Maximum, 5.97 units May 16, 1988; minimum, 3.6 units Nov. 16, 17, 18, 20, 1983.
WATER TEMPERATURE: Maximum, 22.0°C, July 22, 25, Aug. 17, 18, 1985; minimum, 8.3°C, Dec. 25, 1989.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 63 microsiemens, Aug. 21; minimum, 13 microsiemens, on several days during July and August.
pH: Maximum, 5.13 units, Aug. 11, 12, 14; minimum, 4.06 units, Nov. 2.
WATER TEMPERATURE: Maximum, 21.9°C, Aug. 21; minimum, 8.3°C, Dec. 25.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT										
18...	1435	0.31	16	4.5	18.5	0.20	0.13	0.83	0.08	0.64
DEC										
21...	1345	0.28	18	4.5	10.0	0.08	0.15	0.73	0.10	1.1
FEB										
15...	1155	0.24	15	4.6	14.5	0.11	0.14	0.90	0.10	0.93
APR										
17...	1425	0.24	18	4.6	16.5	0.08	0.13	0.80	0.11	0.73
JUN										
28...	1320	0.14	14	4.7	19.0	0.21	0.12	0.80	0.09	0.45
AUG										
01...	1430	0.10	14	4.8	19.0	0.05	0.11	0.80	0.05	0.43

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
OCT										
18...	1.5	0.02	4.3	<0.010	0.032	0.001	70	29	3	2.8
DEC										
21...	1.3	0.02	4.2	<0.010	0.022	0.001	60	18	2	2.4
FEB										
15...	1.3	<0.01	4.2	<0.010	0.026	0.001	50	16	<1	2.6
APR										
17...	1.3	<0.01	3.8	<0.010	0.022	0.004	50	13	1	2.6
JUN										
28...	1.4	0.02	4.4	<0.010	0.015	0.002	40	17	<1	1.9
AUG										
01...	1.4	<0.01	4.2	0.020	0.005	0.003	30	14	<1	1.9

PEE DEE RIVER BASIN

02132287795 JORDAN CREEK NEAR SILVER HILL, NC--Continued

SPECIFIC CONDUCTANCE, US/CM ‡ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	35	16	23	17	15	16	19	15	18	19	16	18
2	46	15	32	51	16	28	19	15	18	18	16	17
3	27	19	24	33	21	26	20	18	19	18	16	17
4	24	19	22	24	19	21	21	17	19	19	16	17
5	22	19	21	22	19	20	19	16	18	18	16	17
6	21	16	19	20	18	19	18	15	17	17	16	17
7	18	15	17	19	18	18	17	15	16	17	16	17
8	19	17	18	18	17	18	34	18	28	26	17	22
9	19	18	19	23	17	21	29	23	25	20	17	19
10	19	16	18	21	18	19	26	21	24	19	16	18
11	18	16	17	21	17	19	24	18	21	19	16	17
12	18	16	17	21	17	18	25	19	21	18	16	17
13	18	16	17	18	16	17	25	22	23	19	17	18
14	17	16	17	18	16	17	23	20	22	18	16	17
15	17	16	17	23	16	19	22	18	20	18	15	17
16	17	16	16	21	18	20	22	19	21	17	16	17
17	16	16	16	21	19	20	21	20	21	17	15	16
18	17	16	16	20	18	19	21	19	20	17	15	16
19	18	16	17	19	18	19	21	18	19	16	15	16
20	19	18	19	19	15	17	21	18	19	16	15	15
21	20	17	19	18	16	17	21	17	18	16	15	16
22	19	16	18	19	17	18	19	18	19	17	15	16
23	19	16	18	26	18	22	19	18	19	17	15	16
24	19	16	17	22	18	20	19	18	18	16	14	15
25	18	16	17	21	16	18	19	16	18	16	14	15
26	18	16	17	17	16	17	18	16	17	19	16	18
27	18	15	17	17	16	16	19	17	18	18	15	17
28	18	16	17	17	15	16	18	17	18	17	15	16
29	17	16	16	19	15	17	18	16	17	16	15	15
30	16	15	16	19	16	18	19	16	17	17	15	16
31	16	15	16	---	---	---	19	17	18	17	15	16
MONTH	46	15	18	51	15	19	34	15	20	26	14	17
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	17	15	16	17	14	16	19	18	18	18	17	17
2	16	15	15	17	15	16	34	21	27	17	16	17
3	16	14	15	23	16	20	21	18	20	17	17	17
4	16	14	15	21	16	19	20	17	19	17	16	17
5	16	15	16	20	17	18	19	16	18	17	15	16
6	17	15	16	19	16	18	18	16	17	17	15	16
7	15	14	15	18	16	17	20	16	19	16	15	16
8	16	14	15	18	17	17	20	17	18	16	15	16
9	17	14	15	18	15	16	19	16	18	16	15	15
10	22	17	18	19	15	18	18	17	18	29	16	22
11	17	16	17	19	17	18	18	16	17	21	17	19
12	17	15	16	19	16	18	19	16	17	19	16	17
13	17	14	16	19	16	17	18	16	17	17	16	17
14	16	14	15	20	16	17	19	16	17	17	16	16
15	16	14	15	20	16	17	19	16	18	17	15	16
16	19	14	16	18	17	17	18	16	17	16	15	16
17	18	16	17	21	16	17	18	16	17	20	15	17
18	16	15	16	22	17	20	18	16	17	19	15	17
19	32	16	24	20	17	18	18	16	17	17	15	16
20	21	17	19	19	17	18	18	16	17	17	14	15
21	19	16	17	19	17	18	17	16	16	15	15	15
22	17	15	16	19	17	18	17	16	16	18	15	16
23	19	14	16	19	17	18	17	16	16	17	15	16
24	19	16	18	19	17	18	17	16	16	16	15	15
25	19	17	18	19	17	18	16	16	16	16	15	15
26	19	18	18	18	16	18	16	15	16	16	15	15
27	19	15	17	18	16	17	16	15	16	16	15	15
28	19	14	17	18	16	17	17	16	16	25	15	19
29	---	---	---	22	17	20	18	16	17	23	17	19
30	---	---	---	21	18	19	18	16	17	18	16	17
31	---	---	---	21	18	19	---	---	---	17	16	16
MONTH	32	14	17	23	14	18	34	15	17	29	14	17

0213228795 JORDAN CREEK NEAR SILVER HILL, NC--Continued

SPECIFIC CONDUCTANCE, US/CM ‡ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	17	15	16	14	14	14	14	13	14	14	14	14
2	16	15	15	14	13	14	14	14	14	14	14	14
3	16	15	16	14	14	14	14	14	14	14	14	14
4	16	15	16	14	13	14	14	13	13	14	14	14
5	16	14	15	14	14	14	13	13	13	15	14	14
6	15	14	15	14	14	14	30	13	16	14	14	14
7	15	14	14	14	14	14	33	16	22	15	14	14
8	15	14	14	14	14	14	16	15	15	14	14	14
9	15	14	14	14	14	14	16	14	15	14	14	14
10	15	14	14	35	14	15	15	14	15	17	14	15
11	15	14	14	46	20	33	15	14	14	15	14	15
12	15	14	14	32	18	23	14	14	14	15	14	14
13	15	14	14	18	16	17	14	14	14	15	14	14
14	15	14	14	18	16	17	14	14	14	14	14	14
15	21	14	17	17	16	16	14	13	14	14	14	14
16	17	15	16	16	15	16	18	14	15	14	14	14
17	15	14	15	16	15	15	17	14	15	15	14	14
18	15	14	15	15	15	15	15	14	14	15	14	15
19	15	14	15	15	15	15	14	14	14	15	14	14
20	15	14	14	15	15	15	14	14	14	14	14	14
21	15	14	14	15	14	15	63	14	25	14	14	14
22	15	14	15	14	14	14	52	26	35	14	14	14
23	15	14	15	14	14	14	26	19	22	15	14	14
24	15	14	14	14	14	14	19	18	19	15	14	15
25	15	14	14	14	14	14	18	17	17	15	14	15
26	15	14	14	14	14	14	17	16	16	15	14	15
27	15	14	14	14	14	14	16	16	16	15	14	14
28	15	14	15	14	14	14	16	16	16	15	14	14
29	15	15	15	14	14	14	16	15	16	14	14	14
30	15	14	15	14	14	14	15	14	15	14	14	14
31	---	---	---	14	14	14	15	14	14	---	---	---
MONTH	21	14	15	46	13	15	63	13	16	17	14	14
YEAR	63	13	17									

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.1	18.5	18.7	17.3	16.4	16.9	13.6	12.4	12.9	12.3	10.8	11.8
2	20.8	19.0	19.4	16.7	15.8	16.2	13.5	12.1	12.8	11.4	10.2	10.8
3	19.3	18.8	19.1	16.5	15.5	16.1	12.9	11.7	12.4	11.7	10.5	11.1
4	18.8	18.0	18.6	16.2	15.1	15.6	12.2	11.1	11.7	12.3	11.5	12.0
5	18.2	17.4	17.8	16.2	15.0	15.6	12.8	11.7	12.2	12.6	12.2	12.5
6	18.7	17.5	18.1	16.5	15.4	16.1	13.3	11.9	12.7	13.0	12.2	12.8
7	18.7	18.2	18.4	16.9	16.1	16.6	13.4	12.8	13.2	12.3	12.1	12.2
8	18.2	17.4	17.9	17.2	16.8	17.0	13.0	11.2	11.7	12.3	11.7	12.0
9	17.3	16.4	16.9	17.5	16.3	17.2	11.5	10.3	11.0	12.6	11.5	11.9
10	17.1	15.8	16.5	16.6	15.6	16.1	10.9	10.5	10.7	12.6	11.4	12.0
11	17.5	16.1	16.8	16.4	15.3	15.9	11.7	10.5	11.2	12.6	10.9	11.8
12	17.6	16.3	17.0	16.8	15.6	16.1	11.8	11.0	11.6	12.5	11.3	12.0
13	17.7	16.7	17.3	16.9	15.7	16.3	11.2	11.0	11.1	11.5	10.5	11.0
14	17.9	17.5	17.7	17.1	16.2	16.8	11.2	10.5	10.8	11.6	10.3	10.9
15	18.0	17.0	17.6	17.1	16.6	16.9	11.6	10.3	11.0	12.3	10.6	11.5
16	18.2	17.4	17.8	17.4	15.4	16.7	11.6	9.8	10.5	12.7	11.4	12.1
17	18.4	17.7	18.1	15.3	14.5	15.0	10.0	9.7	9.9	12.9	11.6	12.3
18	19.6	18.2	18.4	15.0	14.2	14.6	10.3	9.9	10.1	13.2	12.1	12.7
19	18.5	17.6	18.2	14.4	13.7	14.1	10.1	9.8	10.0	13.2	12.6	12.9
20	17.5	16.4	16.9	15.2	13.6	14.4	10.3	9.4	10.0	13.4	12.7	13.1
21	16.5	15.6	16.1	15.1	14.0	14.7	10.7	9.0	9.8	14.0	13.0	13.7
22	16.8	15.5	16.1	14.0	13.6	13.9	10.0	9.0	9.4	13.2	12.1	12.7
23	16.7	15.4	16.0	13.8	12.8	13.3	9.1	8.8	9.0	13.2	11.8	12.6
24	16.6	15.3	15.9	13.2	12.3	12.7	9.4	8.5	9.1	13.4	12.7	13.1
25	16.6	15.7	16.1	13.5	11.9	12.8	9.8	8.3	9.2	14.2	13.3	13.8
26	16.7	15.4	16.0	14.5	13.4	14.0	10.4	9.3	9.8	13.7	11.8	12.8
27	16.8	15.7	16.2	14.6	14.1	14.4	9.9	8.9	9.5	12.6	11.3	11.9
28	16.7	15.7	16.3	15.1	14.2	14.8	10.8	9.4	10.0	13.0	11.2	12.2
29	17.0	16.0	16.6	15.0	13.1	14.2	11.0	9.6	10.3	13.9	12.5	13.3
30	17.3	16.7	17.1	13.6	12.4	13.0	11.5	10.7	11.2	13.2	12.0	12.8
31	17.5	17.0	17.3	---	---	---	12.4	11.1	11.8	13.4	12.2	12.8
MONTH	20.8	15.3	17.3	17.5	11.9	15.3	13.6	8.3	10.9	14.2	10.2	12.3

PEE DEE RIVER BASIN

0213228795 JORDAN CREEK NEAR SILVER HILL, NC--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	13.4	11.8	12.6	13.5	12.7	13.1	15.8	14.5	15.1	17.2	16.4	16.8
2	14.0	13.0	13.6	13.7	12.7	13.2	15.7	14.9	15.3	17.2	16.4	16.8
3	14.2	13.5	14.0	13.8	12.9	13.5	15.5	14.2	15.0	17.0	16.7	16.8
4	14.7	13.9	14.4	13.7	12.3	13.0	15.0	13.4	14.3	17.3	16.7	17.0
5	13.9	12.4	13.2	13.7	12.2	13.0	15.5	13.5	14.5	17.4	16.8	17.1
6	13.3	11.9	12.6	14.0	12.3	13.2	15.8	14.5	15.2	16.7	15.9	16.3
7	14.0	12.9	13.5	13.4	12.4	13.0	15.3	13.9	14.7	16.6	15.6	16.1
8	13.9	12.4	13.2	12.7	12.0	12.4	14.9	13.2	14.0	16.6	15.2	16.0
9	14.4	12.7	13.5	13.5	12.6	13.1	14.9	13.1	14.1	16.5	15.9	16.3
10	14.5	13.6	14.1	14.3	13.2	13.8	15.3	14.0	14.8	17.2	16.3	16.8
11	13.9	12.9	13.4	14.8	13.3	14.2	15.9	14.4	15.4	16.5	15.4	16.0
12	13.6	12.5	13.0	15.4	14.0	14.7	15.2	13.5	14.3	16.6	15.6	16.1
13	13.7	12.0	13.0	15.5	14.4	15.0	15.2	13.4	14.3	16.9	16.1	16.5
14	14.3	13.1	13.7	15.7	14.6	15.3	15.2	14.0	14.7	17.0	16.1	16.6
15	14.7	13.3	14.1	15.9	14.8	15.4	15.6	14.9	15.2	17.2	16.5	16.9
16	15.3	14.6	14.9	16.4	15.6	16.0	15.9	14.8	15.4	17.6	16.8	17.2
17	15.1	13.7	14.7	16.5	15.7	16.1	16.5	15.5	15.9	18.1	17.1	17.5
18	13.6	13.1	13.4	15.9	14.7	15.4	15.7	14.3	15.2	17.3	16.4	16.9
19	13.7	12.6	13.2	15.5	14.2	14.9	15.4	13.7	14.6	17.1	15.9	16.6
20	13.8	12.5	13.3	14.7	13.3	14.1	15.9	14.7	15.4	17.4	16.4	17.0
21	13.6	12.0	12.8	14.5	12.7	13.6	16.3	15.2	15.8	17.5	17.0	17.2
22	14.6	12.8	13.8	14.8	12.8	13.8	16.2	15.4	15.8	17.2	16.3	17.0
23	14.7	14.0	14.4	15.3	13.6	14.5	16.3	14.8	15.6	16.7	15.8	16.3
24	14.0	12.8	13.5	15.4	13.8	14.6	16.6	15.1	15.9	16.7	15.8	16.3
25	12.7	11.7	12.3	15.1	14.1	14.5	16.8	15.4	16.2	16.8	16.1	16.5
26	12.0	11.2	11.6	14.5	14.1	14.3	16.9	15.9	16.5	17.2	16.5	16.9
27	13.0	11.0	12.0	14.9	13.6	14.2	17.2	16.0	16.6	17.6	17.0	17.3
28	13.5	11.8	12.7	14.7	13.2	14.1	16.8	15.7	16.3	17.5	17.3	17.4
29	---	---	---	14.3	13.9	14.1	16.7	15.9	16.3	17.6	17.1	17.4
30	---	---	---	14.4	13.8	14.1	16.9	16.0	16.5	17.3	16.4	16.9
31	---	---	---	14.8	14.2	14.6	---	---	---	17.2	16.5	16.9
MONTH	15.3	11.0	13.4	16.5	12.0	14.2	17.2	13.1	15.3	18.1	15.2	16.8

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	17.4	16.5	17.0	19.2	18.4	18.7	19.0	18.7	18.8	19.5	18.8	19.1
2	17.3	16.9	17.2	18.7	18.1	18.4	18.8	18.4	18.6	19.3	18.5	19.0
3	17.8	17.1	17.4	18.6	17.6	18.1	18.9	18.3	18.6	19.5	19.0	19.2
4	18.0	17.3	17.7	18.6	17.7	18.2	19.0	18.2	18.6	19.5	18.8	19.2
5	17.6	17.0	17.4	18.9	18.0	18.4	19.1	18.6	18.8	19.2	18.3	18.8
6	17.6	16.6	17.1	19.0	18.2	18.6	20.3	18.6	19.0	19.4	18.6	19.0
7	18.0	17.3	17.6	19.0	18.3	18.7	20.3	19.0	19.6	19.7	19.0	19.3
8	18.2	17.6	17.8	19.0	18.5	18.8	19.2	18.9	19.0	19.8	19.1	19.4
9	18.2	17.5	17.9	19.2	18.5	18.8	19.1	18.8	18.9	19.6	19.3	19.4
10	18.3	17.7	18.0	20.2	18.6	19.0	18.9	18.5	18.7	19.7	19.1	19.4
11	18.1	17.4	17.7	20.9	19.7	20.3	19.1	18.3	18.7	19.8	19.2	19.5
12	17.8	17.0	17.4	20.0	19.1	19.6	19.0	18.2	18.6	19.6	19.2	19.4
13	17.6	16.5	17.1	19.5	19.0	19.2	19.3	18.5	18.9	19.4	19.0	19.2
14	17.9	16.9	17.4	19.7	19.0	19.3	19.3	18.7	19.0	19.4	19.0	19.2
15	18.2	17.4	17.8	19.6	18.8	19.2	19.2	18.7	19.0	19.5	18.9	19.3
16	18.1	17.8	17.9	19.2	18.6	18.9	19.3	18.7	19.0	19.2	18.4	18.8
17	18.2	17.5	17.9	19.2	18.6	18.8	19.2	18.9	19.1	18.8	17.8	18.4
18	18.4	17.6	18.1	19.0	18.6	18.8	19.3	18.7	19.0	18.2	17.3	17.8
19	18.7	18.0	18.3	19.0	18.7	18.8	19.2	18.7	19.0	18.1	17.1	17.7
20	18.4	17.8	18.1	19.3	18.6	18.9	19.4	18.8	19.1	18.7	18.1	18.4
21	18.8	17.9	18.3	19.3	18.7	19.0	21.9	19.0	19.9	18.6	18.5	18.6
22	18.7	18.2	18.5	19.5	18.7	19.0	21.1	19.7	20.2	18.9	18.3	18.6
23	18.9	18.3	18.6	19.5	18.8	19.1	19.7	19.4	19.6	18.6	17.6	18.2
24	18.6	17.9	18.2	19.3	18.8	19.0	19.6	19.3	19.4	17.7	16.8	17.3
25	18.4	17.6	18.0	19.4	18.7	19.0	19.7	19.2	19.5	17.6	16.1	16.9
26	18.5	17.7	18.1	19.4	18.5	18.9	19.8	19.2	19.5	17.7	16.4	17.1
27	18.6	17.8	18.2	19.0	18.2	18.7	19.8	19.2	19.5	17.9	17.0	17.5
28	18.5	18.0	18.3	19.1	18.6	18.9	19.8	19.2	19.5	18.0	17.0	17.5
29	18.8	18.0	18.4	19.1	18.5	18.8	19.9	19.1	19.4	17.9	17.0	17.5
30	18.9	18.2	18.5	19.0	18.3	18.7	19.7	19.2	19.4	18.1	17.6	17.9
31	---	---	---	19.2	18.5	18.9	19.6	19.1	19.3	---	---	---
MONTH	18.9	16.5	17.9	20.9	17.6	18.9	21.9	18.2	19.1	19.8	16.1	18.6
YEAR	21.9	8.3	15.8									

PEE DEE RIVER BASIN

0213228795 JORDAN CREEK NEAR SILVER HILL, N.C.--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	4.60	4.39	4.52	4.41	4.33	4.37	4.49	4.38	4.41	4.48	4.30	4.40
2	4.49	4.29	4.40	4.39	4.06	4.24	4.49	4.38	4.43	4.50	4.35	4.42
3	4.54	4.43	4.48	4.27	4.11	4.20	4.45	4.38	4.42	4.52	4.39	4.46
4	4.56	4.47	4.51	4.31	4.20	4.25	4.47	4.36	4.41	4.55	4.40	4.47
5	4.61	4.49	4.53	4.34	4.23	4.28	4.51	4.41	4.45	4.51	4.41	4.44
6	4.62	4.55	4.57	4.34	4.27	4.30	4.53	4.42	4.47	4.55	4.39	4.48
7	4.68	4.53	4.60	4.36	4.29	4.32	4.50	4.43	4.46	4.51	4.45	4.48
8	4.63	4.58	4.60	4.36	4.30	4.33	4.42	4.27	4.35	4.45	4.26	4.35
9	4.62	4.55	4.58	4.33	4.21	4.29	4.42	4.27	4.34	4.56	4.43	4.47
10	4.64	4.53	4.59	4.34	4.19	4.26	4.47	4.41	4.43	4.57	4.38	4.47
11	4.57	4.48	4.54	4.36	4.24	4.29	4.50	4.41	4.47	4.57	4.36	4.48
12	4.53	4.47	4.50	4.39	4.28	4.32	4.52	4.43	4.48	4.55	4.40	4.47
13	4.55	4.50	4.53	4.39	4.29	4.33	4.44	4.42	4.43	4.49	4.38	4.43
14	4.54	4.51	4.53	4.39	4.31	4.35	4.48	4.40	4.44	4.52	4.39	4.46
15	4.55	4.51	4.52	4.37	4.31	4.34	4.51	4.41	4.46	4.59	4.42	4.49
16	4.56	4.50	4.52	4.32	4.23	4.29	4.50	4.41	4.44	4.62	4.48	4.55
17	4.52	4.49	4.50	4.32	4.21	4.26	4.46	4.42	4.44	4.71	4.52	4.59
18	4.52	4.26	4.46	4.35	4.26	4.30	4.48	4.44	4.46	4.69	4.55	4.61
19	4.32	4.12	4.24	4.35	4.28	4.31	4.47	4.43	4.45	4.75	4.62	4.66
20	4.29	4.18	4.25	4.43	4.29	4.36	4.48	4.41	4.45	4.73	4.42	4.65
21	4.40	4.23	4.30	4.42	4.32	4.37	4.54	4.36	4.43	4.71	4.38	4.60
22	4.45	4.26	4.35	4.37	4.32	4.34	4.35	4.26	4.30	4.75	4.59	4.67
23	4.48	4.29	4.38	4.35	4.28	4.32	4.33	4.25	4.30	4.77	4.65	4.71
24	4.47	4.33	4.40	4.37	4.27	4.32	4.37	4.27	4.32	4.72	4.60	4.66
25	4.47	4.35	4.41	4.44	4.31	4.37	4.43	4.27	4.36	4.73	4.50	4.65
26	4.48	4.35	4.42	4.47	4.39	4.42	4.42	4.31	4.37	4.53	4.39	4.48
27	4.48	4.37	4.43	4.45	4.39	4.42	4.40	4.28	4.33	4.65	4.43	4.52
28	4.48	4.39	4.43	4.47	4.38	4.44	4.41	4.24	4.34	4.66	4.49	4.58
29	4.47	4.40	4.43	4.45	4.36	4.40	4.45	4.29	4.39	4.68	4.54	4.62
30	4.45	4.41	4.43	4.47	4.34	4.39	4.46	4.34	4.39	4.69	4.47	4.58
31	4.42	4.37	4.40	---	---	---	4.45	4.30	4.38	4.70	4.52	4.62
MONTH	4.68	4.12	4.46	4.47	4.06	4.33	4.54	4.24	4.41	4.77	4.26	4.53

PH (STANDARD UNITS), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4.70	4.54	4.63	4.76	4.62	4.69	4.82	4.71	4.78	4.85	4.72	4.78
2	4.72	4.60	4.66	4.72	4.59	4.64	4.55	4.29	4.41	4.87	4.78	4.82
3	4.73	4.65	4.69	4.62	4.41	4.50	4.66	4.53	4.57	4.78	4.60	4.71
4	4.80	4.66	4.71	4.68	4.51	4.58	4.71	4.53	4.61	4.83	4.77	4.79
5	4.73	4.63	4.66	4.65	4.51	4.58	4.73	4.56	4.63	4.81	4.75	4.79
6	4.76	4.63	4.67	4.63	4.52	4.56	4.74	4.51	4.67	4.87	4.76	4.80
7	4.79	4.63	4.72	4.66	4.52	4.58	4.68	4.50	4.60	4.85	4.73	4.80
8	4.81	4.67	4.73	4.57	4.42	4.52	4.71	4.58	4.64	4.85	4.74	4.80
9	4.79	4.67	4.73	4.60	4.40	4.51	4.74	4.60	4.66	4.87	4.70	4.80
10	4.61	4.30	4.49	4.63	4.53	4.57	4.71	4.64	4.67	4.79	4.48	4.62
11	4.64	4.38	4.53	4.66	4.59	4.62	4.67	4.47	4.61	4.74	4.64	4.69
12	4.63	4.46	4.53	4.71	4.65	4.67	4.69	4.56	4.63	4.78	4.71	4.74
13	4.70	4.48	4.59	4.78	4.68	4.72	4.71	4.56	4.63	4.78	4.72	4.75
14	4.69	4.58	4.63	4.76	4.69	4.72	4.67	4.43	4.58	4.81	4.75	4.78
15	4.69	4.55	4.62	4.75	4.60	4.69	4.69	4.53	4.59	4.82	4.76	4.79
16	4.67	4.44	4.58	4.63	4.40	4.59	4.68	4.60	4.63	4.82	4.75	4.78
17	4.67	4.46	4.58	4.63	4.45	4.57	4.73	4.59	4.66	4.77	4.46	4.65
18	4.64	4.56	4.60	4.63	4.47	4.54	4.76	4.62	4.69	4.89	4.63	4.77
19	4.58	4.25	4.42	4.65	4.55	4.60	4.81	4.62	4.71	4.96	4.82	4.89
20	4.62	4.47	4.53	4.64	4.56	4.60	4.84	4.70	4.77	5.00	4.88	4.94
21	4.65	4.53	4.59	4.84	4.57	4.67	4.86	4.73	4.82	5.01	4.85	4.95
22	4.66	4.50	4.60	4.79	4.65	4.71	4.84	4.70	4.78	5.00	4.85	4.94
23	4.70	4.54	4.64	4.80	4.62	4.69	4.85	4.75	4.81	5.00	4.90	4.95
24	4.69	4.57	4.63	4.78	4.58	4.68	4.86	4.76	4.81	5.04	4.96	5.00
25	4.62	4.55	4.58	4.68	4.51	4.60	4.86	4.79	4.83	5.03	4.97	5.00
26	4.60	4.53	4.57	4.65	4.40	4.56	4.84	4.78	4.82	4.99	4.95	4.97
27	4.71	4.55	4.61	4.77	4.45	4.61	4.85	4.75	4.81	4.98	4.85	4.94
28	4.78	4.55	4.66	4.85	4.59	4.75	4.84	4.70	4.81	4.87	4.66	4.78
29	---	---	---	4.64	4.50	4.58	4.81	4.68	4.75	4.91	4.69	4.82
30	---	---	---	4.79	4.59	4.70	4.83	4.70	4.77	4.94	4.83	4.89
31	---	---	---	4.83	4.67	4.74	---	---	---	4.92	4.87	4.90
MONTH	4.81	4.25	4.61	4.85	4.40	4.62	4.86	4.29	4.69	5.04	4.46	4.83

PEE DEE RIVER BASIN

02132287795 JORDAN CREEK NEAR SILVER HILL, N.C.--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	4.94	4.90	4.92	5.00	4.74	4.90	4.96	4.79	4.86	4.90	4.85	4.88
2	4.96	4.92	4.93	5.04	4.77	4.94	4.95	4.85	4.90	4.88	4.85	4.87
3	4.94	4.91	4.92	5.06	4.98	5.03	5.01	4.93	4.98	4.89	4.85	4.86
4	4.95	4.91	4.92	5.08	5.00	5.05	5.10	5.00	5.05	4.84	4.62	4.75
5	4.96	4.89	4.92	5.09	5.07	5.08	5.11	5.06	5.08	4.70	4.57	4.65
6	4.90	4.86	4.89	5.09	5.07	5.08	5.12	4.56	4.99	4.73	4.57	4.66
7	4.91	4.86	4.88	5.09	5.07	5.08	5.03	4.54	4.75	4.78	4.69	4.73
8	4.91	4.85	4.88	5.08	5.01	5.04	5.08	5.04	5.05	4.81	4.76	4.79
9	4.89	4.86	4.88	5.08	5.04	5.06	5.09	5.01	5.05	4.82	4.71	4.80
10	4.89	4.86	4.87	5.09	4.50	5.04	5.11	5.07	5.09	4.84	4.70	4.75
11	4.88	4.83	4.86	4.84	4.33	4.51	5.13	5.07	5.10	4.80	4.71	4.75
12	4.88	4.81	4.86	4.93	4.56	4.78	5.13	5.09	5.11	4.78	4.72	4.75
13	4.85	4.79	4.83	5.01	4.82	4.92	5.12	5.06	5.10	4.84	4.78	4.82
14	4.86	4.81	4.83	5.03	4.95	4.99	5.13	5.05	5.10	4.83	4.78	4.81
15	4.83	4.59	4.74	5.04	4.89	4.97	5.11	5.06	5.09	4.83	4.81	4.82
16	4.77	4.70	4.73	5.09	4.98	5.01	5.10	4.89	5.04	4.84	4.76	4.81
17	4.77	4.72	4.74	5.05	4.99	5.00	5.06	4.93	4.98	4.81	4.78	4.80
18	4.77	4.72	4.75	5.02	4.99	5.00	5.07	5.03	5.05	4.79	4.73	4.75
19	4.74	4.71	4.72	5.06	4.99	5.01	5.05	5.03	5.04	4.78	4.73	4.75
20	4.75	4.72	4.74	5.07	4.99	5.01	5.05	5.03	5.04	4.78	4.74	4.76
21	4.76	4.71	4.74	5.05	4.99	5.02	5.03	4.58	4.92	4.74	4.57	4.66
22	4.74	4.67	4.70	5.04	4.96	4.99	4.90	4.59	4.72	4.73	4.69	4.71
23	4.74	4.67	4.71	5.03	4.95	4.99	5.01	4.91	4.97	4.75	4.69	4.72
24	4.75	4.70	4.73	5.03	4.98	5.01	5.04	5.00	5.02	4.75	4.71	4.73
25	4.75	4.73	4.74	5.00	4.96	4.98	5.04	4.96	5.02	4.75	4.71	4.73
26	4.75	4.72	4.73	4.99	4.94	4.96	5.02	4.95	4.98	4.74	4.69	4.71
27	4.75	4.65	4.72	4.99	4.93	4.95	5.02	4.99	5.01	4.76	4.71	4.72
28	4.81	4.71	4.75	5.00	4.93	4.97	5.01	4.95	4.98	4.80	4.71	4.75
29	4.86	4.53	4.79	4.99	4.94	4.97	4.97	4.87	4.94	4.76	4.71	4.73
30	4.94	4.84	4.89	4.98	4.93	4.96	4.90	4.74	4.83	4.75	4.68	4.72
31	---	---	---	4.95	4.93	4.94	4.90	4.87	4.89	---	---	---
MONTH	4.96	4.53	4.81	5.09	4.33	4.98	5.13	4.54	4.99	4.90	4.57	4.76
YEAR	5.13	4.06	4.67									

PEE DEE RIVER BASIN

02132320 BIG SHOE HEEL CREEK NEAR LAURINBURG, NC

LOCATION.--Lat 34°45'01", long 79°23'12", Scotland County, Hydrologic Unit 03040203, at downstream side of bridge near center of span on U. S. Highway 74, 2.5 mi downstream from Jordan Creek, and 4.5 mi southeast of Laurinburg.

DRAINAGE AREA.-- 83.3 mi^2.

PERIOD OF RECORD.--Occasional discharge measurements, water years 1949-54, 1959, 1962, 1968-69. June 1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 170 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good except for period July 26 to Aug. 1, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	69	79	109	106	105	158	78	65	13	4.7	18
2	181	74	76	114	100	101	169	78	57	12	6.4	17
3	241	94	75	119	101	111	174	72	51	12	6.8	15
4	302	103	73	116	104	122	180	72	48	12	5.7	14
5	305	108	72	109	110	134	165	69	44	12	5.8	13
6	258	102	72	111	118	135	132	66	40	11	6.8	13
7	204	90	72	119	120	121	116	62	35	12	30	12
8	156	82	104	141	110	107	112	57	33	13	57	12
9	123	80	144	159	101	100	108	51	35	17	60	12
10	104	79	204	177	101	100	98	55	34	13	54	14
11	88	78	272	187	102	99	90	72	36	12	55	16
12	77	75	307	176	100	96	84	67	28	14	43	18
13	74	73	302	151	95	92	79	60	27	39	32	21
14	73	71	274	131	89	88	77	56	23	30	27	20
15	72	73	238	117	86	83	76	52	23	30	24	19
16	72	92	206	109	87	80	80	46	25	28	22	17
17	71	112	178	104	106	86	84	42	30	27	25	15
18	71	129	152	101	118	119	78	43	28	22	25	14
19	93	129	134	99	136	138	73	40	20	19	24	14
20	104	109	127	97	148	149	69	39	17	18	22	14
21	105	92	126	97	167	132	68	40	16	16	21	24
22	94	83	125	98	183	109	67	39	15	16	23	52
23	83	95	119	98	175	94	65	47	16	13	37	49
24	75	107	112	96	155	84	61	46	17	12	45	37
25	69	114	105	96	145	79	56	43	15	12	39	29
26	67	112	103	113	142	77	55	38	14	9.6	31	25
27	66	102	103	123	128	78	52	37	13	8.7	27	23
28	65	95	104	131	114	78	50	53	14	8.1	23	21
29	64	88	103	129	---	89	52	75	17	9.6	20	21
30	65	82	104	119	---	113	62	89	14	6.8	19	21
31	69	---	103	113	---	143	---	85	---	5.4	18	---
MEAN	116	93.1	141	121	120	105	93.0	57.1	28.3	15.6	27.1	20.3
MAX	305	129	307	187	183	149	180	89	65	39	60	52
MIN	64	69	72	96	86	77	50	37	13	5.4	4.7	12
IN.	1.60	1.25	1.95	1.68	1.49	1.45	1.25	.79	.38	.22	.37	.27

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	66.9	76.3	90.6	108.0	92.9	103.5	103.5	86.0	53.0	65.6	55.6	63.4
MAX	115.8	93.1	140.9	133.5	119.5	134.0	153.0	157.2	104.2	175.1	93.2	82.9
(WY)	1990	1990	1990	1988	1990	1989	1989	1989	1989	1989	1989	1987
MIN	41.3	67.0	50.2	69.3	62.0	72.0	64.6	43.8	28.3	15.6	26.8	20.3
(WY)	1988	1989	1989	1989	1989	1988	1988	1988	1990	1990	1988	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	77.9		*****	
HIGHEST ANNUAL MEAN			99.0	1989
LOWEST ANNUAL MEAN			63.6	1988
HIGHEST DAILY MEAN	307	Dec 12	508	May 4 1989
LOWEST DAILY MEAN	4.7	Aug 1	4.7	Aug 1 1990
INSTANTANEOUS PEAK FLOW	322	Oct 4	546	May 3 1989
INSTANTANEOUS PEAK STAGE	4.16	Oct 4	4.63	May 3 1989
INSTANTANEOUS LOW FLOW	3.9	Aug 1	3.9	Aug 1 1990
ANNUAL RUNOFF (INCHES)	12.7		*****	
10 PERCENTILE	141		145	
50 PERCENTILE	75		66	
95 PERCENTILE	12		17	

***** Indicates not enough data, therefore statistic is not computed

PEE DEE RIVER BASIN

02133500 DROWNING CREEK NEAR HOFFMAN, NC

LOCATION.--Lat 35°03'38", long 79°29'39", Richmond County, Hydrologic Unit 03040203, on right bank 10 ft downstream from bridge on U.S. Highway 1, 0.8 mi downstream from Deep Creek, 1 mi upstream from Seaboard Coast Line Railroad bridge, and 4 mi northeast of Hoffman.

DRAINAGE AREA.--183 mi^2.

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 972: 1941(M). WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 270 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Since 1984, the town of Southern Pines withdraws water for public supply 0.5 mi upstream from the gage causing some diurnal fluctuation at low to medium flows; a daily average of 2.81 ft^3/s was diverted during the year. Minimum discharge for period of record also occurred Aug. 18, 1988. Minimum daily discharge for period of record also occurred July 10, Aug. 20, 1988. Minimum discharge for current water year also occurred Aug. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	268	252	245	296	330	275	478	229	179	45	36	44
2	494	258	225	319	302	273	496	204	133	126	36	42
3	859	301	223	318	276	313	540	223	127	99	35	43
4	946	352	224	295	283	439	666	295	127	70	30	40
5	685	356	221	269	330	499	592	322	114	58	30	39
6	493	324	221	266	323	448	446	309	101	52	35	39
7	385	275	222	291	298	351	373	223	96	44	103	38
8	323	260	274	349	267	300	370	186	91	41	118	34
9	305	274	402	413	256	281	384	167	85	50	97	34
10	288	293	544	438	304	276	365	213	83	53	136	42
11	270	290	614	421	435	280	317	316	82	47	95	44
12	253	272	555	360	463	274	301	367	78	47	69	64
13	239	251	518	297	424	262	289	305	70	69	58	82
14	218	235	541	270	347	254	268	202	68	69	51	78
15	213	241	559	263	288	245	282	176	67	137	77	64
16	218	310	502	258	280	241	349	154	70	138	113	55
17	211	407	434	256	316	237	379	139	76	92	227	50
18	224	433	376	252	366	275	332	135	73	82	284	45
19	346	391	339	249	416	346	280	129	65	84	149	41
20	480	324	330	236	464	362	248	112	58	74	88	41
21	761	283	329	248	488	333	228	125	54	70	73	42
22	627	268	324	308	466	262	229	131	53	69	85	41
23	463	283	295	360	407	242	241	143	100	63	139	47
24	372	327	273	343	372	224	228	163	90	57	109	48
25	318	347	265	290	382	214	209	136	67	49	100	44
26	289	332	271	316	342	219	193	124	57	44	87	40
27	272	294	282	398	296	238	174	117	54	42	79	39
28	251	272	279	441	279	255	158	136	51	38	66	37
29	241	267	275	417	---	268	176	260	51	40	59	35
30	245	258	268	358	---	358	234	355	47	41	53	37
31	247	---	271	350	---	448	---	314	---	38	50	---
MEAN	381	301	345	321	350	300	327	207	82.2	65.4	89.3	45.6
MAX	946	433	614	441	488	499	666	367	179	138	284	82
MIN	211	235	221	236	256	214	158	112	47	38	30	34
IN.	2.40	1.84	2.18	2.02	1.99	1.89	2.00	1.30	.50	.41	.56	.28

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	195.8	229.1	267.0	323.1	362.5	382.1	330.3	237.1	176.3	204.0	195.5	181.6
MAX	594.6	499.3	530.4	500.6	687.3	619.2	842.0	465.3	420.7	623.5	496.9	931.7
(WY)	1965	1980	1973	1978	1960	1952	1973	1958	1976	1944	1985	1945
MIN	48.5	93.4	135.2	151.1	155.7	173.1	110.6	84.5	34.5	32.9	43.4	28.8
(WY)	1941	1942	1989	1942	1941	1981	1986	1988	1988	1986	1968	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	234.1		256.6	
HIGHEST ANNUAL MEAN			396.5	1984
LOWEST ANNUAL MEAN			141.1	1951
HIGHEST DAILY MEAN	946	Oct 4	8530	Sep 18 1945
LOWEST DAILY MEAN	30	Aug 4	20	Jul 9 1988
INSTANTANEOUS PEAK FLOW	1000	Oct 3	10900	Sep 18 1945
INSTANTANEOUS PEAK STAGE	6.27	Oct 3	10.29	Sep 18 1945
INSTANTANEOUS LOW FLOW	29*	Aug 5	19*	Aug 11 1988
ANNUAL RUNOFF (INCHES)	17.4		19.0	
10 PERCENTILE	420		486	
50 PERCENTILE	248		207	
95 PERCENTILE	40		64	

* See REMARKS.

PEE DEE RIVER BASIN

02133624 LUMBER RIVER NEAR MAXTON, NC

LOCATION.--Lat 34°46'22", long 79°19'55", Robeson County, Hydrologic Unit 03040203, at downstream side of bridge, near right center of span, on State Highway 71, 2.6 mi north of Maxton and 7.5 mi upstream from Gum Swamp.

DRAINAGE AREA.--365 mi^2.

PERIOD OF RECORD.--Occasional discharge measurements, water years 1974, 1980-85. June 1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 180 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	509	391	453	539	666	595	613	373	443	122	93	151
2	619	400	434	540	640	557	699	401	489	117	93	141
3	701	423	426	548	608	544	800	421	463	128	90	131
4	906	440	413	558	606	543	904	413	338	173	91	123
5	1020	491	393	566	610	582	884	415	263	167	88	119
6	1210	513	380	581	566	620	912	436	247	141	86	115
7	1180	513	376	581	537	675	984	454	229	124	111	113
8	926	507	417	598	563	723	880	469	211	118	172	113
9	740	498	482	614	565	699	746	454	200	132	239	107
10	629	472	633	652	538	631	653	404	193	114	267	108
11	559	440	751	694	507	569	606	378	188	116	279	107
12	514	438	898	719	506	532	590	396	177	153	277	117
13	489	454	1050	727	544	515	575	441	170	207	246	143
14	467	452	1120	703	610	505	541	471	163	177	191	176
15	444	441	1080	654	660	493	512	490	158	178	164	188
16	422	440	985	593	656	478	507	459	158	183	151	175
17	404	458	921	539	631	475	515	378	164	207	191	154
18	390	481	894	512	579	510	529	326	164	212	255	138
19	440	497	852	501	602	519	544	292	159	199	308	127
20	454	527	773	493	649	528	559	274	153	188	342	121
21	491	559	701	491	727	522	531	258	147	176	347	144
22	547	549	651	487	772	530	483	243	136	163	277	147
23	622	536	620	487	785	545	437	255	129	152	296	131
24	778	503	618	496	789	534	414	265	130	141	364	124
25	784	488	617	518	781	488	403	270	155	133	363	123
26	658	492	579	583	726	441	397	276	154	123	321	121
27	563	496	532	611	654	418	382	273	136	113	259	114
28	499	503	521	618	616	405	362	285	126	107	216	106
29	450	500	517	611	---	430	354	302	124	106	192	104
30	419	481	524	633	---	483	354	348	121	100	177	104
31	401	---	527	660	---	562	---	403	---	97	163	---
MEAN	620	479	650	584	632	537	589	365	203	147	216	129
MAX	1210	559	1120	727	789	723	984	490	489	212	364	188
MIN	390	391	376	487	506	405	354	243	121	97	86	104
IN.	1.96	1.47	2.05	1.85	1.80	1.70	1.80	1.15	.62	.47	.68	.40

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	367.0	415.1	438.6	539.1	497.0	619.7	585.8	450.8	289.9	320.2	295.1	309.7
MAX	620.5	479.4	649.6	627.1	631.9	887.7	826.1	769.1	524.0	640.3	576.5	432.6
(WY)	1990	1990	1990	1988	1990	1989	1989	1989	1989	1989	1989	1989
MIN	184.1	306.6	284.0	406.0	349.3	434.3	342.3	218.0	134.8	147.3	153.8	129.5
(WY)	1988	1988	1989	1989	1989	1988	1988	1988	1988	1990	1988	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR			FOR PERIOD OF RECORD	
AVERAGE FLOW	428.6			*****	
HIGHEST ANNUAL MEAN				538.9	1989
LOWEST ANNUAL MEAN				321.5	1988
HIGHEST DAILY MEAN	1210	Oct	6	1660	Jul 22 1989
LOWEST DAILY MEAN	86	Aug	6	86	Aug 6 1990
INSTANTANEOUS PEAK FLOW	1260	Oct	6	1720	Jul 22 1989
INSTANTANEOUS PEAK STAGE	11.41	Oct	6	11.75	Jul 22 1989
INSTANTANEOUS LOW FLOW	83	Aug	6	83	Aug 6 1990
ANNUAL RUNOFF (INCHES)	15.95			*****	
10 PERCENTILE	695			773	
50 PERCENTILE	450			394	
95 PERCENTILE	111			120	

***** Indicates not enough data, therefore statistic is not computed

PEE DEE RIVER BASIN

02134480 BIG SWAMP NEAR TARHEEL, NC

LOCATION.--Lat 34°42'37", long 78°50'14", Robeson County, Hydrologic Unit 03040203, on left bank at downstream side of bridge on SR 1004 and 2.8 mi southwest of Tarheel.

DRAINAGE AREA.--229 mi^2.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1949-54, 1957-58, 1962-68. October 1985 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 105 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges and those for period March to September, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97	76	151	337	239	316	211	93	56	8.8	17	30
2	137	84	136	363	230	282	276	100	41	10	20	27
3	179	132	123	389	219	259	341	99	30	9.6	20	22
4	234	162	112	400	208	245	356	92	23	9.0	20	19
5	330	188	105	390	202	238	353	82	e19	8.2	20	28
6	443	219	100	379	201	235	346	73	e17	7.5	19	31
7	528	239	98	373	206	232	337	65	e14	7.1	23	31
8	530	232	137	407	211	229	320	58	e12	7.0	31	30
9	471	204	213	473	211	216	297	53	e10	6.3	33	27
10	402	174	341	553	205	200	269	52	e9.5	5.5	34	27
11	337	156	634	584	197	186	246	56	e9.0	14	35	29
12	284	150	869	574	194	179	224	53	e8.6	47	36	23
13	239	150	884	547	195	172	199	48	e8.0	58	36	22
14	199	145	829	508	193	162	172	45	7.9	59	37	24
15	161	135	753	466	183	151	146	43	8.7	58	36	25
16	128	135	663	425	170	141	134	42	9.7	66	37	24
17	105	139	589	388	167	135	131	41	11	67	40	23
18	91	141	537	354	170	151	126	41	10	64	63	21
19	91	142	494	327	199	167	114	39	14	61	68	20
20	102	137	457	299	236	187	100	39	15	55	68	18
21	113	129	420	278	282	202	89	40	15	48	56	20
22	125	119	394	265	331	206	82	44	15	45	50	45
23	125	129	388	254	378	194	78	53	14	40	51	51
24	109	151	385	248	396	172	72	51	15	35	62	49
25	93	170	385	244	373	151	67	47	13	36	62	45
26	85	186	383	249	356	133	62	43	12	36	56	42
27	80	197	379	246	352	122	57	42	11	34	48	41
28	77	195	366	243	342	117	52	45	11	28	39	38
29	74	182	327	244	---	122	53	57	9.9	20	33	37
30	71	166	303	248	---	141	70	84	9.2	24	31	37
31	74	---	314	246	---	167	---	79	---	18	32	---
MEAN	197	159	396	365	244	187	179	58.0	15.3	32.0	39.1	30.2
MAX	530	239	884	584	396	316	356	100	56	67	68	51
MIN	71	76	98	243	167	117	52	39	7.9	5.5	17	18
IN.	.99	.77	1.99	1.84	1.11	.94	.87	.29	.07	.16	.20	.15

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	94.8	124.5	215.5	361.5	241.3	406.6	252.7	120.9	40.5	74.8	76.7	123.8
MAX	197.2	158.8	395.8	919.9	487.8	856.5	517.7	357.5	77.0	257.4	154.2	380.8
(WY)	1990	1990	1990	1987	1987	1987	1989	1989	1989	1989	1986	1988
MIN	5.05	33.5	68.8	92.9	126.6	138.4	66.8	17.1	15.0	18.1	17.6	30.2
(WY)	1988	1988	1988	1986	1986	1988	1986	1986	1986	1986	1987	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	158.5		177.8	
HIGHEST ANNUAL MEAN			284.5	1987
LOWEST ANNUAL MEAN			101.4	1986
HIGHEST DAILY MEAN	884	Dec 13	2650	Mar 3 1987
LOWEST DAILY MEAN	5.5	Jul 10	.59	May 12 1986
INSTANTANEOUS PEAK FLOW	898	Dec 12	2670	Mar 3 1987
INSTANTANEOUS PEAK STAGE	11.43	Dec 12	13.14	Mar 3 1987
INSTANTANEOUS LOW FLOW	4.3	Jul 9	.43	May 12 1986
ANNUAL RUNOFF (INCHES)	9.40		10.5	
10 PERCENTILE	374		429	
50 PERCENTILE	111		95	
95 PERCENTILE	10		6.6	

PEE DEE RIVER BASIN

02134500 LUMBER RIVER AT BOARDMAN, NC

LOCATION.--Lat 34°26'32", long 78°57'38", Robeson County, Hydrologic Unit 03040203, on right bank 50 ft downstream from bridge on U.S. Highway 74, 1 mi downstream from Seaboard Coast Line Railroad bridge at Boardman, 1.5 mi downstream from Big Swamp, and 40.5 mi upstream from mouth.

DRAINAGE AREA.--1,228 mi^2.

PERIOD OF RECORD.--September 1929 to current year.

REVISED RECORDS.--WSP 1303: 1932(M). WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 72.05 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers). Prior to Sept. 30, 1936, nonrecording gage at site 100 ft downstream at same datum. Sept. 30, 1936 to June 8, 1943, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of September 1928 reached a stage of 11.8 ft, from floodmark witnessed by local resident, discharge, 25,000 ft^3/s. Flood of July 22, 1901, the highest during the period 1896-1913, reached a stage of 10.8 ft, from observations by Butters Lumber Co., discharge, 14,800 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	897	1140	1270	1830	1460	1910	1130	670	511	e152	113	285
2	1430	1120	1240	1830	1470	1860	1180	690	520	e140	107	251
3	1900	e1200	1220	1810	1470	1810	1270	699	510	e130	101	224
4	2440	e1300	1200	1820	1470	1720	1340	704	489	e150	95	201
5	2590	e1500	1180	1830	1460	1630	1410	719	471	e170	95	183
6	2640	e1600	1160	1840	1450	1550	1470	713	467	e180	94	167
7	2550	e1650	1130	1880	1460	1480	1520	692	472	e190	97	150
8	2390	e1600	1200	2020	1440	1410	1580	667	460	e180	113	137
9	2260	e1550	1390	2160	1410	1360	1630	639	391	e170	110	128
10	2200	e1500	1800	2310	1400	1350	1650	635	306	e160	105	121
11	2180	e1400	2230	2400	1390	1330	1680	619	285	e150	114	117
12	2170	e1350	2540	2440	1350	1340	1690	617	267	e145	134	115
13	2100	e1300	2860	2410	1320	1360	1640	639	246	154	158	118
14	1980	e1250	2970	2340	1300	1360	1550	635	233	152	177	118
15	1810	e1200	2960	2270	1280	1320	1450	596	222	150	189	120
16	1620	1180	2940	2230	1250	1250	1350	553	214	187	202	123
17	1450	1160	2980	2180	1230	1200	1240	524	205	212	219	131
18	1310	1130	3010	2120	1210	1180	1170	510	194	226	217	144
19	1210	1110	3000	2050	1300	1150	1100	504	189	233	201	153
20	1130	1100	2940	1960	1390	1130	1020	507	184	242	203	153
21	1050	1090	2810	1850	1450	1120	957	502	180	243	234	146
22	971	1070	2640	1760	1520	1110	910	489	177	234	262	139
23	921	1140	2460	1660	1590	1110	876	455	171	218	283	138
24	890	1190	2370	1570	1650	1110	850	412	163	202	296	149
25	875	1230	2250	1500	1680	1110	830	377	156	188	320	168
26	870	1280	2160	1490	1760	1110	801	339	149	173	358	177
27	889	1330	2020	1460	1850	1110	761	321	146	156	372	165
28	933	1340	1910	1430	1910	1090	708	343	150	143	361	151
29	1000	1340	1870	1420	---	1090	672	424	158	134	344	141
30	1090	1310	1850	1430	---	1090	638	458	164	125	334	135
31	1150	---	1840	1440	---	1090	---	483	---	118	311	---
MEAN	1577	1289	2110	1895	1461	1317	1202	553	282	174	204	155
MAX	2640	1650	3010	2440	1910	1910	1690	719	520	243	372	285
MIN	870	1070	1130	1420	1210	1090	638	321	146	118	94	115
IN.	1.48	1.17	1.98	1.78	1.24	1.24	1.09	.52	.26	.16	.19	.14

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	800.6	865.7	1300	1795	2182	2356	1902	1015	768.7	826.8	934.2	983.9
MAX	4721	4142	3977	3375	5486	5259	5688	3430	2587	2808	3741	4787
(WY)	1965	1948	1949	1946	1973	1983	1936	1978	1969	1943	1974	1945
MIN	141.1	211.2	236.7	261.8	429.2	610.7	419.9	276.0	215.2	174.4	137.7	92.2
(WY)	1941	1934	1934	1934	1934	1934	1981	1986	1941	1990	1954	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	1018		1306	
HIGHEST ANNUAL MEAN			2391	1965
LOWEST ANNUAL MEAN			524.4	1934
HIGHEST DAILY MEAN	3010	Dec 18	13400	Sep 24 1945
LOWEST DAILY MEAN	94	Aug 6	68	Oct 1 1968
INSTANTANEOUS PEAK FLOW	3010	Dec 18	13400	Sep 24 1945
INSTANTANEOUS PEAK STAGE	7.32	Dec 18	10.64	Sep 24 1945
INSTANTANEOUS LOW FLOW	93	Aug 6	66	Oct 9 1968
ANNUAL RUNOFF (INCHES)	11.3		14.4	
10 PERCENTILE	2040		2850	
50 PERCENTILE	1090		949	
95 PERCENTILE	125		216	

SANTEE RIVER BASIN

02137727 CATAWBA RIVER NEAR PLEASANT GARDENS, NC

LOCATION.--Lat 35°41'09", long 82°03'40", McDowell County, Hydrologic Unit 03050101, on right bank 18 ft downstream from bridge on Secondary Road 1221, 0.8 mi upstream from Buck Creek, 0.8 mi southeast of Pleasant Gardens, and at mile 297.

DRAINAGE AREA.--126 mi^2.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1963, 1970-73, 1975. October 1980 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,230 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Maximum discharge 11,000 ft^3/s, from rating curve extended above 7,130 ft^3/s on basis of contracted-opening measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2330	242	275	429	311	398	384	289	230	131	126	229
2	1500	230	266	331	301	433	376	276	231	133	127	201
3	844	227	256	306	301	735	356	266	225	127	127	187
4	621	219	252	317	599	589	346	301	200	125	127	174
5	502	213	255	327	463	497	334	303	192	125	125	168
6	429	256	239	450	393	447	330	277	190	124	135	159
7	380	242	235	409	365	412	312	250	185	121	120	153
8	344	231	555	529	333	392	296	243	184	159	289	145
9	317	227	451	489	323	395	291	273	451	185	204	158
10	298	215	369	422	1060	374	294	584	239	153	159	174
11	283	208	363	352	727	357	324	386	204	151	149	169
12	268	206	681	329	534	342	288	324	189	143	140	188
13	255	202	719	301	446	331	282	297	184	176	129	362
14	246	201	528	286	400	323	281	276	178	403	142	257
15	236	270	433	278	371	318	281	257	182	259	179	193
16	231	2540	381	270	2340	1610	274	251	201	177	140	166
17	401	646	347	262	1330	3680	263	263	185	156	124	155
18	360	450	325	260	793	1320	254	241	174	188	120	149
19	771	374	319	251	882	841	250	232	166	338	117	146
20	452	340	295	255	701	678	253	265	159	240	113	147
21	370	311	283	371	594	589	259	240	158	231	134	142
22	326	401	269	292	814	527	257	239	162	186	159	154
23	297	672	e235	273	748	484	283	225	156	175	148	143
24	282	466	e230	282	617	450	256	220	148	155	274	133
25	270	401	e250	459	530	424	242	222	144	178	2850	130
26	258	366	e247	422	474	401	231	218	142	154	587	128
27	254	342	235	362	444	386	225	224	140	141	381	125
28	247	323	236	330	421	371	319	331	148	134	276	125
29	238	298	e230	364	---	397	501	337	138	144	228	126
30	234	284	e232	371	---	378	326	261	137	138	202	125
31	259	---	338	331	---	405	---	238	---	131	286	---
MEAN	455	387	333	345	629	622	299	278	187	174	272	167
MAX	2330	2540	719	529	2340	3680	501	584	451	403	2850	362
MIN	231	201	230	251	301	318	225	218	137	121	113	125
IN.	4.13	3.40	3.03	3.14	5.16	5.65	2.63	2.52	1.65	1.58	2.47	1.47

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	158.7	226.1	251.6	220.0	361.2	335.6	311.0	248.6	185.9	170.0	173.9	181.9
MAX	454.9	606.0	572.6	345.5	629.1	622.1	687.8	443.8	315.8	252.1	292.2	435.3
(WY)	1990	1986	1984	1990	1990	1990	1983	1984	1983	1984	1984	1989
MIN	69.2	69.0	77.6	106.8	158.8	130.0	138.5	109.0	70.7	57.9	50.5	71.5
(WY)	1982	1982	1989	1981	1988	1988	1986	1988	1988	1988	1988	1988

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	344.3		234.5	
HIGHEST ANNUAL MEAN			350.8	1984
LOWEST ANNUAL MEAN			126.0	1988
HIGHEST DAILY MEAN	3680	Mar 17	5210	Feb 2 1983
LOWEST DAILY MEAN	113	Aug 20	33	Aug 19 1988
INSTANTANEOUS PEAK FLOW	7830	Aug 25	11000*	Feb 2 1983
INSTANTANEOUS PEAK STAGE	11.14	Aug 25	13.60	Feb 2 1983
INSTANTANEOUS LOW FLOW	109	Aug 21	32	Aug 28 1988
ANNUAL RUNOFF (INCHES)	36.8		25.1	
10 PERCENTILE	524		419	
50 PERCENTILE	271		169	
95 PERCENTILE	131		65	

* See REMARKS.

SANTEE RIVER BASIN

02138500 LINVILLE RIVER NEAR NEBO, NC

LOCATION.--Lat 35°47'41", long 81°53'25", Burke County, Hydrologic Unit 03050101, in Pisgah National Forest, on right bank 370 ft upstream from bridge on State Highway 126, 0.2 mi downstream from Shooks Creek, 0.5 mi upstream from Lake James, 2.0 mi northeast of Longtown, and 6.0 mi northeast of Nebo.

DRAINAGE AREA.--66.7 mi^2.

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). WDR NC-80-1: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 1,203.87 ft above National Geodetic Vertical Datum of 1929 . May 1907 to August 1908, nonrecording gage about 1.2 mi 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 downstream from bridge on State Highway 126 at datum 1.00 ft higher. Oct. 1, 1970 to Sept. 30, 1973 at present site at datum 1.00 ft higher. Oct. 1, 1973 to Aug. 25, 1981 at present site at datum 1.00 ft higher.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Maximum discharge, 39,500 ft^3/s, site and datum then in use, from rating curve extended above 6,400 ft^3/s on basis of slope-area measurement of peak flow. Minimum discharge, for period of record, 2.0 ft^3/s, result of freezeup. Minimum daily for period of record, 8 ft^3/s, also occurred Sept. 8, 9, 1925. Minimum discharge for current water year also occurred on July 8.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of about 11 ft at former site and datum, discharge, 34,600 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1040	152	160	408	239	206	153	158	114	39	40	114
2	862	144	152	254	223	201	147	154	105	40	38	102
3	571	145	142	210	212	330	168	161	101	41	37	93
4	421	155	127	198	324	317	128	201	96	38	36	87
5	333	154	135	221	346	267	105	243	89	36	36	83
6	298	154	131	246	301	235	115	195	84	34	88	77
7	259	161	125	253	273	218	121	172	79	32	104	73
8	216	151	158	307	251	202	114	153	78	34	70	70
9	197	146	166	328	236	197	110	149	83	60	198	69
10	188	142	151	269	513	190	107	422	82	48	201	67
11	175	108	155	234	493	176	126	310	77	43	364	69
12	164	119	212	209	372	170	117	224	69	43	142	67
13	159	121	275	187	300	166	111	192	66	58	107	139
14	149	149	211	171	267	166	106	171	63	197	95	140
15	141	161	188	176	252	162	104	151	58	239	83	109
16	137	1260	e160	169	1080	1020	100	137	70	111	70	86
17	194	475	e139	175	736	3360	97	134	74	80	63	71
18	210	348	e141	173	424	1010	94	134	70	108	60	66
19	545	294	e136	168	456	574	91	136	60	125	57	64
20	326	245	e128	161	389	435	88	93	54	94	53	64
21	260	218	e105	197	319	309	84	104	50	74	61	62
22	227	211	e88	194	337	323	87	112	50	73	61	61
23	211	376	e92	178	390	211	89	110	50	96	65	63
24	203	306	e96	172	329	219	87	103	47	73	70	60
25	193	262	e105	223	282	212	87	97	44	63	1730	58
26	183	229	e105	270	248	200	83	91	43	56	404	55
27	174	200	e101	229	228	167	79	94	42	50	303	53
28	165	182	101	212	220	149	82	110	43	47	203	52
29	153	181	97	219	---	148	380	194	41	45	161	50
30	143	170	95	335	---	152	192	155	39	49	139	49
31	141	---	146	272	---	167	---	128	---	43	129	---
MEAN	279	237	139	226	359	383	118	161	67.4	70.0	170	75.8
MAX	1040	1260	275	408	1080	3360	380	422	114	239	1730	140
MIN	137	108	88	161	212	148	79	91	39	32	36	49
IN.	4.82	3.97	2.41	3.91	5.60	6.61	1.98	2.78	1.13	1.21	2.94	1.27

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	124.0	138.0	138.8	163.5	190.8	226.5	198.7	149.5	124.3	100.7	117.7	118.2
MAX	433.5	677.9	348.5	443.3	453.7	632.0	479.3	369.1	598.1	448.7	1084	605.5
(WY)	1937	1978	1984	1937	1983	1979	1983	1976	1972	1989	1940	1979
MIN	18.9	27.8	30.9	31.8	60.7	74.3	62.0	48.9	33.7	23.0	15.5	13.8
(WY)	1955	1932	1940	1940	1941	1988	1986	1941	1941	1930	1925	1925

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	189.8		149.1	
HIGHEST ANNUAL MEAN			246.0	1979
LOWEST ANNUAL MEAN			77.6	1956
HIGHEST DAILY MEAN	3360	Mar 17	14000	Aug 13 1940
LOWEST DAILY MEAN	32	Jul 7	8.0	Sep 7 1925
INSTANTANEOUS PEAK FLOW	4650	Mar 17	39500*	Aug 13 1940
INSTANTANEOUS PEAK STAGE	6.10	Mar 17	11.4	Aug 13 1940
INSTANTANEOUS LOW FLOW	31*	Jul 7	2.0*	Jan 9 1956
ANNUAL RUNOFF (INCHES)	38.6		30.3	
10 PERCENTILE	330		270	
50 PERCENTILE	146		100	
95 PERCENTILE	44		30	

* See REMARKS.

SANTEE RIVER BASIN

02140991 JOHNS RIVER AT ARNEY'S STORE, NC

LOCATION.--Lat 35°50'01", long 81°42'43", Burke County, Hydrologic Unit 03050101, on right bank 12 ft downstream from bridge on Secondary Road 1438, 0.2 mi downstream from Sims Branch, and 0.8 mi northeast of Arney's Store.

DRAINAGE AREA.--201 mi^2.

PERIOD OF RECORD.--May 1985 to current year.

REVISED RECORDS.--WDR NC-87-1: 1985-86 (P).

GAGE.--Water-stage recorder. Datum of gage is 1,001.74 ft above National Geodetic Vertical Datum of 1929. Station has landline telemetry.

REMARKS.--Records good except those above 1500 ft^3/s, and for estimated daily discharges, which are fair. Minimum discharge for period of record also occurred on Aug. 20, 1988. Minimum discharge for current water year also occurred July 8, and Sept. 27-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2960	342	406	849	535	585	534	421	308	164	157	219
2	2780	323	391	561	503	598	507	411	299	169	157	205
3	1640	319	381	487	486	975	493	492	300	162	156	195
4	1040	305	364	498	794	833	475	517	293	155	155	187
5	827	299	366	512	667	704	460	500	275	151	155	182
6	715	322	356	642	572	643	454	435	271	145	823	176
7	624	330	345	601	546	589	462	404	263	143	328	170
8	554	308	537	866	499	556	427	380	264	142	232	163
9	505	305	521	847	478	564	415	387	308	162	216	266
10	466	288	444	707	1430	533	418	967	269	174	220	215
11	440	280	452	612	1060	510	496	683	253	155	319	358
12	413	275	746	560	769	491	422	532	239	161	213	237
13	390	268	869	503	658	478	402	478	235	224	191	284
14	373	265	652	467	595	466	396	439	235	825	204	298
15	356	281	556	449	554	458	396	405	245	687	193	240
16	345	5600	499	432	1970	1080	388	384	256	316	191	203
17	473	1290	455	415	1810	5050	380	390	250	235	184	183
18	480	802	437	408	1060	2440	367	368	234	316	185	172
19	1510	653	420	395	1120	1430	355	337	217	255	172	169
20	765	576	405	388	923	1060	354	337	208	228	157	172
21	605	519	384	525	799	886	352	339	206	252	178	165
22	522	515	e344	436	943	792	357	386	204	346	197	169
23	469	862	e306	402	1080	730	348	346	213	342	518	163
24	438	640	e335	398	893	681	344	317	194	247	454	150
25	413	567	e364	601	768	644	350	307	187	225	1080	147
26	394	530	362	602	691	608	332	305	183	203	744	147
27	378	500	e340	509	649	577	324	326	183	188	605	144
28	364	475	330	469	620	551	349	451	185	177	371	141
29	353	446	320	513	---	570	799	568	174	172	296	141
30	346	419	324	730	---	548	465	391	170	172	261	142
31	346	---	502	596	---	594	---	330	---	164	234	---
MEAN	719	630	436	548	838	878	421	430	237	241	308	193
MAX	2960	5600	869	866	1970	5050	799	967	308	825	1080	358
MIN	345	265	306	388	478	458	324	305	170	142	155	141
IN.	4.12	3.50	2.50	3.14	4.34	5.04	2.34	2.47	1.32	1.38	1.77	1.07

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	241.0	399.0	315.1	304.1	386.2	497.3	411.4	314.6	229.3	239.5	246.2	285.4
MAX	718.8	754.2	456.4	547.7	838.3	878.2	883.2	430.1	386.8	569.6	509.9	808.3
(WY)	1990	1986	1987	1990	1990	1990	1987	1990	1989	1989	1985	1989
MIN	85.7	160.9	112.5	180.0	205.9	178.8	206.4	166.1	96.9	75.5	65.5	99.5
(WY)	1989	1989	1989	1989	1988	1988	1986	1988	1988	1988	1988	1988

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	488.4		322.5	
HIGHEST ANNUAL MEAN			488.4	1990
LOWEST ANNUAL MEAN			168.8	1988
HIGHEST DAILY MEAN	5600	Nov 16	5600	Nov 16 1989
LOWEST DAILY MEAN	141	Sep 28	35	Aug 19 1988
INSTANTANEOUS PEAK FLOW	11700	Nov 16	11700	Nov 16 1989
INSTANTANEOUS PEAK STAGE	16.55	Nov 16	16.55	Nov 16 1989
INSTANTANEOUS LOW FLOW	141*	Jul 7	33*	Aug 19 1988
ANNUAL RUNOFF (INCHES)	3300		2180	
10 PERCENTILE	810		583	
50 PERCENTILE	391		228	
95 PERCENTILE	159		82	

* See REMARKS.

SANTEE RIVER BASIN

02142000 LOWER LITTLE RIVER NEAR ALL HEALING SPRINGS, NC

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 downstream from Grassy Creek, 0.4 mi upstream from Lambert Creek, 2.2 mi northeast of All Healing Springs, and 4 mi northwest of Taylorsville.

DRAINAGE AREA.--28.2 mi^2.

PERIOD OF RECORD.--October to December 1952 (monthly discharge only), January 1953 to current year.

REVISED RECORDS.--WDR NC-79-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,070 ft, by barometer. Prior to June 13, 1953, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Minimum discharge of 2.9 ft^3/s also occurred Sept. 21, 1955. Minimum discharge for current water year also occurred Sept. 27, 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	554	26	26	165	65	67	70	58	53	32	23	21
2	269	26	25	77	59	73	66	122	51	32	25	21
3	100	25	24	60	58	114	64	135	50	30	23	20
4	65	25	24	61	160	97	63	284	48	29	22	19
5	52	25	24	58	101	83	61	127	45	29	25	20
6	44	32	23	84	77	75	61	86	45	28	126	19
7	39	29	23	74	69	69	62	72	43	27	43	18
8	36	28	40	177	61	66	60	63	43	28	32	18
9	34	27	35	115	59	66	59	63	81	28	34	18
10	33	25	32	81	463	63	61	164	86	27	29	30
11	32	25	32	67	162	61	79	95	55	29	28	33
12	30	25	145	59	104	59	62	75	48	30	26	34
13	29	24	126	52	85	58	57	68	45	31	25	28
14	28	24	79	48	76	57	62	61	43	87	26	25
15	27	26	61	46	70	56	128	57	48	138	25	22
16	27	50	51	44	423	58	82	54	45	63	24	21
17	30	35	44	42	191	280	69	53	42	44	23	19
18	37	31	41	42	111	151	61	50	40	58	23	19
19	67	29	39	40	128	98	58	48	39	43	22	19
20	41	28	38	41	100	84	57	49	38	36	21	19
21	36	27	36	52	87	76	56	48	37	35	22	19
22	34	35	34	44	129	71	56	68	37	33	25	20
23	32	69	e33	41	130	68	53	53	37	33	156	18
24	30	44	e32	45	98	66	51	48	35	29	49	17
25	29	37	e32	118	84	64	49	47	34	28	34	17
26	28	34	e31	97	77	63	48	46	34	27	31	17
27	28	32	31	72	74	62	47	52	34	25	32	17
28	27	30	30	61	70	61	55	101	32	25	26	17
29	27	28	29	94	---	63	65	130	32	25	24	17
30	26	27	30	105	---	61	55	73	31	25	23	17
31	26	---	75	77	---	86	---	59	---	23	22	---
MEAN	61.2	30.9	42.7	72.2	120	79.9	62.6	80.9	44.4	37.3	34.5	20.6
MAX	554	69	145	177	463	280	128	284	86	138	156	34
MIN	26	24	23	40	58	56	47	46	31	23	21	17
IN.	2.50	1.22	1.75	2.95	4.45	3.27	2.48	3.31	1.76	1.53	1.41	.82

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	27.7	28.1	35.9	40.1	52.4	57.3	57.1	41.6	37.5	27.5	27.1	26.3
MAX	102.8	115.0	76.3	117.3	134.0	153.0	136.6	98.5	106.2	88.1	123.1	102.3
(WY)	1965	1978	1984	1978	1960	1975	1958	1975	1975	1984	1970	1979
MIN	6.04	7.03	8.16	9.36	22.4	21.1	18.8	16.4	10.1	9.11	4.86	4.75
(WY)	1955	1956	1956	1956	1956	1956	1966	1956	1956	1954	1956	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	57.0		38.4	
HIGHEST ANNUAL MEAN			59.4	1984
LOWEST ANNUAL MEAN			14.9	1956
HIGHEST DAILY MEAN	554	Oct 1	2270	Aug 10 1970
LOWEST DAILY MEAN	17	Sep 24	3.1	Sep 20 1955
INSTANTANEOUS PEAK FLOW	1190	Oct 1	4850	Aug 10 1970
INSTANTANEOUS PEAK STAGE	8.42	Oct 1	15.68	Aug 10 1970
INSTANTANEOUS LOW FLOW	16*	Sep 26	2.9*	Sep 20 1955
ANNUAL RUNOFF (INCHES)	27.4		18.5	
10 PERCENTILE	98		67	
50 PERCENTILE	44		27	
95 PERCENTILE	20		9.7	

*See REMARKS.

SANTEE RIVER BASIN

0214253830 NORWOOD CREEK NEAR TROUTMAN, NC

LOCATION.--Lat 35°40'48", long 80°56'44", Iredell County, Hydrologic Unit 03040102, on left upstream wingwall of culvert on Secondary Road 1328, 0.4 mi upstream from Lake Norman, 0.7 mi downstream from Powder Spring Branch, 1.0 mi northeast of community of East Monbo, and 3.7 mi southwest of Troutman.

DRAINAGE AREA.--7.18 mi^2.

PERIOD OF RECORD.--December 1983 to current year.

GAGE.--Water-stage recorder. Datum of gage is 761.09 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for estimated daily discharges and those above 400 ft^3/s, which are poor. Maximum discharge, 1,320 ft^3/s, from rating curve extended above 400 ft^3/s by logarithmic plotting. Minimum discharge for current water year also occurred Sept. 7, 8, 9, 27, 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	387	7.3	6.2	18	8.5	10	14	8.0	8.7	4.8	3.8	3.1
2	94	7.3	6.2	9.7	8.2	10	12	7.9	8.0	4.9	3.8	3.1
3	31	7.2	5.9	8.2	7.8	21	11	e70	7.7	4.7	3.8	3.0
4	21	7.1	5.9	9.2	64	15	9.8	e25	7.1	4.6	3.7	2.9
5	17	7.0	6.0	9.6	25	12	9.3	10	6.8	4.6	4.4	2.9
6	15	7.9	6.0	21	14	11	8.9	9.8	6.7	4.5	6.3	2.7
7	13	7.6	5.9	14	11	11	11	11	6.6	4.4	4.6	2.7
8	12	7.8	14	45	9.2	10	9.0	8.9	6.4	4.5	4.1	2.7
9	11	7.7	13	21	8.7	10	8.8	8.8	6.3	4.5	4.1	2.8
10	10	7.0	9.4	13	96	9.6	8.9	40	6.3	4.5	4.0	2.9
11	10	6.9	12	10	28	9.3	9.7	16	6.1	4.6	3.8	4.6
12	9.9	6.7	115	8.9	16	8.9	8.8	12	6.0	4.4	3.7	4.7
13	9.6	6.6	66	8.2	12	8.5	8.6	11	5.9	6.9	4.7	3.7
14	9.3	6.6	22	8.0	9.9	8.4	8.8	9.8	5.8	9.8	5.6	3.6
15	9.0	7.9	13	7.6	8.9	8.2	43	8.9	6.2	9.0	4.0	3.4
16	8.9	18	9.4	7.7	117	8.2	16	8.5	6.3	5.6	3.9	3.2
17	9.6	9.2	8.0	7.3	40	81	12	8.2	6.0	5.1	3.8	3.2
18	45	8.0	7.1	7.4	18	29	11	7.9	5.8	5.0	3.7	3.1
19	126	7.6	6.9	7.2	42	16	9.9	7.6	5.6	4.9	3.6	2.9
20	23	7.1	6.6	7.4	20	13	9.5	8.4	5.4	4.9	3.5	3.0
21	14	6.7	6.4	32	13	12	9.2	9.5	5.4	4.8	3.6	3.0
22	11	8.9	6.2	13	33	11	8.9	17	5.6	4.8	3.8	3.2
23	9.8	22	e6.1	9.7	29	11	8.6	11	5.8	4.9	5.9	3.0
24	9.1	10	e6.0	9.8	16	10	8.2	9.2	5.4	4.6	4.1	2.8
25	8.5	8.5	e6.0	95	13	9.5	8.2	8.4	5.2	4.6	3.8	2.8
26	8.2	7.9	e5.9	37	12	9.2	7.9	8.0	5.2	4.5	3.8	2.8
27	8.0	7.2	5.9	17	11	9.0	7.6	8.5	5.1	4.4	3.7	2.7
28	8.0	7.0	5.8	13	11	8.9	10	15	5.1	4.3	3.5	2.7
29	7.6	6.6	6.1	12	---	12	12	61	5.0	4.1	3.4	2.7
30	7.6	6.3	6.3	11	---	11	8.7	15	4.9	4.0	3.3	2.8
31	7.6	---	11	9.5	---	21	---	10	---	4.0	3.2	---
MEAN	31.3	8.32	13.4	16.4	25.1	14.0	11.0	15.2	6.08	5.01	4.03	3.09
MAX	387	22	115	95	117	81	43	70	8.7	9.8	6.3	4.7
MIN	7.6	6.3	5.8	7.2	7.8	8.2	7.6	7.6	4.9	4.0	3.2	2.7
IN.	5.03	1.29	2.16	2.63	3.64	2.25	1.71	2.44	.95	.80	.65	.48

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	8.69	8.01	10.3	9.92	17.2	12.0	9.63	7.90	5.09	7.31	5.54	5.00
MAX	31.3	9.98	15.8	16.4	25.1	22.4	19.9	15.2	6.93	22.1	11.4	10.5
(WY)	1990	1988	1984	1990	1990	1987	1984	1990	1984	1989	1985	1989
MIN	3.01	4.83	4.23	4.97	5.14	6.23	3.60	2.86	1.61	1.90	2.62	2.43
(WY)	1987	1985	1989	1986	1986	1985	1986	1986	1986	1986	1987	1986

SUMMARY STATISTICS	FOR 1990 WATER YEAR			FOR PERIOD OF RECORD			
AVERAGE FLOW	12.7			8.36			
HIGHEST ANNUAL MEAN				12.7			1990
LOWEST ANNUAL MEAN				4.73			1986
HIGHEST DAILY MEAN	387	Oct	1	387	Oct	1	1989
LOWEST DAILY MEAN	2.7	Sep	6	.82	Aug	2	1986
INSTANTANEOUS PEAK FLOW	1320*	Oct	1	1320*	Oct	1	1989
INSTANTANEOUS PEAK STAGE	8.22*	Oct	1	8.22*	Oct	1	1989
INSTANTANEOUS LOW FLOW	2.5*	Sep	6	.67	Aug	2	1986
ANNUAL RUNOFF (INCHES)	24.0			15.8			
10 PERCENTILE	20			13			
50 PERCENTILE	7.7			4.4			
95 PERCENTILE	3.0			1.7			

* See REMARKS.

SANTEE RIVER BASIN

02142900 LONG CREEK NEAR PAW CREEK, NC

LOCATION.--Lat 35°19'42", long 80°54'35", Mecklenburg County, Hydrologic Unit 03050101, on right bank at upstream side of bridge on Secondary Road 2042, 600 ft downstream from McIntyre Creek, 1.2 mi upstream from Gutter Branch, and 3.6 mi north of community of Paw Creek.

DRAINAGE AREA.--16.4 mi^2.

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

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 648.7 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good except those below 4.0 ft^3/s, which are fair. Frequent diversions for irrigation by upstream golf course. Minimum discharge for period of record also occurred Oct. 2, 3, 1986 and Sept. 3, 1987.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	485	4.9	7.9	37	11	17	23	11	8.3	2.7	1.4	.92
2	247	4.8	7.5	14	11	17	20	57	7.5	2.5	1.2	.73
3	33	4.8	7.1	11	11	311	14	42	7.2	2.0	1.3	.59
4	16	4.6	6.9	11	16	73	12	19	6.9	2.2	1.2	.47
5	12	4.6	6.9	12	12	34	11	30	6.1	2.2	1.3	.57
6	10	4.9	6.7	68	10	24	10	13	6.2	2.0	1.5	.69
7	8.8	5.7	6.6	28	10	21	14	11	5.1	2.0	3.0	.57
8	7.9	5.2	139	128	9.6	17	10	9.2	4.8	2.0	1.5	2.7
9	6.7	7.1	67	39	9.8	17	9.5	9.0	4.5	1.8	1.3	8.1
10	6.2	5.4	40	23	298	16	9.5	34	4.4	1.9	1.2	1.6
11	5.9	4.7	37	16	67	14	17	12	4.0	1.7	1.2	1.7
12	5.6	4.7	137	13	30	14	9.8	9.1	3.7	1.8	1.1	8.4
13	5.4	4.7	160	11	22	13	9.0	8.2	3.5	2.8	1.0	2.9
14	5.3	4.7	34	10	19	12	9.0	7.8	3.5	9.0	1.1	4.0
15	5.2	8.6	20	9.6	17	12	32	7.1	10	6.8	1.1	1.7
16	4.8	158	15	9.3	548	13	14	6.8	13	3.2	1.3	1.3
17	5.0	21	11	9.0	136	71	11	6.6	6.0	3.0	2.8	1.1
18	8.5	11	11	9.2	43	62	9.2	6.4	5.1	3.3	1.3	1.2
19	49	8.6	10	9.0	193	30	8.6	5.8	4.5	2.9	1.1	1.1
20	11	7.7	10	8.8	52	19	8.6	5.4	4.0	2.7	1.3	1.2
21	8.2	7.1	9.3	214	31	15	8.6	5.5	3.7	2.6	1.5	1.1
22	7.2	23	8.4	33	84	13	8.6	6.3	3.5	2.6	2.1	1.2
23	6.6	171	7.5	18	71	11	8.3	6.6	3.5	2.2	1.9	1.2
24	6.2	22	7.5	18	41	11	7.9	5.3	3.3	1.7	1.8	.95
25	5.9	13	7.6	132	25	10	7.6	5.1	3.1	1.6	1.3	.78
26	5.7	11	7.8	58	18	9.5	7.5	4.9	2.8	2.2	2.9	.76
27	5.4	10	7.6	24	18	9.5	7.1	4.7	3.5	1.8	1.3	.84
28	5.2	9.7	7.6	16	17	9.0	7.1	107	3.4	1.3	.96	.69
29	5.2	8.7	7.6	16	---	34	25	196	3.1	1.2	1.2	.84
30	5.0	8.0	8.3	17	---	35	9.8	23	2.9	1.6	.93	.86
31	5.1	---	23	12	---	33	---	11	---	1.4	.59	---
MEAN	32.4	19.0	27.2	33.4	65.4	32.2	12.0	22.1	5.04	2.54	1.44	1.69
MAX	485	171	160	214	548	311	32	196	13	9.0	3.0	8.4
MIN	4.8	4.6	6.6	8.8	9.6	9.0	7.1	4.7	2.8	1.2	.59	.47
IN.	2.28	1.29	1.91	2.35	4.15	2.26	.81	1.56	.34	.18	.10	.12

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	11.3	13.7	20.8	27.9	34.8	33.6	18.8	18.7	11.2	6.61	8.35	9.41
MAX	63.6	91.3	59.5	68.7	78.4	75.6	44.3	101.2	66.5	16.2	59.0	66.2
(WY)	1977	1986	1984	1978	1979	1975	1987	1975	1982	1984	1967	1975
MIN	1.48	2.42	2.53	4.04	8.92	8.80	4.38	3.60	1.68	1.08	1.44	1.27
(WY)	1984	1982	1966	1981	1968	1967	1967	1981	1986	1986	1987	1986

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	21.0		17.9	
HIGHEST ANNUAL MEAN			36.2	1975
LOWEST ANNUAL MEAN			6.79	1981
HIGHEST DAILY MEAN	548	Feb 16	1600	Oct 9 1976
LOWEST DAILY MEAN	.47	Sep 4	.43	Oct 3 1986
INSTANTANEOUS PEAK FLOW	1160	Feb 16	4300	Jun 18 1982
INSTANTANEOUS PEAK STAGE	11.09	Feb 16	11.70	Jun 18 1982
INSTANTANEOUS LOW FLOW	.39	Sep 4	.35*	Sep 26 1986
ANNUAL RUNOFF (INCHES)	17.4		14.8	
10 PERCENTILE	37		31	
50 PERCENTILE	7.6		6.5	
95 PERCENTILE	1.1		1.1	

* See REMARKS.

SANTEE RIVER BASIN

02143000 HENRY FORK NEAR HENRY RIVER, NC

LOCATION.--Lat 35°41'03", long 81°24'10", Catawba County, Hydrologic Unit 03050102, on left bank 325 ft downstream from bridge on Secondary Road 1124, at site of Old Link Ford, 1.2 mi downstream from Burke-Catawba County line, and 2 mi southeast of village of Henry River.

DRAINAGE AREA.--83.2 mi^2.

PERIOD OF RECORD.--July 1925 to November 1931, December 1941 to current year.

REVISED RECORDS.--WSP 952: 1928, 1930. WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 891.0 ft above National Geodetic Vertical Datum of 1929. July 1925 to November 1931, at site 450 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Some regulation at times during the year following activities of upstream mill. An average of 1.7 ft^3/s was diverted for water supply by City of Morganton and return as treated effluent into Catawba River. Maximum discharge, 15,300 ft^3/s, from rating curve extended above 2,300 ft^3/s on basis of computation of peak flow over dam at Henry River, at gage height 29.2 ft. Minimum discharge for current water year also occurred on Sept. 29.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 29.2 ft Aug. 13, 1940 at former site, from floodmarks, discharge, 31,300 ft^3/s. The flood of July 16, 1916 reached a stage of about 23 ft at former site, discharge, 20,700 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3270	110	110	208	201	233	273	161	133	73	66	67
2	1260	107	106	165	184	237	291	212	127	72	67	65
3	489	107	105	140	175	362	250	176	127	70	67	63
4	334	103	102	140	293	441	219	172	123	68	65	61
5	262	102	103	146	288	302	206	175	117	67	110	59
6	226	120	101	186	217	264	198	160	115	66	239	58
7	203	125	100	206	198	244	197	160	112	65	101	55
8	184	113	209	350	180	230	185	149	111	67	87	54
9	170	109	289	421	173	229	180	152	110	72	87	74
10	159	103	199	229	1030	224	182	284	123	69	75	68
11	281	100	179	187	659	218	218	289	108	67	78	67
12	156	99	384	169	330	210	189	188	102	67	70	64
13	144	97	623	152	243	205	181	170	100	104	67	62
14	139	97	310	141	215	201	180	160	99	204	66	68
15	134	104	215	136	196	200	226	150	99	239	65	64
16	130	243	184	130	895	209	194	144	103	120	79	55
17	147	170	161	127	806	1340	185	144	102	92	69	52
18	162	134	151	132	442	656	177	139	96	84	66	50
19	265	119	144	127	498	406	170	132	92	84	67	51
20	174	113	137	126	485	281	169	132	88	85	63	53
21	150	110	130	184	334	245	169	133	88	99	69	51
22	138	120	125	170	393	226	168	159	95	102	126	55
23	129	324	139	149	597	215	163	137	107	111	264	56
24	123	202	131	145	449	208	160	130	88	82	225	48
25	120	161	149	307	311	203	159	126	84	84	121	48
26	118	144	122	461	269	199	155	124	87	84	101	48
27	116	134	117	243	253	194	152	157	85	74	86	47
28	114	126	112	194	245	189	157	212	79	82	77	46
29	113	119	110	210	---	208	203	263	76	70	71	47
30	112	114	111	379	---	206	166	179	75	77	68	47
31	113	---	132	248	---	292	---	146	---	67	66	---
MEAN	311	131	171	203	377	293	191	168	102	89.3	94.5	56.8
MAX	3270	324	623	461	1030	1340	291	289	133	239	264	74
MIN	112	97	100	126	173	189	152	124	75	65	63	46
IN.	4.31	1.76	2.37	2.82	4.72	4.06	2.56	2.33	1.36	1.24	1.31	.76

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	105.3	108.4	132.1	147.9	195.6	208.5	190.2	142.9	122.8	92.7	92.7	98.2
MAX	432.7	392.4	276.3	353.7	473.1	582.6	470.5	321.5	391.5	203.3	389.0	594.5
(WY)	1965	1978	1984	1978	1960	1975	1983	1984	1947	1949	1970	1945
MIN	26.5	35.6	31.1	32.3	78.9	69.7	61.6	57.1	41.3	34.9	39.4	25.4
(WY)	1955	1956	1956	1956	1947	1985	1967	1985	1988	1986	1988	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD		
AVERAGE FLOW	181.3		136.6		
HIGHEST ANNUAL MEAN			208.9		1960
LOWEST ANNUAL MEAN			65.2		1955
HIGHEST DAILY MEAN	3270	Oct 1	7930	Jun 14	1947
LOWEST DAILY MEAN	46	Sep 28	4.0	Nov 15	1942
INSTANTANEOUS PEAK FLOW	6980	Oct 1	15300*	Oct 2	1929
INSTANTANEOUS PEAK STAGE	13.10	Oct 1	18.40	Oct 2	1929
INSTANTANEOUS LOW FLOW	46*	Sep 28	3	Dec 20	1942
ANNUAL RUNOFF (INCHES)	29.6		22.3		
10 PERCENTILE	291		225		
50 PERCENTILE	138		94		
95 PERCENTILE	59		33		

*See REMARKS.

SANTEE RIVER BASIN

02143040 JACOB FORK AT RAMSEY, NC

LOCATION.--Lat 35°35'26", long 81°34'02", Burke County, Hydrologic Unit 03050102, on left bank 16 ft downstream from bridge on Secondary Road 1924, 0.6 mi downstream from Queens Creek, and 0.6 mi north of Ramsey.

DRAINAGE AREA.--25.7 mi^2.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1960-61. October 1961 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,103.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Maximum discharge, 7,220 ft^3/s, from rating curve extended above 3,400 ft^3/s on basis of contracted-opening measurement of peak flow. Minimum discharge for current water year also occurred Sept. 28, 29, 30.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1940 reached a stage of about 39 ft, from information by local resident. Flood of July 1916 reached a stage of about 19 ft, from information by North Carolina State Highway Commission.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1170	55	37	122	78	88	112	62	38	18	15	e20
2	375	56	36	73	71	95	140	69	38	18	16	e19
3	160	58	35	59	67	138	96	59	38	17	16	e18
4	118	58	34	60	122	125	78	63	36	17	15	e18
5	99	57	34	60	110	99	70	64	34	16	e34	e17
6	89	63	34	82	86	89	66	58	34	16	e48	e17
7	79	67	34	87	77	82	65	56	33	15	e30	e17
8	73	64	79	187	68	78	61	51	31	15	e25	e16
9	68	65	79	133	68	78	57	59	31	e21	e25	e22
10	65	61	62	90	380	74	59	182	34	e20	e21	e20
11	62	60	67	72	160	71	72	102	30	e19	e23	e20
12	61	58	190	65	102	68	61	72	28	e19	e21	e19
13	59	57	162	56	85	67	58	63	28	e27	e20	e18
14	57	56	91	52	78	66	60	57	27	e47	e19	e21
15	57	58	72	50	74	65	100	52	28	e58	e18	e20
16	58	98	62	48	377	72	84	49	31	e30	e23	e18
17	78	59	54	48	210	662	77	48	29	e22	e21	e17
18	75	48	51	48	117	186	69	45	27	e20	e19	e15
19	95	41	49	47	184	113	64	43	25	e21	e19	e16
20	69	39	48	48	141	96	63	43	24	e31	e18	e17
21	60	38	46	80	106	87	63	50	24	23	e21	e16
22	54	48	43	67	172	79	62	58	28	22	e37	e17
23	51	92	50	58	192	76	59	46	29	21	e76	e17
24	49	69	57	60	126	73	57	42	23	19	e64	e15
25	49	55	43	166	102	71	56	41	22	21	e35	e15
26	49	49	40	134	92	69	54	40	21	20	e29	e15
27	49	46	38	88	90	66	52	42	21	18	e25	11
28	50	44	38	73	90	63	64	54	20	18	e23	11
29	50	40	37	101	---	74	75	82	19	17	e21	11
30	52	38	39	148	---	72	61	52	19	17	e20	11
31	55	---	66	96	---	105	---	43	---	16	e19	---
MEAN	114	56.6	58.3	82.5	129	105	70.5	59.6	28.3	21.9	26.3	16.8
MAX	1170	98	190	187	380	662	140	182	38	58	76	22
MIN	49	38	34	47	67	63	52	40	19	15	15	11
IN.	5.12	2.46	2.62	3.70	5.25	4.70	3.06	2.67	1.23	.98	1.18	.73

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	41.2	42.0	49.2	55.8	68.0	76.0	67.3	54.9	41.4	35.4	33.1	30.7
MAX	153.8	130.0	92.6	116.9	133.6	176.6	157.1	108.9	82.3	72.7	151.9	102.3
(WY)	1965	1978	1984	1978	1966	1975	1983	1984	1972	1985	1970	1989
MIN	11.7	12.7	14.8	20.9	27.9	27.4	22.6	19.9	11.9	9.23	8.81	15.6
(WY)	1964	1982	1989	1981	1986	1988	1967	1988	1988	1988	1988	1988

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	63.8		49.5	
HIGHEST ANNUAL MEAN			68.2	1984
LOWEST ANNUAL MEAN			23.8	1988
HIGHEST DAILY MEAN	1170	Oct 1	1730	Nov 6 1977
LOWEST DAILY MEAN	11	Sep 27	4.7	Aug 27 1988
INSTANTANEOUS PEAK FLOW	2700	Oct 1	7220*	Oct 17 1975
INSTANTANEOUS PEAK STAGE	12.39	Oct 1	19.74	Oct 17 1975
INSTANTANEOUS LOW FLOW	11*	Sep 27	4.4	Aug 28 1988
ANNUAL RUNOFF (INCHES)	33.7		26.1	
10 PERCENTILE	101		84	
50 PERCENTILE	55		34	
95 PERCENTILE	17		13	

*See REMARKS.

SANTEE RIVER BASIN

02143500 INDIAN CREEK NEAR LABORATORY, NC

LOCATION.--Lat 35°25'20", long 81°15'52", Lincoln County, Hydrologic Unit 03050102, on left bank 250 ft upstream from remains of Rudisill Mill dam, 0.5 mi upstream from bridge on Secondary Road 1252, 1.5 mi upstream from mouth, 1.5 mi south of Laboratory, and 3.5 mi south of Lincolnton.

DRAINAGE AREA.--69.2 mi^2.

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

REVISED RECORDS.--WDR NC-71-1: 1970(M). WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 736 ft above National Geodetic Vertical Datum of 1929, by barometer.

REMARKS.--No estimated daily discharges. Records good. Minimum discharge for current water year also occurred part of each day Sept. 27-29.

EXTREMES OUTSIDE PERIOD OF RECORD.--Peak discharge of flood in October 1929 was 9,920 ft^3/s; flood in July 1916, 7,840 ft^3/s; flood in August 1940, 6,000 ft^3/s. Discharge based on computation of peak flow over dam 1 mi downstream, using floodmarks and information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1030	46	90	171	93	101	151	101	89	34	28	30
2	1700	44	88	119	91	103	207	138	84	34	25	26
3	244	47	86	105	88	199	144	120	81	32	29	26
4	142	44	82	112	408	148	123	106	79	29	27	25
5	104	41	85	110	261	120	111	110	74	30	24	25
6	87	53	86	184	158	108	105	90	71	28	25	25
7	76	62	82	145	131	100	113	92	70	28	35	20
8	61	55	129	345	113	96	97	83	70	27	25	20
9	57	60	219	202	110	99	94	82	92	30	28	43
10	55	53	172	145	515	96	97	263	74	30	27	32
11	53	51	165	118	280	89	130	156	70	37	26	28
12	51	48	217	107	177	88	100	115	67	29	23	25
13	47	44	812	90	142	86	92	99	62	30	24	24
14	45	44	283	84	121	84	93	87	50	147	26	32
15	45	51	205	82	112	84	202	80	61	146	26	28
16	43	163	166	80	563	86	142	75	74	62	48	23
17	45	83	141	79	683	723	116	72	67	39	27	24
18	104	65	127	80	208	1260	102	71	63	37	21	23
19	252	60	119	75	583	232	95	66	51	53	21	19
20	118	57	112	72	246	184	94	67	42	71	35	24
21	86	57	104	288	174	152	94	76	42	59	42	24
22	66	64	101	155	203	133	91	131	43	54	68	24
23	60	203	99	117	226	123	88	85	53	42	83	23
24	57	111	95	109	170	116	88	74	44	36	48	19
25	55	88	94	495	132	110	89	67	38	36	69	23
26	52	82	91	308	117	108	87	65	37	35	67	23
27	49	79	87	173	109	104	85	62	40	31	38	21
28	49	77	87	134	105	100	88	269	45	34	29	16
29	49	81	86	121	---	139	143	491	38	32	27	18
30	48	92	86	120	---	129	100	147	38	31	26	21
31	48	---	183	102	---	199	---	107	---	26	26	---
MEAN	161	70.2	148	149	226	177	112	118	60.3	44.2	34.6	24.5
MAX	1700	203	812	495	683	1260	207	491	92	147	83	43
MIN	43	41	82	72	88	84	85	62	37	26	21	16
IN.	2.68	1.13	2.46	2.49	3.40	2.96	1.81	1.96	.97	.74	.58	.39

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	64.6	63.5	93.7	112.8	137.7	148.5	115.9	89.4	72.7	54.5	54.6	47.1
MAX	324.2	272.2	236.0	313.4	308.6	423.5	301.3	250.5	164.6	129.7	274.8	154.6
(WY)	1965	1958	1968	1978	1960	1952	1958	1984	1962	1964	1970	1959
MIN	8.30	19.2	26.0	25.8	44.0	59.8	38.1	27.6	11.8	12.7	13.7	8.62
(WY)	1955	1955	1956	1956	1986	1986	1986	1986	1986	1986	1956	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	109.9		87.7	
HIGHEST ANNUAL MEAN			133.9	1960
LOWEST ANNUAL MEAN			40.4	1988
HIGHEST DAILY MEAN	1700	Oct 2	4350	Aug 10 1970
LOWEST DAILY MEAN	16	Sep 28	2.1	Jul 20 1986
INSTANTANEOUS PEAK FLOW	2340	Mar 18	8450	Aug 10 1970
INSTANTANEOUS PEAK STAGE	5.73	Mar 18	10.61	Aug 10 1970
INSTANTANEOUS LOW FLOW	16*	Sep 24	1.7	Jul 21 1986
ANNUAL RUNOFF (INCHES)	21.6		17.2	
10 PERCENTILE	196		148	
50 PERCENTILE	82		57	
95 PERCENTILE	24		19	

* See REMARKS.

SANTEE RIVER BASIN

02144000 LONG CREEK NEAR BESSEMER CITY, NC

LOCATION.--Lat 35°18'23", long 81°14'05", Gaston County, Hydrologic Unit 03050102, on right bank 700 ft upstream from bridge on Secondary Road 1456, 3.3 mi northeast of Bessemer City, and 8.2 mi upstream from mouth.

DRAINAGE AREA.--31.8 mi^2.

PERIOD OF RECORD.--October 1952 to current year. Monthly discharge only for some periods, published in WSP 1723.

REVISED RECORDS.--WSP 1723: 1959-60 (M). WSP 1904: 1959-60. WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 706.1 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Bessemer City diverts water supply from above gaging station and returns treated effluent to South Fork Catawba River below mouth of Long Creek, causing some diurnal fluctuation; a daily average of 1.32 ft^3/s was diverted during the year. Lowest annual mean for period of record also occurred for 1988 water year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of 26 ft at site on left bank 1,500 ft upstream, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	820	15	20	53	37	42	89	37	24	7.7	5.8	5.3
2	567	14	19	35	37	43	129	67	22	7.6	5.5	5.0
3	69	15	18	31	36	107	61	40	22	6.8	5.5	5.0
4	44	15	18	29	65	64	51	35	21	6.5	5.5	4.6
5	34	15	18	31	51	52	46	34	19	6.2	5.1	4.2
6	29	17	18	59	40	46	43	28	18	5.9	6.0	3.6
7	27	18	18	46	38	44	44	28	18	6.0	8.3	3.4
8	24	18	80	88	35	41	40	26	17	5.7	6.3	32
9	20	18	73	57	35	41	39	26	17	6.0	6.1	38
10	18	16	56	44	268	39	37	77	16	5.5	5.7	9.3
11	18	15	60	37	108	38	46	39	15	5.4	5.8	6.2
12	17	15	242	34	62	37	38	31	14	4.8	5.2	19
13	16	14	255	30	49	32	35	28	13	8.7	4.7	11
14	16	14	69	31	43	32	35	27	13	17	4.7	11
15	16	18	50	29	42	31	51	25	13	28	5.5	10
16	15	91	41	28	571	32	39	24	14	9.9	24	7.8
17	16	32	36	27	368	129	35	23	13	7.9	7.9	6.9
18	22	24	34	28	76	72	32	21	13	7.9	5.9	5.9
19	44	20	32	27	306	50	30	20	12	7.9	5.5	5.8
20	23	20	30	27	91	45	30	21	11	8.3	7.0	5.7
21	19	19	28	87	64	41	30	22	11	20	9.1	5.2
22	18	26	26	46	105	39	30	20	10	14	9.9	5.8
23	17	87	24	36	90	38	29	20	10	12	16	5.8
24	16	37	24	37	64	36	27	19	9.6	8.5	9.6	4.7
25	16	30	25	359	54	35	27	19	9.0	23	9.1	4.7
26	15	27	26	146	49	34	25	18	8.8	13	7.7	4.7
27	15	25	24	64	45	36	24	18	9.4	8.7	6.9	4.5
28	15	24	24	50	44	33	28	41	11	7.5	6.0	4.2
29	15	22	24	50	---	57	60	143	8.8	7.2	5.3	4.3
30	15	20	25	51	---	53	37	39	8.1	7.0	5.1	4.2
31	15	---	35	41	---	130	---	27	---	6.4	4.6	---
MEAN	65.5	24.7	47.5	56.1	103	50.0	42.2	33.6	14.0	9.58	7.27	8.26
MAX	820	91	255	359	571	130	129	143	24	28	24	38
MIN	15	14	18	27	35	31	24	18	8.1	4.8	4.6	3.4
IN.	2.38	.87	1.72	2.03	3.36	1.81	1.48	1.22	.49	.35	.26	.29

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	24.7	25.6	35.2	47.4	59.4	60.1	48.3	33.3	25.3	19.7	20.7	16.6
MAX	147.3	128.0	85.2	126.9	137.4	133.2	141.7	89.2	72.5	65.9	81.7	59.3
(WY)	1972	1958	1977	1978	1960	1963	1958	1975	1962	1975	1985	1971
MIN	2.37	7.09	7.37	8.17	22.5	22.8	14.3	10.0	3.74	2.41	4.14	1.99
(WY)	1955	1954	1956	1956	1986	1955	1967	1986	1986	1986	1987	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	38.1		34.7	
HIGHEST ANNUAL MEAN			55.5	1975
LOWEST ANNUAL MEAN			16.7*	1955
HIGHEST DAILY MEAN	820	Oct 1	2940	Oct 16 1971
LOWEST DAILY MEAN	3.4	Sep 7	.55	Jul 14 1986
INSTANTANEOUS PEAK FLOW	1870	Oct 1	6500	Oct 16 1971
INSTANTANEOUS PEAK STAGE	7.01	Oct 1	9.10	Oct 16 1971
INSTANTANEOUS LOW FLOW	2.8	Sep 7	.40	Oct 7 1954
ANNUAL RUNOFF (INCHES)	16.3		14.8	
10 PERCENTILE	62		57	
50 PERCENTILE	24		21	
95 PERCENTILE	4.6		4.8	

* See REMARKS.

SANTEE RIVER BASIN

02145000 SOUTH FORK CATAWBA RIVER AT LOWELL, NC

LOCATION.--Lat 35°17'10", long 81°06'00", Gaston County, Hydrologic Unit 03050102, on right bank 50 ft north of private mill road, 120 ft downstream from Housers Creek, 1.0 mi north of Lowell, 2.5 mi upstream from bridge on Interstate Highway 85, and 3.0 mi downstream from Long Creek.

DRAINAGE AREA.--628 mi^2.

PERIOD OF RECORD.--January 1942 to September 1971, October 1983 to current year.

REVISED RECORDS.--WSP 1002: 1943(M). WSP 1303: 1950(M).

GAGE.--Water-stage recorder. Datum of gage is 603.10 ft above National Geodetic Vertical Datum of 1929. City of Gastonia and Duke Power Co. Handar telemetry unit at station.

REMARKS.--No estimated daily discharges. Records good except period of Apr. 3 to July 3, which are fair. Considerable diurnal fluctuation and slight regulation for short periods at low flow caused by powerplant above station. City of Gastonia diverted for water supply an average of 31.4 ft^3/s from South Fork Catawba River. A part of the diversion is returned to Long Creek as treated effluent. For diversion by town of Morganton, see Henry Fork near Henry River (station 02143000). For diversion by town of Bessemer City, see Long Creek near Bessemer City (station 02144000). Minimum discharge for all water years affected by regulation.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Aug. 15, 1940 reached a stage of 21.33 ft, from floodmarks, discharge, 34,000 ft^3/s. Depth of flow over dam during the July 1916 flood at High Shoals 11 miles upstream was about 1 ft higher than that for August 1940, from information by local resident.

REVISIONS.--City of Gastonia diverted for water supply an average of 25.0 ft^3/s from South Fork Catawba River, and 3.39 ft^3/s from Long Creek during the period Oct. 1987 to Sept. 1988.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6610	618	630	1450	1050	1200	1620	841	764	404	356	281
2	11400	572	614	1140	1030	1160	2170	1130	671	418	355	263
3	9410	562	592	943	977	1800	1700	1030	644	390	319	284
4	4680	523	597	852	2510	1760	1300	957	664	370	262	280
5	1890	530	612	917	2310	1590	1170	1020	653	351	292	256
6	1220	553	549	1140	1530	1380	1090	936	606	311	719	291
7	1040	660	569	1290	1240	1220	1070	857	587	312	1130	275
8	921	670	999	1960	1120	1140	1010	797	570	288	525	244
9	836	659	1700	2470	1110	1110	978	752	635	300	404	399
10	776	564	1390	1850	3620	1070	943	1560	548	362	389	322
11	734	524	1230	1290	3260	1050	1050	1760	559	408	338	308
12	775	522	2250	1080	2770	1060	1000	1250	522	350	321	493
13	717	568	5050	942	1680	1030	916	986	496	343	334	395
14	642	539	2850	865	1290	1010	888	887	486	788	325	354
15	655	536	1820	856	1180	992	1520	815	606	1730	343	302
16	633	1280	1250	818	5070	981	1440	780	549	1130	348	258
17	600	1080	1060	785	5620	2710	1110	742	488	651	329	275
18	795	823	961	766	3660	7470	993	708	531	488	301	225
19	2490	698	906	794	4800	5710	908	653	499	469	270	233
20	1730	646	868	803	3700	2750	910	644	440	542	321	269
21	1030	612	807	1980	2700	1600	900	680	441	555	318	256
22	822	639	769	1320	2500	1340	864	888	418	638	427	174
23	783	1590	668	1060	2580	1250	840	828	442	563	606	196
24	735	1340	601	1000	2270	1180	807	693	442	499	687	283
25	697	1030	691	3620	1840	1110	788	649	438	440	680	275
26	651	836	741	2980	1460	1080	769	606	426	442	722	203
27	652	775	692	1910	1310	1050	741	592	437	412	498	230
28	598	738	669	1350	1240	998	740	1100	456	362	396	209
29	585	720	668	1250	---	1140	1050	3020	496	354	359	171
30	594	660	660	1390	---	1320	974	1390	410	398	324	181
31	598	---	725	1420	---	1670	---	968	---	400	307	---
MEAN	1816	736	1103	1364	2337	1675	1075	984	531	499	429	273
MAX	11400	1590	5050	3620	5620	7470	2170	3020	764	1730	1130	493
MIN	585	522	549	766	977	981	740	592	410	288	262	171
IN.	3.33	1.31	2.03	2.51	3.88	3.08	1.91	1.81	.94	.92	.79	.48

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	607.5	604.1	801.4	930.9	1235	1250	1030	737.7	604.4	548.9	581.1	518.8
MAX	2862	2034	1748	2000	3204	3511	2676	1759	1424	1361	2266	2460
(WY)	1965	1958	1968	1946	1960	1952	1958	1984	1962	1943	1970	1945
MIN	104.0	214.9	234.5	241.5	499.0	561.2	390.2	336.7	196.2	162.0	182.4	110.4
(WY)	1955	1955	1956	1956	1986	1955	1967	1986	1986	1986	1956	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	1063		786.5	
HIGHEST ANNUAL MEAN			1305	1960
LOWEST ANNUAL MEAN			418.0*	1955
HIGHEST DAILY MEAN	11400	Oct 2	21700	Aug 11 1970
LOWEST DAILY MEAN	171*	Sep 29	31*	Oct 8 1954
INSTANTANEOUS PEAK FLOW	12400	Oct 2	24800	Aug 11 1970
INSTANTANEOUS PEAK STAGE	12.67	Oct 2	17.38	Aug 11 1970
INSTANTANEOUS LOW FLOW	44*	Sep 28	13*	Aug 22 1988
ANNUAL RUNOFF (INCHES)	23.0		17.0	
10 PERCENTILE	1860		1380	
50 PERCENTILE	763		557	
95 PERCENTILE	272		220	

* See REMARKS.

SANTEE RIVER BASIN

0214620760 IRWIN CREEK AT STARITA ROAD AT CHARLOTTE, NC

LOCATION.--Lat 35°16'32", long 80°47'05", Mecklenburg County, Hydrologic Unit 03050103, on right bank 200 ft upstream from Starita Road and 600 ft upstream from Interstate 85, 0.5 mi northeast from intersection of Starita Road and U.S. Highway 21, and 1.5 mi upstream from Kennedy Branch.

DRAINAGE AREA.--4.40 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1989 to current year.

GAGE.--Water-stage recorder. Datum of gage is 679.347 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Minimum discharge for current water year and period of record also occured Sept. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	236	1.5	1.9	14	3.6	3.9	10	8.2	2.5	.94	.37	.31
2	72	1.4	1.9	4.6	3.8	6.9	9.3	9.6	2.1	.97	.35	.97
3	7.9	1.5	1.8	3.5	3.5	56	5.1	7.1	2.0	.90	.36	.96
4	4.1	1.5	1.8	3.8	4.4	12	4.0	3.5	1.9	.87	.36	.84
5	2.8	1.5	1.9	3.8	3.5	6.7	3.5	3.4	1.8	.85	.34	.53
6	2.5	1.8	1.9	18	3.2	5.6	3.1	2.5	1.7	.80	2.1	.79
7	2.2	1.7	2.2	7.4	3.2	4.7	4.7	2.7	1.7	.70	.63	.26
8	2.0	2.6	35	25	3.1	4.2	3.1	2.2	1.6	6.2	.41	1.3
9	1.9	3.0	17	8.2	4.4	4.5	3.0	2.6	1.6	1.3	.40	.45
10	1.9	1.8	9.1	5.5	92	4.2	3.3	12	1.6	1.1	.36	.30
11	1.8	1.6	7.5	4.4	15	3.9	5.0	3.1	1.5	.96	.34	8.2
12	1.8	1.6	32	3.8	7.1	3.9	3.0	2.4	1.4	.69	.31	3.2
13	1.7	1.5	27	3.2	5.3	3.7	2.8	2.3	1.4	1.8	.32	.95
14	1.7	1.8	7.2	3.0	4.6	3.5	2.9	2.2	1.4	2.8	.33	.52
15	1.6	4.1	4.8	2.9	4.2	3.7	15	2.0	8.3	1.5	1.6	.39
16	1.7	21	3.7	2.8	212	3.6	6.2	1.9	2.5	1.0	1.7	.34
17	2.0	3.7	3.1	2.8	23	20	3.6	1.9	1.5	3.9	.74	.32
18	7.6	2.3	2.9	2.8	8.2	7.9	2.8	1.7	1.5	1.3	.37	.31
19	24	1.9	3.0	2.7	47	4.8	2.7	1.3	1.4	1.1	.32	.31
20	3.5	1.8	2.7	3.3	10	4.8	2.6	1.6	1.4	.99	.47	.31
21	2.3	1.7	2.5	78	6.5	3.7	2.6	1.4	1.3	.78	.49	.29
22	1.8	8.5	2.2	8.2	14	3.5	2.5	2.0	1.3	.73	.51	.80
23	1.6	21	2.1	5.4	10	3.3	2.4	1.6	1.3	.65	.49	.32
24	1.6	4.2	1.9	7.5	6.5	3.1	2.3	1.3	1.2	.56	.43	.28
25	1.5	2.7	2.0	23	5.0	3.0	2.3	1.3	1.2	.55	.37	.27
26	1.5	2.4	2.1	12	4.3	3.4	2.2	1.2	1.1	.54	.35	.26
27	1.4	2.3	2.0	6.2	4.3	3.1	2.1	7.8	1.1	.46	.34	.25
28	1.4	2.2	2.0	5.1	4.2	2.8	4.9	228	1.0	.44	.29	.24
29	1.4	2.0	2.1	5.3	---	11	5.9	76	.97	.41	.26	.24
30	1.4	2.0	2.3	4.8	---	6.0	2.6	6.4	.91	.41	.25	.24
31	1.5	---	13	3.9	---	7.0	---	3.5	---	.39	.23	---
MEAN	12.8	3.62	6.54	9.19	18.4	7.05	4.18	13.1	1.74	1.18	.52	.82
MAX	236	21	35	78	212	56	15	228	8.3	6.2	2.1	8.2
MIN	1.4	1.4	1.8	2.7	3.1	2.8	2.1	1.2	.91	.39	.23	.24
IN.	3.37	.92	1.71	2.41	4.36	1.85	1.06	3.42	.44	.31	.14	.21

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	12.8	3.62	6.54	9.19	13.7	10.4	4.35	12.0	2.55	1.62	1.22	3.97
MAX	12.8	3.62	6.54	9.19	18.4	13.8	4.51	13.1	3.37	2.05	1.91	7.12
(WY)	1990	1990	1990	1990	1990	1989	1989	1990	1989	1989	1989	1989
MIN	12.8	3.62	6.54	9.19	9.10	7.05	4.18	10.9	1.74	1.18	.522	.825
(WY)	1990	1990	1990	1990	1989	1990	1990	1989	1990	1990	1990	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	6.54		*****	
HIGHEST ANNUAL MEAN			6.54	1990
LOWEST ANNUAL MEAN			6.54	1990
HIGHEST DAILY MEAN	236	Oct 1	236	Oct 1 1989
LOWEST DAILY MEAN	.23	Aug 31	.23	Aug 31 1990
INSTANTANEOUS PEAK FLOW	820	May 28	820	May 28 1990
INSTANTANEOUS PEAK STAGE	6.00	May 28	6.00	May 28 1990
INSTANTANEOUS LOW FLOW	.21*	Aug 31	.21*	Aug 31 1990
ANNUAL RUNOFF (INCHES)	20.2		*****	
10 PERCENTILE	8.6		8.6	
50 PERCENTILE	1.9		1.9	
95 PERCENTILE	.28		.28	

***** Indicates not enough data, therefore statistic is not computed

* See REMARKS.

SANTEE RIVER BASIN

0214620760 IRWIN CREEK AT STARITA ROAD AT CHARLOTTE, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1989, to September 1990 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1989 to September 1990.
WATER TEMPERATURE: February 1989 to September 1990.

INSTRUMENTATION.--Water-quality monitor since Feb. 1989. Continuous water-quality monitor was removed Oct. 1990.

REMARKS.--Station operated as part of the Charlotte-Mecklenburg County Water-Quality Study. Interruptions in the record were due to malfunctions of the recorder.

COOPERATION.--Chemical samples were collected by the U.S. Geological Survey. Laboratory analyses, other than the organics, were performed by the Mecklenburg County Department of Environmental Health Laboratory.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, >984 microsiemens, Feb. 24, 1989; minimum, 37 microsiemens, Nov. 16, 1989.
WATER TEMPERATURE: Maximum, 27.4°C, Aug. 15, 1990; minimum, 0.0°C, Dec. 23-25, 1989.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 400 microsiemens, Dec. 9; minimum, 37 microsiemens, Nov. 16.
WATER TEMPERATURE: Maximum, 27.4°C, Aug. 15; minimum, 0.0°C, Dec. 23-25.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)
APR									
12...	1005	150	6.2	10.0	10.8	1.0	6.2	0.430	0.500
12...	1010	150	6.2	10.0	10.8	--	--	--	--
JUL									
02...	1330	160	6.4	22.5	8.8	1.2	1.5	0.360	<0.040

DATE	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	PHOSPHORUS TOTAL (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
APR								
12...	0.64	0.010	570	<2	200	<2	<2	<50
12...	--	--	--	--	--	--	--	--
JUL								
02...	--	<0.050	480	<2	300	<2	13	<50

0214620760 IRWIN CREEK AT STARITA ROAD AT CHARLOTTE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (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)	CARBON, ORGANIC TOTAL (MG/L AS C)
APR								
12...	1100	3	210	<0.20	<2	<2	100	2.4
12...	--	--	--	--	--	--	--	2.3
JUL								
02...	660	6	70	0.30	<2	<2	100	3.6

SANTEE RIVER BASIN

0214620760 IRWIN CREEK AT STARITA ROAD AT CHARLOTTE, NC--Continued

SPECIFIC CONDUCTANCE, US/CM ‡ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	171	93	150	177	161	170	---	---	---	134	100	113
2	135	106	120	179	170	173	---	---	---	149	131	140
3	162	134	146	180	164	171	---	---	---	155	135	146
4	166	154	159	179	160	170	---	---	---	175	135	146
5	177	167	173	176	157	167	---	---	---	173	140	144
6	184	177	181	211	162	172	---	---	---	164	87	114
7	186	181	184	169	153	162	210	152	162	137	112	129
8	188	183	185	172	105	154	134	86	103	125	90	107
9	194	184	188	191	97	152	400	111	151	141	125	131
10	195	181	188	195	156	177	152	115	130	164	141	147
11	192	181	186	198	155	175	130	117	123	172	152	160
12	188	179	185	187	151	172	218	83	125	179	160	166
13	186	178	183	192	153	175	115	91	104	226	167	181
14	185	178	182	218	160	181	136	114	123	193	168	180
15	186	176	181	176	84	153	140	130	134	183	170	177
16	182	175	179	154	37	101	190	138	151	188	173	181
17	224	177	185	160	129	141	195	144	170	191	172	183
18	197	83	156	177	145	162	159	146	153	191	175	183
19	139	71	115	183	153	170	219	157	176	190	180	185
20	163	140	151	---	---	---	184	144	163	193	144	187
21	174	164	168	---	---	---	186	144	164	141	83	120
22	177	167	172	---	---	---	196	153	176	128	119	123
23	180	170	175	---	---	---	176	171	174	134	128	130
24	181	172	177	---	---	---	178	150	168	155	102	134
25	180	171	176	---	---	---	173	159	168	104	66	92
26	181	172	177	---	---	---	194	148	166	125	99	109
27	182	171	177	---	---	---	192	148	170	137	119	128
28	181	169	175	---	---	---	182	145	164	144	123	133
29	179	165	172	---	---	---	195	146	166	137	124	131
30	175	165	171	---	---	---	157	149	152	139	121	128
31	176	163	171	---	---	---	226	90	132	146	127	135
MONTH	224	71	171	---	---	---	---	---	---	226	66	144
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	153	139	145	143	131	137	142	91	128	165	81	153
2	157	138	146	162	67	139	143	109	127	148	103	132
3	148	136	142	96	62	75	156	137	144	152	112	138
4	146	120	138	118	98	105	162	141	152	170	146	153
5	159	135	144	127	116	119	162	141	152	159	143	149
6	171	139	154	135	122	128	161	144	153	176	152	164
7	160	139	148	141	132	135	171	127	143	172	139	159
8	162	138	152	144	134	140	181	140	152	185	163	170
9	171	53	150	172	132	140	196	140	159	187	151	170
10	99	41	76	142	129	134	159	124	149	160	68	131
11	116	92	105	145	133	138	156	121	138	175	148	157
12	129	113	119	148	132	140	168	136	150	178	156	167
13	135	125	130	150	135	143	164	137	150	179	161	168
14	140	130	134	153	134	144	158	139	150	180	154	166
15	141	131	136	168	140	150	150	65	116	189	166	171
16	141	45	93	151	135	142	142	98	127	---	---	---
17	114	89	100	147	67	112	150	138	144	---	---	---
18	142	112	119	142	120	127	160	144	151	---	---	---
19	102	63	83	150	135	141	169	146	157	---	---	---
20	122	103	109	176	133	144	161	147	154	---	---	---
21	129	118	123	166	139	151	160	149	154	---	---	---
22	127	92	111	160	138	149	160	148	154	---	---	---
23	119	104	110	158	140	149	164	150	157	---	---	---
24	130	115	119	160	139	150	165	152	158	---	---	---
25	141	125	132	158	139	149	168	155	161	---	---	---
26	197	130	149	168	142	153	167	156	161	---	---	---
27	146	128	137	165	140	149	169	157	162	---	---	---
28	141	128	135	170	141	155	191	97	159	---	---	---
29	---	---	---	177	104	131	153	108	140	---	---	---
30	---	---	---	142	132	135	162	153	156	---	---	---
31	---	---	---	155	127	132	---	---	---	148	140	144
MONTH	197	41	126	177	62	137	196	65	149	---	---	---

0214620760 IRWIN CREEK AT STARITA ROAD AT CHARLOTTE, NC--Continued

SPECIFIC CONDUCTANCE, US/CM ‡ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	152	148	150	200	152	161	168	158	163	167	154	160
2	154	151	153	173	158	162	172	159	165	151	115	123
3	156	153	155	165	160	163	171	161	165	117	114	115
4	158	154	156	165	156	161	164	157	161	122	114	117
5	158	153	155	163	158	160	165	157	160	138	119	123
6	160	154	157	165	159	162	165	117	154	139	122	129
7	160	154	158	165	158	161	173	162	165	140	128	132
8	160	156	158	180	83	153	174	166	171	231	140	151
9	159	154	157	163	160	161	177	169	175	187	178	182
10	158	153	156	165	162	164	178	165	171	189	177	184
11	160	155	157	168	163	165	176	162	169	190	125	175
12	162	157	159	167	164	166	169	159	164	208	123	167
13	163	155	159	168	105	159	186	159	169	210	172	196
14	163	152	159	159	83	138	220	170	184	197	171	187
15	161	77	146	157	140	146	260	107	197	206	189	196
16	157	149	152	158	151	154	201	113	165	206	191	197
17	156	152	154	160	88	146	234	122	182	198	185	191
18	160	154	157	157	148	151	274	231	250	198	180	188
19	160	155	158	164	156	159	310	252	279	188	178	183
20	163	154	159	169	158	161	308	237	283	187	172	180
21	163	157	160	166	159	162	302	210	268	185	173	180
22	163	159	161	162	157	159	235	150	177	186	149	168
23	163	157	160	161	157	159	177	155	165	188	174	181
24	163	155	159	166	160	163	184	162	169	184	172	178
25	162	155	159	168	165	167	177	159	165	181	171	176
26	164	155	159	167	159	164	163	158	161	179	172	177
27	164	158	160	165	158	162	171	154	162	179	169	175
28	163	155	158	168	158	163	171	154	162	180	169	175
29	160	153	156	167	158	161	170	156	164	178	166	173
30	159	152	156	164	158	160	170	156	163	178	166	173
31	---	---	---	166	158	162	171	155	164	---	---	---
MONTH	164	77	157	200	83	159	310	107	181	231	114	168

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.5	18.6	19.0	16.0	13.5	14.9	---	---	---	9.9	5.9	8.2
2	21.5	19.3	20.3	13.4	12.2	12.9	---	---	---	7.3	4.2	5.7
3	21.9	19.2	20.6	14.5	11.6	12.7	---	---	---	8.3	5.2	6.6
4	20.1	17.4	18.8	12.9	9.8	11.3	---	---	---	9.8	7.3	8.6
5	18.0	14.3	16.3	13.3	9.3	11.4	---	---	---	11.1	9.7	10.3
6	20.8	15.8	18.1	20.2	11.7	12.9	---	---	---	10.5	9.5	10.1
7	20.6	18.1	19.2	15.3	13.2	14.2	9.9	7.9	9.2	9.4	8.5	9.1
8	18.3	15.5	17.2	16.8	14.4	15.2	8.6	5.7	7.0	8.8	7.6	8.1
9	15.5	12.4	14.0	16.4	13.9	15.5	6.4	4.6	5.2	8.9	7.3	7.9
10	15.0	11.0	13.0	14.0	8.1	12.4	6.9	4.6	5.8	9.4	6.8	7.8
11	16.6	11.4	13.9	13.8	10.3	12.0	8.1	6.5	7.3	9.6	5.1	7.4
12	17.5	12.6	15.0	15.0	11.2	12.9	8.0	6.7	7.7	8.8	5.8	7.7
13	18.5	14.1	16.2	15.6	12.0	13.6	7.5	6.3	6.9	7.1	4.0	5.4
14	18.8	16.5	17.5	22.6	12.5	14.4	7.1	4.6	5.9	7.6	4.0	5.7
15	19.2	14.9	17.1	16.0	14.1	15.1	7.5	4.9	6.2	9.7	5.5	7.3
16	18.9	15.9	17.5	16.1	11.3	13.6	7.0	3.2	4.9	10.8	7.1	8.7
17	19.6	17.5	18.4	11.4	5.9	9.8	4.6	2.4	3.5	11.7	7.3	9.4
18	20.3	18.4	19.0	11.7	8.6	10.2	6.1	4.2	4.9	13.0	9.2	10.9
19	18.7	14.6	16.6	10.9	8.7	9.8	5.1	4.5	4.8	11.1	10.1	10.6
20	14.2	10.9	12.6	---	---	---	5.4	2.9	4.2	11.6	9.8	10.6
21	12.8	9.1	10.9	---	---	---	5.5	1.9	3.6	11.9	10.1	11.2
22	14.2	9.5	11.8	---	---	---	3.6	.1	1.5	10.6	9.1	9.9
23	14.1	9.8	12.1	---	---	---	.4	-.2	.1	11.4	8.0	9.8
24	14.3	10.7	12.5	---	---	---	.9	-.1	.3	10.6	10.2	10.4
25	14.5	10.5	12.4	---	---	---	2.4	-.1	1.1	11.7	10.3	10.7
26	14.6	10.3	12.4	---	---	---	4.5	1.2	2.8	11.0	7.3	9.5
27	14.6	10.7	12.7	---	---	---	4.1	.9	2.6	9.6	5.6	7.5
28	15.2	11.3	13.3	---	---	---	5.8	1.7	3.6	10.0	5.1	7.7
29	16.3	12.1	14.1	---	---	---	7.0	2.3	4.7	12.7	8.1	10.1
30	17.4	13.2	15.4	---	---	---	9.0	6.9	7.7	9.8	6.6	8.6
31	18.0	15.1	16.6	---	---	---	11.8	7.5	9.5	10.9	6.8	8.6
MONTH	21.9	9.1	15.6	---	---	---	---	---	---	13.0	4.0	8.7

SANTEE RIVER BASIN

0214620760 IRWIN CREEK AT STARITA ROAD AT CHARLOTTE, NC--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.0	5.9	8.3	12.5	9.9	11.0	20.2	11.7	15.3	23.1	17.0	19.5
2	12.8	8.6	10.7	11.4	9.6	10.4	19.6	14.0	16.3	22.4	18.5	20.4
3	15.1	11.0	12.8	11.8	10.0	10.8	16.6	11.6	13.9	20.0	18.6	19.2
4	15.0	11.5	13.5	13.1	8.1	10.4	17.0	9.1	12.4	21.3	17.9	19.1
5	11.5	7.7	9.7	13.9	8.6	11.0	18.1	9.6	13.5	21.8	18.2	19.7
6	11.0	6.1	8.4	15.0	8.5	11.6	17.7	12.2	14.8	18.7	14.5	17.0
7	13.3	9.3	10.9	12.4	9.7	10.9	17.3	10.9	13.7	19.5	13.3	16.9
8	12.6	7.4	10.0	9.9	8.0	9.1	16.6	8.7	12.2	20.6	13.4	17.4
9	13.7	8.8	10.8	11.5	8.7	10.0	17.2	8.7	12.5	20.3	16.3	17.8
10	13.9	11.5	12.7	17.5	10.1	13.1	16.1	11.8	13.8	20.8	16.8	18.8
11	12.4	9.3	10.8	19.3	11.8	15.4	18.8	13.3	15.8	20.1	13.3	16.8
12	12.4	8.0	10.0	20.2	13.3	16.6	17.3	9.7	13.0	20.3	14.0	17.1
13	12.1	7.4	9.8	20.9	14.0	17.1	17.2	9.6	12.9	21.1	16.7	19.1
14	14.4	9.3	11.7	20.3	14.3	17.1	16.1	10.8	13.3	22.0	16.1	19.0
15	16.3	11.4	13.6	18.9	15.1	17.1	18.4	13.7	15.8	22.5	17.0	20.1
16	16.2	14.1	14.6	19.5	16.7	18.0	20.4	14.5	17.0	---	---	---
17	15.1	11.7	13.7	19.0	15.8	17.5	21.1	13.3	17.0	---	---	---
18	11.5	9.6	10.3	18.6	13.2	15.6	18.0	12.6	15.1	---	---	---
19	12.7	8.3	10.5	17.8	12.1	14.6	17.8	10.1	13.6	---	---	---
20	13.0	9.5	10.9	14.9	10.0	12.3	18.1	13.2	15.4	---	---	---
21	12.0	7.3	9.8	15.2	7.6	11.0	18.7	14.7	16.7	---	---	---
22	14.8	10.4	12.1	16.8	8.5	12.3	19.6	14.7	17.1	---	---	---
23	14.5	12.4	13.3	18.9	10.7	14.5	20.9	13.3	16.9	---	---	---
24	12.5	8.7	10.7	18.3	11.9	14.7	21.5	14.7	18.0	---	---	---
25	10.5	6.7	8.2	17.6	11.5	14.0	21.8	15.9	18.7	---	---	---
26	9.3	4.6	6.7	14.6	12.5	13.5	22.3	16.3	19.1	---	---	---
27	11.6	5.7	8.4	17.6	11.1	13.7	23.0	16.6	19.5	---	---	---
28	12.3	7.9	10.1	16.3	9.8	12.8	19.3	17.1	18.1	---	---	---
29	---	---	---	13.3	11.6	12.4	18.6	16.0	17.2	---	---	---
30	---	---	---	13.0	11.0	12.0	19.9	15.6	17.7	---	---	---
31	---	---	---	15.3	12.0	13.4	---	---	---	20.0	16.7	18.3
MONTH	16.3	4.6	10.8	20.9	7.6	13.4	23.0	8.7	15.5	---	---	---

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	20.8	17.2	18.9	25.1	22.5	23.7	25.4	22.8	24.0	24.3	21.6	23.0
2	19.9	18.5	19.2	23.9	21.5	22.7	24.6	22.6	23.6	25.1	21.1	23.0
3	21.4	18.4	19.7	23.2	19.4	21.4	24.2	21.7	23.0	25.5	22.8	24.1
4	22.1	18.9	20.4	24.4	20.3	22.2	25.0	21.9	23.5	24.1	22.3	23.4
5	20.0	17.5	18.9	24.9	21.2	23.0	25.0	23.0	24.0	23.9	20.6	22.3
6	21.4	16.9	18.9	25.1	21.9	23.4	26.1	23.1	24.2	25.0	21.5	23.2
7	22.3	18.6	20.3	25.4	22.1	23.7	24.8	22.5	23.7	25.9	22.8	24.4
8	23.8	20.1	21.6	25.6	22.9	24.1	24.2	22.2	23.2	26.8	23.4	24.7
9	23.3	20.6	21.9	26.2	22.9	24.4	24.5	22.5	23.4	25.2	23.8	24.3
10	23.1	20.2	21.5	26.8	23.7	24.9	23.7	21.3	22.5	25.5	23.0	24.2
11	22.2	18.8	20.4	26.8	23.3	24.8	24.2	20.8	22.6	25.2	22.9	24.1
12	21.1	17.6	19.4	25.6	23.8	24.6	24.5	21.1	22.9	24.0	22.5	23.4
13	21.0	16.8	18.9	24.8	23.0	23.9	25.5	23.0	24.3	23.7	22.8	23.2
14	22.5	18.5	20.5	24.1	23.0	23.6	25.3	23.4	24.2	23.6	22.3	23.0
15	24.1	20.3	21.6	24.9	22.6	23.6	27.4	22.4	23.9	24.5	22.3	23.2
16	22.6	21.1	21.8	23.9	21.7	22.9	24.9	22.8	23.8	22.4	19.8	21.2
17	22.7	19.6	21.0	24.1	22.3	23.2	24.1	22.9	23.3	20.9	18.3	19.6
18	23.8	19.6	21.6	23.6	22.0	22.7	23.7	22.2	23.0	19.1	16.5	17.8
19	24.6	21.1	22.6	23.1	21.4	22.3	24.2	22.5	23.4	19.6	17.0	18.2
20	23.6	19.8	21.5	23.1	21.6	22.4	24.8	23.2	24.0	22.4	18.9	20.6
21	25.1	20.4	22.3	24.9	21.8	23.0	24.6	23.7	24.2	21.8	20.5	21.1
22	24.1	21.6	22.8	24.8	21.8	23.1	24.4	23.0	23.7	22.4	20.5	21.3
23	23.8	21.8	22.7	25.6	22.5	23.8	24.1	23.0	23.6	20.6	17.3	18.9
24	22.6	19.2	21.0	25.3	22.4	23.8	24.4	23.1	23.7	17.1	14.1	16.0
25	22.8	18.7	20.6	23.7	22.3	22.7	24.8	23.1	23.9	17.2	12.8	15.2
26	22.1	19.3	20.9	24.5	21.1	22.6	25.1	23.4	24.2	18.2	13.8	16.1
27	23.2	19.9	21.6	24.0	20.7	22.4	25.9	23.2	24.5	19.4	15.4	17.4
28	23.3	20.9	22.2	24.4	22.5	23.3	26.2	23.0	24.5	19.3	16.1	17.7
29	24.5	21.4	22.9	24.2	21.7	23.0	25.4	23.0	24.3	19.4	16.8	18.0
30	25.2	21.5	23.3	25.7	22.6	23.9	24.7	22.7	23.9	19.1	16.9	17.8
31	---	---	---	25.5	22.6	24.1	24.3	22.4	23.4	---	---	---
MONTH	25.2	16.8	21.0	26.8	19.4	23.3	27.4	20.8	23.7	26.8	12.8	21.0

SANTEE RIVER BASIN

02146211 IRWIN CREEK AT STATESVILLE AVENUE AT CHARLOTTE, NC

LOCATION.--Lat 35°15'43", long 80°50'15", Mecklenburg County, Hydrologic Unit 03050103, on right bank 50 ft upstream from bridge on U. S. Highway 21 (Statesville Avenue), 1000 ft upstream from Kennedy Branch, 0.2 mi upstream from U. S. Interstate 77, and 2.5 mi north of Trade and Tryon Street intersection in downtown Charlotte.

DRAINAGE AREA.--5.97 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1969-77, 1970-80, October 1981 to current year.

REVISED RECORDS.--WDR NC-84-1: 1982.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 656.85 ft above National Geodetic Vertical Datum of 1929 (levels by City of Charlotte).

REMARKS.--Records good except for estimated daily discharges, which are fair. A 140-acre solid waste landfill, used 1940 to 1970, is located just above station. The drainage area is urbanized and has an impervious area of about 15 percent. No flow also occurred Aug. 3, 4, 1987, as a result of upstream construction. Minimum daily discharge for period of record also occurred Aug. 2, 1986. Minimum discharge for current water year also occurred Sept. 6, 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	2.1	2.2	23	4.5	5.1	20	14	3.8	1.6	.70	.53
2	58	2.1	2.5	7.4	4.8	12	15	16	3.3	1.5	.69	1.3
3	10	2.1	2.6	5.4	4.4	81	6.7	12	3.0	1.5	.72	1.2
4	4.5	2.0	2.4	5.1	6.0	17	5.1	5.3	2.6	1.5	.71	1.1
5	2.9	1.9	2.4	5.0	4.3	9.6	4.5	5.0	2.4	1.4	.69	.73
6	2.4	2.2	2.3	30	3.8	7.7	4.1	3.5	2.3	1.4	4.7	.95
7	2.2	1.9	2.8	12	3.9	6.5	6.9	4.0	2.2	2.1	1.2	.52
8	1.9	3.7	55	39	3.7	5.8	3.8	2.9	2.0	e8.4	.78	3.6
9	1.8	4.5	27	13	6.5	6.3	3.6	3.9	1.9	e2.5	.77	1.2
10	1.8	2.1	15	7.9	128	5.6	4.1	24	1.9	e1.4	.70	.58
11	1.8	1.9	11	6.1	24	5.2	7.5	5.1	1.8	e1.2	.70	13
12	1.7	1.8	49	5.0	11	5.0	3.7	3.7	1.7	e1.0	.67	7.4
13	1.7	1.7	38	4.2	7.6	5.0	3.4	3.4	1.7	e2.3	.60	1.8
14	1.7	2.2	11	3.8	6.4	5.1	3.6	3.3	1.7	e4.2	.93	1.2
15	1.7	7.5	6.7	3.7	5.7	5.4	26	3.1	14	e2.1	3.0	.93
16	1.6	33	4.9	3.7	213	5.1	8.7	3.0	4.8	e1.5	3.4	.69
17	2.0	5.2	4.1	3.6	32	39	4.6	3.0	2.8	e7.0	1.7	.53
18	12	3.2	3.8	3.6	13	13	3.5	2.7	2.3	e2.2	.76	.52
19	35	2.6	4.3	3.6	67	6.9	3.2	2.6	2.0	e1.6	.70	.56
20	4.4	2.4	3.6	4.4	15	7.3	3.2	3.0	1.9	e1.4	.81	.56
21	2.9	2.3	3.3	102	9.6	5.3	3.2	2.8	1.9	e1.3	.88	.55
22	2.3	16	3.0	13	22	4.9	3.1	3.9	2.0	e1.2	1.0	1.9
23	2.2	33	2.6	7.9	16	4.6	3.0	2.8	2.0	e1.1	.80	.54
24	2.1	6.8	3.0	13	9.6	4.4	2.8	2.5	1.9	e.95	.71	.63
25	2.0	3.8	3.1	34	6.9	4.2	2.7	2.4	1.9	.91	.64	.83
26	2.0	3.2	3.4	19	6.0	5.1	2.6	2.3	1.8	.91	.63	.66
27	2.0	3.2	3.3	8.8	5.8	4.5	2.4	22	1.8	.85	.61	.61
28	2.0	3.0	2.9	7.0	5.7	4.0	9.1	248	1.7	.85	.53	.58
29	2.0	2.6	2.9	7.6	---	21	9.5	88	1.7	.80	.54	.60
30	2.1	2.3	3.2	6.5	---	8.9	3.5	8.7	1.6	.78	.56	.59
31	2.1	---	27	5.0	---	11	---	5.0	---	.79	.53	---
MEAN	12.0	5.41	9.95	13.3	23.1	10.7	6.10	16.5	2.61	1.88	1.04	1.55
MAX	200	33	55	102	213	81	26	248	14	8.4	4.7	13
MIN	1.6	1.7	2.2	3.6	3.7	4.0	2.4	2.3	1.6	.78	.53	.52
IN.	2.32	1.01	1.92	2.58	4.03	2.07	1.14	3.19	.49	.36	.20	.29

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	4.09	6.89	8.60	9.88	15.1	12.6	6.62	8.20	6.73	3.86	4.26	4.14
MAX	12.0	27.8	21.3	15.2	23.1	22.4	13.2	16.5	24.9	8.15	11.3	16.2
(WY)	1990	1986	1984	1982	1990	1984	1984	1990	1982	1984	1985	1987
MIN	1.38	1.08	2.97	4.04	4.71	2.99	2.71	1.94	.885	.932	.387	.472
(WY)	1985	1982	1989	1986	1986	1985	1986	1986	1986	1986	1987	1983

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	8.62		7.54	
HIGHEST ANNUAL MEAN			10.7	1984
LOWEST ANNUAL MEAN			5.44	1986
HIGHEST DAILY MEAN	248	May 28	388	Nov 21 1985
LOWEST DAILY MEAN	.52	Sep 7	.16*	Aug 1 1986
INSTANTANEOUS PEAK FLOW	765	May 28	1430	Jun 18 1982
INSTANTANEOUS PEAK STAGE	4.95	May 28	7.58	Jun 18 1982
INSTANTANEOUS LOW FLOW	.40*	Sep 5	0*	Aug 1 1987
ANNUAL RUNOFF (INCHES)	19.6		17.1	
10 PERCENTILE	15		15	
50 PERCENTILE	2.7		2.6	
95 PERCENTILE	.52		.51	

* See REMARKS.

SANTEE RIVER BASIN

02146211 IRWIN CREEK AT STATESVILLE AVENUE AT CHARLOTTE, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1981, water years 1982 to September 1990 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1982 to September 1990.
WATER TEMPERATURE: April 1982 to September 1990.

INSTRUMENTATION.--Water-quality monitor since Apr. 1982. Continuous water-quality monitor was removed Oct. 1990.

REMARKS.--Station operated as part of the Charlotte-Mecklenburg County Water-Quality Study. Interruptions in the record were due to probes being out of the water.

COOPERATION.--Chemical samples were collected by the U.S. Geological Survey. Laboratory analyses, other than the organics, were performed by the Mecklenburg County Department of Environmental Health Laboratory.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, >1100 microsiemens June 26, 1988; minimum, 42 microsiemens Aug. 17, 1989.
WATER TEMPERATURE: Maximum, 34.7°C, June 29, 1987; minimum, 0.0°C several days during Jan. and Dec. 1985, Jan. 1986, Jan. 7, 8, 1988, and Dec. 22, 23, 1989.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 802 microsiemens, Aug. 12; minimum, <50 microsiemens, May 28.
WATER TEMPERATURE: Maximum, 28.0°C, July 7; minimum, 0.0°C, Dec. 22, 23.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)
APR									
12...	1145	290	6.2	12.0	10.8	0.9	3.7	0.800	0.690
JUL									
02...	1400	465	6.8	24.5	7.0	5.2	5.1	0.840	<0.040

DATE	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)	PHOSPHORUS TOTAL (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
APR								
12...	0.89	0.030	1	<2	500	<2	<2	<50
JUL								
02...	--	<0.050	450	<2	200	<2	7	<50

02146211 IRWIN CREEK AT STATESVILLE AVENUE AT CHARLOTTE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (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)	CARBON, ORGANIC TOTAL (MG/L AS C)
APR								
12...	1600	5	510	<0.20	<2	<2	130	4.3
JUL								
02...	840	2	720	<0.20	<2	<2	90	7.5

SANTEE RIVER BASIN

02146211 IRWIN CREEK AT STATESVILLE AVENUE AT CHARLOTTE, NC--Continued

SPECIFIC CONDUCTANCE, US/CM ‡ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	405	399	402	318	312	315	235	204	220
2	---	---	---	412	405	408	324	317	321	258	236	245
3	---	---	---	407	391	399	324	320	322	292	258	271
4	---	---	---	420	401	408	330	322	326	303	260	291
5	398	348	371	423	404	413	330	325	328	298	261	287
6	421	400	413	424	341	403	348	327	339	235	120	164
7	435	424	429	416	395	408	345	189	338	230	160	210
8	452	437	443	416	212	352	182	103	124	184	123	145
9	454	450	451	357	208	293	284	134	177	226	187	207
10	455	447	452	393	358	376	217	172	186	254	227	241
11	452	443	447	412	387	397	213	172	191	284	254	268
12	450	438	445	412	401	408	257	125	188	293	283	287
13	447	434	440	414	402	410	175	128	151	303	297	300
14	437	426	433	415	311	397	212	176	194	312	304	308
15	443	430	435	385	185	295	248	214	233	316	311	312
16	440	425	435	302	122	182	258	248	253	317	313	314
17	434	324	403	283	219	257	267	257	262	317	312	314
18	407	126	311	307	285	297	270	267	268	316	309	312
19	224	103	164	324	308	316	280	259	270	313	308	311
20	309	229	271	336	324	331	272	262	267	317	191	311
21	358	312	338	341	335	337	274	263	267	154	56	118
22	379	360	370	345	122	313	268	261	265	217	156	180
23	389	382	387	192	115	160	294	268	278	238	219	229
24	403	389	397	258	193	225	275	264	269	257	125	228
25	406	379	401	283	258	273	266	259	263	163	127	143
26	409	386	400	294	284	290	259	255	257	188	151	167
27	401	394	398	302	288	296	259	244	253	219	190	206
28	403	393	398	307	298	304	277	255	265	239	219	228
29	405	329	399	312	305	309	283	272	277	252	204	239
30	409	405	408	318	309	314	284	277	279	243	217	231
31	414	402	409	---	---	---	280	194	244	257	246	251
MONTH	---	---	---	424	115	332	348	103	257	317	56	243
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	306	292	296	308	300	303	220	167	199	305	170	285
2	306	256	295	311	97	276	225	185	206	239	127	201
3	308	299	304	128	77	96	264	230	243	242	141	197
4	314	211	281	179	131	157	278	266	269	273	205	255
5	309	281	295	201	180	191	287	278	281	280	225	255
6	324	310	317	211	202	206	296	286	292	300	280	290
7	328	317	322	218	209	214	298	153	239	299	223	274
8	330	324	327	220	217	218	288	271	279	319	299	306
9	336	165	324	219	198	211	305	272	292	326	227	303
10	142	88	121	211	208	209	303	211	297	242	100	180
11	183	140	163	216	211	213	278	172	240	267	218	242
12	210	184	197	217	201	209	296	281	290	287	268	275
13	229	211	220	210	201	206	306	299	303	293	278	284
14	249	231	239	211	198	205	309	259	302	297	283	288
15	264	250	256	210	160	195	304	118	200	299	288	295
16	269	95	185	188	178	184	243	192	222	310	298	302
17	217	159	191	186	62	99	296	244	268	315	293	307
18	242	219	232	190	96	140	297	284	291	318	298	309
19	197	139	159	236	192	214	291	286	289	330	312	318
20	206	178	192	243	231	238	290	286	288	335	274	322
21	235	208	221	259	242	250	289	285	287	321	274	306
22	243	209	226	263	249	256	286	282	284	329	224	293
23	235	212	223	275	259	267	302	283	290	315	283	299
24	251	235	243	273	264	268	312	298	303	322	316	319
25	263	251	258	267	257	262	311	302	306	330	321	325
26	276	264	270	273	262	268	312	306	309	341	328	332
27	288	276	282	274	256	265	323	312	315	344	66	315
28	300	289	294	274	267	271	328	244	314	147	<50	---
29	---	---	---	274	234	246	247	225	235	225	68	162
30	---	---	---	237	232	235	287	249	264	262	228	242
31	---	---	---	235	200	208	---	---	---	297	266	276
MONTH	336	88	248	311	62	219	328	118	273	---	---	---

02146211 IRWIN CREEK AT STATESVILLE AVENUE AT CHARLOTTE, NC--Continued

SPECIFIC CONDUCTANCE, US/CM ‡ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	323	298	305	513	399	478	578	517	557	715	684	701
2	343	322	328	473	433	459	587	557	573	707	332	419
3	372	345	353	486	459	473	598	549	571	342	322	331
4	375	355	366	498	464	478	596	563	573	366	318	330
5	383	356	368	519	464	490	609	563	583	466	376	402
6	398	363	378	512	465	489	619	221	502	607	370	425
7	397	372	386	511	477	490	527	313	409	660	386	514
8	403	377	392	520	193	330	697	532	618	733	364	650
9	415	384	402	401	348	378	789	668	711	591	403	485
10	418	387	405	415	392	404	771	691	735	683	600	653
11	429	399	412	440	405	425	755	657	719	718	223	607
12	454	413	427	464	428	451	802	705	746	417	282	352
13	444	417	434	466	233	436	745	654	693	467	421	441
14	457	420	441	266	160	220	710	415	642	529	429	470
15	463	142	366	319	230	272	615	243	438	573	533	554
16	324	235	289	359	324	344	622	363	498	621	567	592
17	356	328	340	374	206	299	592	391	495	668	621	647
18	401	357	373	376	311	338	690	601	655	694	668	682
19	410	389	402	420	378	403	676	573	632	717	694	706
20	427	404	417	444	418	426	671	492	619	718	709	714
21	438	412	425	455	419	438	610	488	553	718	710	714
22	439	421	429	471	431	447	506	362	431	718	474	548
23	441	418	433	480	456	469	558	423	492	587	495	539
24	452	430	443	461	448	455	539	476	517	621	590	608
25	460	432	448	484	463	476	571	507	551	649	621	637
26	461	441	452	489	467	476	597	565	580	654	631	644
27	478	448	463	511	479	496	617	572	595	667	644	655
28	500	456	479	528	500	512	636	569	617	667	660	663
29	492	441	469	543	503	520	710	620	683	679	665	670
30	504	461	482	559	517	532	710	675	693	690	675	683
31	---	---	---	571	481	532	702	664	683	---	---	---
MONTH	504	142	404	571	160	433	802	221	592	733	223	568

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	17.0	13.5	15.3	10.9	6.1	8.0	10.8	5.9	8.5
2	---	---	---	13.5	12.5	12.9	10.3	6.0	8.0	7.8	4.4	5.8
3	---	---	---	16.0	11.7	13.3	8.4	4.7	6.8	9.4	5.1	7.0
4	---	---	---	14.1	9.8	11.7	7.0	2.7	5.0	10.6	8.0	9.3
5	19.1	13.7	16.5	14.5	8.7	11.6	9.5	4.8	7.0	12.2	10.5	11.2
6	21.9	15.8	18.5	14.0	12.0	13.0	11.8	7.0	9.2	11.2	10.1	10.7
7	21.7	18.2	19.6	16.7	13.9	15.2	11.0	8.6	10.0	10.0	8.7	9.5
8	19.5	15.7	17.5	18.0	15.1	16.5	9.2	5.8	7.3	8.8	7.9	8.4
9	16.9	11.8	14.2	19.8	14.0	17.2	5.9	4.6	5.0	9.3	7.7	8.3
10	16.3	10.4	13.2	15.5	10.7	13.1	6.6	4.3	5.4	10.3	6.9	8.3
11	17.2	11.0	13.9	14.9	9.7	12.3	8.1	6.0	7.1	10.2	5.2	7.6
12	18.6	11.8	15.0	16.8	10.7	13.5	8.3	6.0	7.6	9.7	5.7	7.9
13	19.5	13.4	16.3	16.9	11.4	14.0	7.5	5.8	6.6	7.8	3.9	5.5
14	19.9	16.2	17.6	16.1	12.2	14.3	7.4	4.4	5.7	8.4	4.0	5.8
15	20.3	14.5	17.2	17.2	14.2	15.8	7.5	4.7	6.1	10.6	5.5	7.6
16	20.0	15.4	17.6	17.7	11.8	15.4	6.7	3.2	4.8	11.4	7.1	9.0
17	20.0	17.3	18.6	12.1	9.0	10.4	4.5	2.0	3.3	12.5	7.4	9.7
18	19.9	18.6	19.2	11.1	7.8	9.3	5.8	3.8	4.7	13.9	9.4	11.3
19	18.7	14.9	16.4	10.9	7.8	9.0	5.0	4.3	4.6	11.4	10.4	10.9
20	14.5	10.9	12.5	12.6	7.8	10.1	5.9	2.5	4.2	11.8	10.1	11.0
21	13.7	8.9	11.0	13.4	9.6	11.4	5.8	1.4	3.5	12.3	10.2	11.2
22	15.7	9.2	12.0	9.4	6.0	8.5	3.4	.0	1.4	11.4	7.9	9.5
23	15.3	9.6	12.2	9.9	6.5	8.3	1.0	-.1	.3	10.9	7.1	9.1
24	15.7	10.1	12.6	8.6	5.3	6.9	1.6	.1	.6	10.4	9.8	10.1
25	16.0	9.8	12.5	8.5	5.0	6.8	1.4	.3	.9	12.2	9.9	10.7
26	16.0	9.7	12.5	12.9	8.3	10.5	4.4	1.1	2.5	10.8	7.3	9.3
27	16.0	10.0	12.8	12.8	11.3	12.1	4.5	1.1	2.6	10.0	5.3	7.3
28	16.4	11.3	13.7	15.5	12.0	13.8	6.0	1.2	3.4	10.4	5.0	7.6
29	17.6	11.8	14.5	13.6	8.8	12.0	6.9	1.9	4.5	12.5	8.3	10.4
30	18.0	13.4	15.8	10.8	6.2	8.3	9.2	6.4	7.7	10.5	7.1	9.2
31	19.1	15.6	17.2	---	---	---	12.1	7.6	9.8	12.0	7.1	9.2
MONTH	---	---	---	19.8	5.0	12.1	12.1	-.1	5.3	13.9	3.9	8.9

SANTEE RIVER BASIN

02146211 IRWIN CREEK AT STATESVILLE AVENUE AT CHARLOTTE, NC--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.7	6.9	9.2	13.0	10.2	11.5	20.8	11.6	15.3	22.7	17.4	19.8
2	13.6	8.7	11.1	11.1	9.7	10.3	19.5	13.8	16.3	22.9	18.7	20.6
3	16.3	11.5	13.4	11.8	10.1	10.7	16.6	11.5	13.8	20.7	18.9	19.5
4	16.3	11.9	14.1	13.3	8.0	10.2	17.2	9.0	12.5	21.0	18.5	19.7
5	12.7	8.1	10.3	13.6	8.3	10.5	18.8	9.6	13.7	21.9	18.9	20.2
6	11.4	5.7	8.6	15.1	8.0	11.1	17.6	12.1	14.9	18.2	15.4	16.9
7	14.5	9.7	11.5	11.9	9.0	10.3	17.9	11.1	14.0	20.1	13.9	16.7
8	13.6	7.8	10.5	9.4	7.3	8.4	17.7	8.9	12.7	20.9	13.8	17.2
9	13.9	9.0	11.2	10.5	7.9	9.2	18.2	9.0	13.2	18.6	16.9	17.8
10	14.4	12.0	13.1	17.1	9.6	12.7	16.7	12.6	14.6	21.2	17.5	19.0
11	12.4	9.6	11.1	19.4	11.4	14.7	20.3	14.0	16.7	19.5	14.0	16.9
12	12.9	8.4	10.4	20.8	12.4	16.2	17.5	10.5	13.4	20.7	15.5	17.8
13	12.3	7.9	10.1	21.3	13.9	17.3	17.5	9.2	12.8	20.7	17.7	19.1
14	15.4	9.5	12.2	20.7	14.0	17.2	15.7	10.6	13.2	21.7	17.0	19.5
15	17.1	12.1	14.3	19.0	15.6	17.1	17.9	13.4	15.4	22.4	17.9	20.2
16	16.5	14.4	15.2	19.7	16.5	17.8	20.9	14.4	17.0	23.7	19.4	21.5
17	16.3	12.4	14.3	17.9	15.6	17.0	21.1	13.4	17.1	22.4	20.4	21.6
18	12.2	10.1	10.9	18.3	12.7	15.2	18.5	12.3	15.3	21.6	17.3	19.5
19	12.7	8.6	10.8	17.2	11.6	14.1	18.0	10.0	13.8	21.5	16.1	18.9
20	13.8	10.0	11.4	15.3	9.3	11.7	18.4	13.6	15.6	22.1	18.1	19.9
21	12.8	7.7	10.3	15.4	6.9	10.5	18.9	15.0	16.9	23.1	19.5	21.2
22	15.4	10.9	12.7	16.6	7.7	11.7	20.7	15.3	17.6	21.5	17.2	19.6
23	14.8	12.8	13.7	19.0	9.8	13.9	21.7	13.6	17.4	19.2	16.0	17.5
24	13.0	9.0	11.2	18.7	12.0	14.8	22.2	15.1	18.5	20.5	16.9	18.5
25	11.5	6.6	8.6	18.1	11.6	14.3	22.8	16.2	19.2	21.2	18.2	19.6
26	10.3	5.0	7.2	14.6	12.3	13.3	22.0	16.5	19.4	23.3	19.1	21.0
27	12.7	6.0	8.8	18.0	11.0	13.8	23.4	16.7	19.8	24.1	21.1	22.3
28	13.1	8.3	10.7	16.9	9.8	12.9	19.8	17.2	18.4	21.8	19.9	21.3
29	---	---	---	13.2	11.5	12.1	18.8	16.3	17.3	20.9	19.4	20.1
30	---	---	---	12.4	10.7	11.6	20.8	16.2	18.3	20.4	17.2	18.8
31	---	---	---	15.4	11.8	13.2	---	---	---	20.7	17.0	18.6
MONTH	17.1	5.0	11.3	21.3	6.9	13.1	23.4	8.9	15.8	24.1	13.8	19.4

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	21.3	17.4	19.2	26.6	23.2	24.8	26.1	23.1	24.6	24.6	20.9	22.8
2	20.7	19.0	19.8	25.3	22.4	23.9	25.8	22.8	24.2	25.0	20.7	22.7
3	22.3	19.0	20.4	24.7	20.5	22.7	25.4	21.8	23.5	25.4	21.9	23.6
4	23.0	19.3	21.0	25.8	21.5	23.4	25.6	21.7	23.7	24.1	21.6	22.9
5	21.0	17.8	19.7	26.4	21.9	24.1	25.6	23.0	24.4	24.4	19.9	22.0
6	21.9	17.4	19.5	26.3	22.6	24.5	26.6	23.2	24.6	25.1	20.8	22.8
7	23.4	19.1	21.1	26.8	23.2	25.0	25.6	22.9	24.3	26.3	21.9	24.1
8	24.9	20.7	22.5	26.4	24.3	25.3	24.7	22.5	23.5	26.4	22.4	24.4
9	24.6	21.0	22.8	27.5	23.8	25.6	25.6	22.8	23.9	25.2	23.6	24.2
10	23.7	20.9	22.3	27.9	24.6	26.2	24.0	21.6	22.8	26.1	22.3	24.1
11	23.3	19.4	21.3	28.0	24.3	26.1	25.3	21.2	23.1	25.7	22.4	23.9
12	22.6	18.2	20.4	27.0	24.8	25.9	25.3	21.2	23.1	24.7	22.5	23.5
13	22.1	17.3	19.9	26.3	23.9	25.0	26.4	22.7	24.4	23.7	22.3	22.9
14	24.1	19.2	21.6	25.8	24.3	25.0	26.2	23.1	24.6	23.9	21.9	22.7
15	24.3	21.0	22.3	26.5	23.8	25.0	26.5	23.0	24.6	25.5	21.7	23.2
16	23.5	21.5	22.4	25.3	22.7	24.2	25.9	23.2	24.7	23.6	19.2	21.3
17	23.7	20.5	22.0	25.4	23.2	24.4	25.0	23.4	24.1	22.6	17.7	20.0
18	24.6	20.4	22.5	24.9	23.0	23.9	25.2	22.2	23.7	21.0	16.0	18.3
19	25.5	21.5	23.4	24.4	22.5	23.5	25.9	22.6	24.2	19.7	16.4	18.1
20	23.9	20.7	22.4	24.3	22.6	23.5	26.5	23.5	24.9	22.9	18.3	20.5
21	25.5	21.1	23.2	26.2	22.9	24.4	26.2	24.1	25.0	21.5	20.5	21.0
22	24.9	22.3	23.7	26.7	22.8	24.7	24.2	23.2	23.8	22.3	20.1	21.1
23	25.4	22.5	23.7	26.7	23.7	25.2	24.1	22.3	23.1	21.0	17.3	19.2
24	23.6	20.0	21.9	26.0	23.5	24.8	24.2	22.5	23.3	19.3	13.9	16.5
25	23.7	19.5	21.7	24.5	22.9	23.5	24.8	22.4	23.6	18.3	12.5	15.5
26	23.4	20.2	21.9	25.4	21.6	23.3	25.0	22.7	23.8	19.5	13.4	16.5
27	24.5	20.9	22.5	25.1	21.4	23.2	26.2	22.3	24.1	20.9	15.0	17.8
28	24.5	21.4	22.9	26.0	23.1	24.2	27.0	22.0	24.4	19.6	15.7	17.7
29	25.7	21.8	23.7	26.1	21.9	23.9	25.2	21.8	23.7	20.0	16.1	17.9
30	26.1	22.0	24.1	26.9	23.1	24.7	25.1	21.7	23.5	19.6	16.3	17.7
31	---	---	---	27.4	22.9	24.9	25.8	21.7	23.3	---	---	---
MONTH	26.1	17.3	21.9	28.0	20.5	24.5	27.0	21.2	24.0	26.4	12.5	21.0

02146300 IRWIN CREEK NEAR CHARLOTTE, NC

LOCATION.--Lat 35°11'50", long 80°54'18", Mecklenburg County, Hydrologic Unit 03050103, on left bank at sewage-disposal plant of City of Charlotte, 2,200 ft upstream from Southern Railway bridge, 0.7 mi upstream from Taggart Creek, and 4.2 mi southwest of City Hall, Charlotte.

DRAINAGE AREA.--30.7 mi^2.

PERIOD OF RECORD.--May 1962 to current year. Prior to October 1963, published as Sugar (Irwin) Creek at Charlotte.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 591.53 ft above National Geodetic Vertical Datum of 1929 (levels by City of Charlotte).

REMARKS.--Records good. Since July 2, 1981, wastewater from upstream city water filtration plants enters creek below gage via sewer to wastewater treatment plant. 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. Minimum discharge for period of record also occurred July 14, 1986. Minimum discharge for current water year also occurred Sept. 30.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 6, 1936 reached a stage of about 17.3 ft at site 400 ft downstream, from information by plant employee. Peak may have been affected by failure of Lakewood Dam 5 mi upstream. Flood of Jan. 6, 1962 reached a stage of 14.32 ft, from floodmarks, discharge, 4,120 ft^3/s. Flood of Apr. 11, 1962 reached a stage of 15.18 ft, from floodmarks, discharge, 4,740 ft^3/s, on basis of slope-area measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1150	12	15	126	22	23	162	42	22	26	5.8	5.6
2	281	12	15	32	24	56	104	86	19	10	5.8	5.5
3	50	12	15	26	22	438	33	76	18	7.7	6.3	5.5
4	31	11	14	27	32	72	25	30	17	7.4	6.4	5.5
5	25	10	15	26	22	40	24	36	14	7.3	6.1	5.5
6	22	15	14	181	19	34	22	16	13	8.1	45	5.5
7	21	12	16	47	20	29	46	26	13	7.8	12	5.7
8	18	46	344	224	19	27	20	14	13	14	6.7	66
9	16	32	133	54	29	31	19	19	12	8.5	6.5	34
10	15	12	64	36	741	27	19	143	12	7.8	6.5	6.2
11	15	11	45	29	104	25	50	21	12	8.3	6.3	52
12	15	11	239	26	44	24	20	14	11	8.2	6.0	54
13	14	11	173	23	34	23	18	13	16	20	5.7	23
14	14	14	47	22	29	22	20	13	14	54	16	10
15	14	57	33	21	27	28	143	13	251	17	17	6.3
16	14	258	27	20	1160	26	37	12	30	7.4	8.0	6.0
17	21	29	24	20	142	237	22	14	13	46	22	6.0
18	133	21	24	20	53	58	18	12	12	10	6.1	5.6
19	212	17	27	19	356	30	16	11	11	38	5.8	5.5
20	26	16	23	20	65	37	16	14	10	8.8	7.1	5.5
21	19	15	20	629	43	24	17	15	9.5	7.4	6.3	5.5
22	17	105	19	53	129	23	17	25	9.0	7.1	9.9	16
23	15	202	22	34	65	22	17	13	8.7	7.0	11	5.6
24	14	31	29	56	42	21	17	11	8.2	6.8	11	5.2
25	14	23	27	176	32	19	16	11	8.1	6.5	6.1	5.2
26	13	20	22	80	29	29	17	10	13	6.5	11	5.2
27	13	22	20	37	27	24	19	27	12	6.3	8.1	5.2
28	13	19	18	31	25	19	59	1180	9.6	6.2	5.8	5.2
29	12	16	18	38	---	115	91	510	9.4	6.0	5.7	5.2
30	12	15	20	32	---	38	19	40	9.4	5.9	6.8	5.2
31	12	---	191	24	---	58	---	26	---	5.9	5.7	---
MEAN	72.9	36.2	55.3	70.6	120	54.2	37.4	80.4	21.0	12.7	9.50	12.7
MAX	1150	258	344	629	1160	438	162	1180	251	54	45	66
MIN	12	10	14	19	19	19	16	10	8.1	5.9	5.7	5.2
IN.	2.74	1.32	2.08	2.65	4.07	2.03	1.36	3.02	.76	.48	.36	.46

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	33.0	34.7	43.6	56.1	66.1	68.5	39.8	43.3	34.6	30.3	30.8	35.1
MAX	142.5	137.5	107.3	118.8	124.4	138.9	81.6	203.6	123.4	77.6	96.0	134.7
(WY)	1977	1986	1984	1978	1979	1980	1979	1975	1982	1975	1967	1975
MIN	10.6	9.32	10.2	13.4	20.7	18.5	14.9	14.0	6.95	6.67	7.97	6.00
(WY)	1964	1982	1966	1981	1968	1985	1981	1986	1986	1986	1987	1983

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	48.2		43.1	
HIGHEST ANNUAL MEAN			78.6	1975
LOWEST ANNUAL MEAN			24.0	1981
HIGHEST DAILY MEAN	1180	May 28	2600	May 30 1975
LOWEST DAILY MEAN	5.2	Sep 24	3.1	Sep 25 1983
INSTANTANEOUS PEAK FLOW	4070	May 28	8880	May 30 1975
INSTANTANEOUS PEAK STAGE	12.16	May 28	18.04	May 30 1975
INSTANTANEOUS LOW FLOW	4.9*	Sep 24	2.8*	Jul 13 1986
ANNUAL RUNOFF (INCHES)	21.3		19.1	
10 PERCENTILE	78		79	
50 PERCENTILE	19		19	
95 PERCENTILE	5.2		7.0	

* See REMARKS.

SANTEE RIVER BASIN

02146470 LITTLE HOPE CREEK AT SENECA PLACE AT CHARLOTTE, NC

LOCATION.--Lat 35°09'53", long 80°51'12", Mecklenburg County, Hydrologic Unit 03050103, on right bank at downstream side of bridge on Seneca Place, 0.8 mi upstream from mouth, and 4 mi south of City Hall in Charlotte.

DRAINAGE AREA.--2.63 mi^2, revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Annual maximum, water years 1967-70; continuous record December 1982 to September 1990 (discontinued).

REVISED RECORDS.--WDR NC-85-1: 1984 (P). WDR NC-88-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 597.77 ft above National Geodetic Vertical Datum of 1929 (North Carolina Coast and Geodetic Survey bench mark).

REMARKS.--Records fair except for estimated daily discharges, which are poor. The drainage area is urbanized and has an impervious area of about 25 percent. No flow occurred periodically in 1986, 1987, and 1988. Minimum discharge for current water year also occurred Sept. 5, 6, 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	105	.58	1.6	6.6	1.4	1.5	2.2	2.4	1.4	2.6	.12	.15
2	15	.57	1.5	2.2	1.8	8.5	2.7	1.9	1.3	.74	.17	.13
3	2.8	.71	.98	1.8	1.4	38	1.6	1.5	1.3	.49	.15	.19
4	1.8	.53	.92	1.6	2.5	3.2	1.5	2.7	1.2	.50	.17	e.03
5	1.4	.54	.86	2.0	1.3	2.4	1.4	1.7	1.1	.46	.16	e.03
6	1.3	.81	.80	15	1.3	2.0	1.4	.96	1.0	.45	9.5	e.03
7	1.1	.60	1.1	3.5	1.3	1.8	3.2	2.0	.99	.36	.68	.05
8	.90	2.5	25	17	1.3	1.6	1.4	.86	.90	.38	.33	7.3
9	.82	1.9	8.3	2.9	5.1	2.3	1.3	1.6	.87	.37	.49	1.4
10	.79	.54	3.2	2.1	68	1.7	1.3	16	.87	.41	.31	.24
11	.79	.56	2.2	1.8	5.3	1.5	2.3	1.4	.77	.45	.25	18
12	.75	.53	17	1.5	2.6	1.4	1.2	1.2	.71	1.8	.21	.92
13	.78	.54	7.6	1.3	2.1	1.4	1.2	1.3	.66	1.4	.20	3.3
14	.73	.87	2.3	1.3	1.8	1.3	3.1	1.2	.65	4.2	5.2	.73
15	.70	4.5	1.8	1.3	1.7	2.3	9.9	1.1	19	.77	5.0	.35
16	.64	22	1.5	1.2	95	1.4	1.6	1.1	1.5	.42	.70	.27
17	1.2	2.9	1.4	1.2	5.0	19	1.4	2.7	.90	.39	.49	.25
18	3.4	2.8	1.3	1.2	3.0	2.9	1.2	.95	.79	.41	.34	.25
19	8.6	2.7	1.9	1.1	27	2.0	1.2	.89	.72	.84	.31	.30
20	.81	3.2	1.6	1.5	2.8	2.5	1.3	.95	.81	.56	.30	.33
21	.67	3.2	1.1	37	2.0	1.7	1.3	2.1	.58	.49	.48	.29
22	.63	23	.99	2.5	8.0	1.5	1.2	1.7	.51	.47	.62	1.2
23	.63	20	1.0	2.0	2.7	1.5	1.2	.99	.50	.33	1.2	.26
24	.65	3.1	1.1	4.5	1.7	1.4	1.1	.90	.47	.25	.31	.30
25	.69	2.6	1.2	16	1.3	1.3	1.0	.93	.45	.29	.29	.32
26	.72	2.4	1.1	4.5	1.1	2.7	.98	.94	.48	.30	.34	.33
27	.73	2.6	1.1	2.2	1.1	1.4	.95	35	.49	.23	1.7	.18
28	.73	2.1	.97	1.9	1.3	1.2	7.1	106	.53	.23	.30	.16
29	.70	2.0	.97	2.9	---	11	4.2	9.7	.48	.21	.30	.17
30	.58	1.8	1.1	1.7	---	2.1	1.4	2.0	.49	.21	2.1	.20
31	.59	---	21	1.5	---	4.2	---	1.6	---	.17	.37	---
MEAN	5.05	3.76	3.69	4.67	8.96	4.15	2.09	6.65	1.41	.68	1.07	1.26
MAX	105	23	25	37	95	38	9.9	106	19	4.2	9.5	18
MIN	.58	.53	.80	1.1	1.1	1.2	.95	.86	.45	.17	.12	.03
IN.	2.14	1.54	1.57	1.98	3.43	1.76	.86	2.82	.58	.29	.45	.52

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	2.10	3.52	3.70	4.04	6.11	5.23	2.61	3.41	2.40	1.65	2.33	2.52
MAX	5.05	10.5	10.5	7.58	8.96	9.04	4.30	6.65	7.18	3.89	6.44	8.17
(WY)	1990	1986	1984	1984	1990	1984	1983	1990	1985	1984	1985	1989
MIN	.570	.945	1.38	1.70	1.59	1.03	1.24	.884	.220	.307	.190	.341
(WY)	1988	1985	1989	1986	1986	1985	1985	1987	1986	1986	1987	1983

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	3.59		3.30	
HIGHEST ANNUAL MEAN			4.87	1984
LOWEST ANNUAL MEAN			2.31	1988
HIGHEST DAILY MEAN	106	May 28	150	Nov 21 1985
LOWEST DAILY MEAN	.03	Sep 4	0	Jul 14 1986
INSTANTANEOUS PEAK FLOW	736	May 27	1680	Jun 7 1985
INSTANTANEOUS PEAK STAGE	6.49	May 27	8.47	Jun 7 1985
INSTANTANEOUS LOW FLOW	.03*	Sep 4	0*	Jul 14 1986
ANNUAL RUNOFF (INCHES)	17.9		16.5	
10 PERCENTILE	5.0		5.8	
50 PERCENTILE	1.2		.76	
95 PERCENTILE	.17		.10	

* See REMARKS.

SANTEE RIVER BASIN

02146470 LITTLE HOPE CREEK AT SENECA PLACE AT CHARLOTTE, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1980, Water years 1983 to September 1990 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1982 to September 1990.
WATER TEMPERATURE: November 1982 to September 1990.

INSTRUMENTATION.--Water-quality monitor since Nov. 1982. Continuous water-quality monitor was removed Oct. 1990.

REMARKS.--Station operated as part of the Charlotte-Mecklenburg County Water-Quality Study. Interruptions in the daily record were due to malfunctions of the monitor and probes being out of the water.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 727 microsiemens, Mar. 24, 1986; minimum, <28 microsiemens on several days in 1988 water year and Dec. 31, 1989, Jan. 21, Mar. 2, 3, 1990.
WATER TEMPERATURE: Maximum, 34.0°C, July 19, 1986; minimum, 0.0°C on several days in water years 1985, 1986, 1988, 1989, and 1990.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 698 microsiemens, Jan. 4; minimum, <28 microsiemens, Dec. 31, Jan. 21, Mar. 2, 3.
WATER TEMPERATURE: Maximum, 30.0°C, July 10; minimum, 0.0°C, Dec. 22-27.

SPECIFIC CONDUCTANCE, US/CM ‡ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	224	188	211	251	227	242	125	32	89
2	---	---	---	219	202	209	233	215	227	150	126	137
3	---	---	---	222	193	209	225	201	214	563	173	382
4	217	209	213	215	178	199	202	185	191	698	408	608
5	220	215	218	204	181	196	186	179	182	372	162	266
6	221	217	219	221	186	201	248	179	194	156	45	101
7	222	218	219	210	191	203	247	182	213	192	89	172
8	222	219	221	205	91	168	114	42	72	152	45	92
9	223	218	221	144	101	121	150	76	116	182	156	170
10	223	214	219	165	138	150	176	142	157	191	183	188
11	221	211	217	195	165	177	223	148	176	192	188	190
12	221	209	217	195	182	188	212	48	136	192	186	188
13	226	205	217	201	185	194	224	74	141	191	186	188
14	226	206	218	210	175	194	240	182	197	194	187	190
15	226	207	220	203	63	135	186	182	184	195	186	190
16	226	201	217	133	36	97	187	179	182	196	188	191
17	264	209	237	190	135	158	187	176	180	386	199	297
18	248	116	214	217	193	209	179	173	177	263	205	220
19	164	51	109	211	205	208	209	162	179	207	195	201
20	210	168	189	231	201	217	205	141	166	203	104	196
21	212	208	210	459	223	307	166	155	161	162	<28	108
22	211	208	209	252	44	217	169	166	167	184	164	176
23	212	206	209	175	46	107	179	168	172	191	185	189
24	209	196	204	209	176	188	178	162	169	192	75	178
25	221	202	208	217	206	212	165	153	160	138	50	96
26	282	215	234	237	217	231	288	155	232	173	121	148
27	315	272	289	252	229	240	209	148	176	202	174	186
28	279	240	262	253	243	248	159	148	156	199	191	194
29	307	228	253	275	231	255	156	151	154	198	141	183
30	245	203	228	495	229	361	164	154	159	186	139	158
31	240	193	221	---	---	---	168	<28	106	199	187	193
MONTH	---	---	---	495	36	200	288	28	172	698	28	196

SANTEE RIVER BASIN

02146470 LITTLE HOPE CREEK AT SENECA PLACE AT CHARLOTTE, NC--Continued
< Actual value is known to be less than the value shown
SPECIFIC CONDUCTANCE, US/CM ‡ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	200	194	198	---	---	---	203	145	191	---	---	---
2	201	163	187	194	<28	174	199	147	166	---	---	---
3	204	176	190	151	<28	94	202	192	198	359	189	209
4	207	152	183	185	154	169	202	197	200	274	95	215
5	190	151	166	276	180	200	201	192	197	176	97	140
6	197	190	194	222	197	203	226	195	202	195	178	188
7	203	190	197	196	190	193	193	109	139	163	128	142
8	213	199	206	195	189	191	200	176	188	194	161	182
9	203	40	188	195	165	185	204	195	199	222	152	190
10	---	---	---	205	171	181	207	194	203	147	37	104
11	---	---	---	205	184	194	175	149	160	183	143	169
12	---	---	---	202	181	193	200	176	188	195	183	191
13	---	---	---	201	179	193	206	194	199	202	192	196
14	---	---	---	201	173	191	204	117	175	201	194	197
15	---	---	---	198	152	183	161	50	114	203	193	198
16	---	---	---	188	161	171	193	163	180	204	193	199
17	---	---	---	189	55	98	224	193	204	205	136	175
18	---	---	---	196	127	165	219	210	214	226	152	189
19	---	---	---	197	189	192	228	198	212	214	198	204
20	---	---	---	243	163	186	226	187	206	218	186	200
21	---	---	---	223	196	203	209	197	202	201	117	187
22	---	---	---	207	197	203	210	198	206	167	127	149
23	---	---	---	207	192	200	212	191	204	196	161	174
24	---	---	---	212	192	201	---	---	---	203	192	199
25	---	---	---	213	193	204	---	---	---	207	194	199
26	---	---	---	210	138	188	---	---	---	207	192	201
27	---	---	---	220	141	163	---	---	---	205	38	190
28	---	---	---	311	211	243	---	---	---	110	41	73
29	---	---	---	211	70	110	---	---	---	182	76	146
30	---	---	---	205	129	167	---	---	---	204	180	191
31	---	---	---	181	116	154	---	---	---	210	204	208
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	216	208	212	216	104	186	219	198	209	171	159	165
2	215	208	211	173	122	151	217	187	202	177	169	173
3	213	205	210	195	175	182	223	199	209	185	175	179
4	370	212	274	204	192	196	214	193	205	192	179	184
5	360	286	309	206	194	201	217	194	205	193	175	185
6	309	237	264	208	193	202	256	71	176	186	180	184
7	416	236	299	209	192	201	186	125	161	387	187	223
8	515	388	445	210	193	203	---	---	---	206	50	179
9	379	274	310	206	191	200	---	---	---	157	92	128
10	272	244	257	214	184	200	---	---	---	165	143	156
11	255	231	242	207	183	195	---	---	---	175	57	150
12	238	221	229	162	130	147	---	---	---	140	100	122
13	228	213	221	210	126	164	---	---	---	181	89	123
14	223	210	216	131	69	95	---	---	---	138	90	116
15	217	56	172	152	117	132	---	---	---	153	138	146
16	290	131	202	166	154	160	---	---	---	166	154	160
17	405	296	334	182	164	174	---	---	---	171	165	168
18	301	233	262	189	166	179	---	---	---	178	168	174
19	231	220	225	198	120	178	---	---	---	185	175	181
20	259	218	235	193	165	182	---	---	---	190	175	183
21	234	209	217	188	143	171	---	---	---	193	171	184
22	224	213	218	198	154	178	---	---	---	186	126	162
23	217	208	212	197	158	177	194	138	158	171	159	166
24	215	206	211	193	166	177	161	146	154	180	167	173
25	212	204	210	204	179	197	175	153	163	181	169	175
26	214	203	209	209	173	191	181	140	166	184	167	176
27	217	205	212	206	182	191	183	112	146	188	175	182
28	218	206	213	211	188	197	171	150	162	189	176	184
29	216	204	211	212	193	202	187	171	178	192	180	186
30	216	199	209	215	195	205	179	149	155	195	187	191
31	---	---	---	222	189	206	174	153	162	---	---	---
MONTH	515	56	242	222	69	181	---	---	---	387	50	169

02146470 LITTLE HOPE CREEK AT SENECA PLACE AT CHARLOTTE, NC--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	17.1	13.0	15.0	9.9	5.4	7.2	11.7	5.9	9.0
2	---	---	---	13.3	12.0	12.9	9.7	5.3	7.3	8.1	3.8	5.9
3	---	---	---	16.3	11.4	13.0	7.2	2.3	5.2	9.0	5.3	7.1
4	21.1	16.0	18.2	14.7	9.4	11.7	6.0	1.0	3.1	10.7	8.1	9.4
5	19.3	13.3	16.2	15.5	9.2	12.0	8.6	2.8	5.3	12.5	10.6	11.2
6	22.6	15.2	18.1	14.1	11.8	12.8	10.5	5.3	7.5	11.6	9.9	10.9
7	22.5	17.8	19.4	17.9	13.5	15.3	10.8	7.8	9.2	9.7	8.7	9.5
8	20.1	14.9	17.1	18.2	15.0	16.4	8.8	5.0	6.6	9.1	8.0	8.4
9	17.2	11.2	13.8	19.9	13.5	17.0	5.3	3.8	4.3	9.2	8.1	8.5
10	17.3	10.4	13.2	16.0	9.9	12.9	6.6	3.0	5.0	11.1	7.0	8.6
11	18.8	10.9	14.3	15.4	9.3	12.2	8.3	6.0	7.2	10.8	5.5	8.0
12	19.6	12.3	15.5	17.6	10.9	13.6	8.4	5.5	7.5	10.2	5.6	8.0
13	20.5	14.1	16.8	17.7	11.2	13.9	7.6	5.3	6.3	8.2	3.5	5.4
14	20.0	16.4	17.9	16.4	11.5	14.0	7.6	4.1	5.8	8.8	3.6	5.8
15	22.0	14.8	17.9	16.5	13.6	15.3	7.8	4.4	6.2	11.0	5.2	7.6
16	21.2	15.9	18.4	17.8	9.9	14.7	6.4	1.7	4.1	11.7	7.1	9.2
17	20.8	18.1	19.3	11.4	7.4	9.2	4.0	1.2	2.4	13.0	7.5	9.9
18	21.1	19.4	20.0	10.1	6.3	8.1	5.8	3.0	4.2	14.4	9.0	11.2
19	20.0	14.7	17.0	9.5	6.5	7.9	4.4	3.7	4.0	11.7	10.4	11.0
20	14.3	10.7	12.5	12.8	6.4	9.1	6.0	2.0	3.7	11.9	9.9	10.9
21	14.9	8.7	11.2	13.1	8.9	10.4	6.1	.9	3.1	13.2	10.4	11.7
22	16.7	9.4	12.5	8.9	5.9	8.0	2.1	.0	.6	11.6	8.0	9.7
23	16.4	9.7	12.8	9.0	5.9	7.1	.1	.0	.0	11.6	6.9	9.4
24	15.5	9.4	11.9	8.1	3.9	5.9	.5	.0	.0	10.9	9.6	10.2
25	15.8	9.1	11.9	8.5	3.6	6.0	.4	.0	.0	13.4	10.2	11.5
26	16.0	8.9	11.9	12.5	7.7	9.7	3.3	.0	1.2	11.5	7.3	9.8
27	15.5	9.9	12.5	11.9	10.4	11.2	3.2	.0	1.4	10.2	5.6	7.6
28	16.5	10.7	13.3	15.9	11.3	13.3	5.9	.5	2.8	11.4	5.6	8.3
29	18.2	11.3	14.3	12.8	7.6	10.6	7.8	1.1	4.2	13.0	9.0	11.0
30	19.1	12.9	15.8	9.6	5.4	7.2	9.6	6.3	7.8	11.5	7.5	9.8
31	19.6	14.9	16.9	---	---	---	12.6	7.7	10.0	13.0	7.7	9.9
MONTH	---	---	---	19.9	3.6	11.5	12.6	.0	4.6	14.4	3.5	9.2
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	13.0	6.7	9.6	---	---	---	23.5	12.9	17.4	---	---	---
2	14.3	9.4	11.8	11.9	9.8	10.8	21.1	15.4	17.9	---	---	---
3	17.1	11.8	13.9	13.1	10.6	11.6	18.5	10.8	14.0	21.6	19.6	20.5
4	16.1	11.6	14.4	14.7	8.7	11.2	18.6	8.5	12.4	23.2	19.3	21.0
5	13.2	4.6	10.1	16.1	9.3	12.0	20.4	9.3	14.0	23.9	19.1	21.3
6	12.7	6.3	9.2	17.4	9.3	12.8	20.1	12.3	15.2	20.1	14.7	17.2
7	15.5	9.7	12.0	14.0	9.8	11.6	19.0	10.7	14.0	24.0	14.1	17.9
8	15.1	8.4	11.3	11.0	8.5	9.6	19.0	8.5	12.6	25.3	14.0	18.7
9	14.2	9.5	11.7	12.0	9.3	10.6	19.7	8.6	13.0	19.8	16.9	18.4
10	---	---	---	19.8	11.1	14.6	16.1	11.7	14.0	23.4	16.5	19.7
11	---	---	---	22.1	12.8	16.8	18.9	11.8	15.6	23.3	13.8	17.7
12	---	---	---	23.3	14.2	18.1	19.5	8.9	13.1	24.5	15.6	19.0
13	---	---	---	24.1	15.2	18.8	19.9	8.9	13.3	22.7	17.8	19.9
14	---	---	---	23.3	15.2	18.6	16.2	10.9	13.6	26.0	16.9	21.0
15	---	---	---	20.1	16.0	18.0	20.4	14.2	16.5	26.4	18.5	22.0
16	---	---	---	21.1	17.6	19.1	23.6	14.6	17.8	27.0	19.5	22.8
17	---	---	---	19.5	16.2	18.0	24.2	13.7	18.1	24.0	20.4	22.2
18	---	---	---	20.1	13.3	16.2	21.0	11.9	15.7	25.3	16.6	20.3
19	---	---	---	19.4	12.6	15.3	21.0	10.2	14.6	25.1	15.8	19.7
20	---	---	---	16.7	10.0	12.8	19.8	14.1	16.4	25.6	18.2	21.1
21	---	---	---	17.3	7.9	12.0	20.8	15.0	17.6	26.4	19.6	22.1
22	---	---	---	19.5	9.4	13.5	23.8	15.8	18.7	21.8	16.5	19.7
23	---	---	---	21.7	11.4	15.7	25.6	14.2	18.9	23.5	15.2	18.3
24	---	---	---	21.4	12.8	16.2	---	---	---	22.1	16.5	19.1
25	---	---	---	20.4	12.1	15.3	---	---	---	23.4	17.9	20.3
26	---	---	---	16.5	13.0	14.5	---	---	---	25.5	19.0	21.6
27	---	---	---	20.3	11.9	15.0	---	---	---	27.3	20.4	22.9
28	---	---	---	18.8	10.6	14.2	---	---	---	22.4	19.8	21.3
29	---	---	---	14.1	12.3	13.2	---	---	---	21.5	18.7	20.1
30	---	---	---	14.1	11.6	12.7	---	---	---	24.2	16.3	19.6
31	---	---	---	17.2	12.9	14.6	---	---	---	24.9	17.4	20.4
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

SANTEE RIVER BASIN

02146470 LITTLE HOPE CREEK AT SENECA PLACE AT CHARLOTTE, NC--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.7	18.3	21.3	28.4	22.2	24.1	---	---	---	25.7	22.1	23.9
2	22.9	19.8	21.0	26.3	20.7	23.1	---	---	---	26.1	22.0	24.0
3	25.2	19.7	21.9	26.1	18.2	22.1	---	---	---	26.7	23.6	24.9
4	27.8	19.8	22.8	27.2	19.4	23.0	---	---	---	25.3	23.0	24.1
5	24.8	18.3	21.2	28.3	20.8	24.1	---	---	---	25.6	21.0	23.1
6	25.5	17.8	21.2	27.7	22.0	24.6	---	---	---	26.1	22.4	24.1
7	27.6	19.7	23.0	27.8	22.1	24.9	---	---	---	26.7	23.6	24.9
8	28.3	21.5	24.5	28.2	23.3	25.3	---	---	---	26.7	24.4	25.4
9	29.3	21.5	24.5	29.4	22.8	25.6	---	---	---	26.0	24.4	25.2
10	26.6	21.0	23.8	30.0	23.5	26.1	---	---	---	27.7	23.3	25.2
11	27.0	19.6	22.8	29.2	23.4	26.0	---	---	---	25.9	23.8	24.7
12	26.6	18.9	22.0	28.1	23.1	25.2	---	---	---	26.9	23.1	24.8
13	26.2	17.5	21.7	27.6	22.7	24.7	---	---	---	25.8	23.6	24.6
14	28.0	19.8	23.5	---	---	---	---	---	---	25.3	23.0	24.0
15	26.1	22.0	23.7	---	---	---	---	---	---	25.9	22.7	23.9
16	25.8	22.1	23.6	---	---	---	---	---	---	23.6	19.7	21.7
17	26.4	20.6	23.4	---	---	---	---	---	---	22.4	18.7	20.5
18	28.8	20.7	24.3	---	---	---	---	---	---	20.0	16.3	18.5
19	29.3	22.5	25.3	---	---	---	---	---	---	20.8	16.4	18.6
20	27.0	20.7	23.8	---	---	---	---	---	---	23.7	19.6	21.2
21	29.8	21.2	24.9	---	---	---	---	---	---	23.4	21.1	22.1
22	27.6	23.0	25.1	---	---	---	---	---	---	23.9	20.7	22.0
23	28.5	22.4	24.9	---	---	---	25.5	22.7	24.2	21.7	17.5	19.6
24	26.9	19.8	23.2	---	---	---	25.9	22.8	24.4	18.5	14.7	16.4
25	27.0	19.6	23.0	---	---	---	27.0	23.3	24.8	17.4	13.5	15.5
26	26.9	20.1	23.4	---	---	---	27.7	23.5	25.2	19.6	14.6	16.7
27	26.6	20.6	23.5	---	---	---	28.3	23.5	26.1	20.5	16.3	18.2
28	26.0	20.1	23.1	---	---	---	28.2	23.3	25.5	20.3	16.7	18.5
29	27.3	20.7	23.8	---	---	---	27.2	23.5	25.4	20.2	17.6	18.9
30	28.1	21.1	24.3	---	---	---	27.7	23.0	25.2	19.9	17.8	18.9
31	---	---	---	---	---	---	25.7	22.7	24.2	---	---	---
MONTH	29.8	17.5	23.3	---	---	---	---	---	---	27.7	13.5	21.8

02146507 LITTLE SUGAR CREEK AT ARCHDALE DRIVE AT CHARLOTTE, NC

LOCATION.--Lat 35°08'52", long 80°51'29", Mecklenburg County, Hydrologic Unit 03050103, at downstream side of bridge on Secondary Road 3657 (Archdale Drive) in Charlotte, 0.7 mi downstream from Little Hope Creek, and 5.3 mi south of City Hall, Charlotte.

DRAINAGE AREA.--42.6 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 564.46 ft above National Geodetic Vertical Datum of 1929 (levels by City of Charlotte).

REMARKS.-- No estimated daily discharges. Records good. The city of Charlotte diverted a daily average of 107 ft^3/s for municipal water supply from Catawba River at Mountain Island Lake. A daily average of 21.2 ft^3/s of sewage effluent from Little Sugar Creek waste treatment plant was discharged into the stream 0.4 mi up-stream from gage. Since 1911 the creek channel has been dredged and improved periodically. The drainage area is urbanized and has an impervious area of about 20 percent. Minimum discharge for period of record also occurred Oct. 14, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 22, 1975 reached a stage of about 12.7 ft, from flood-marks, discharge, 7,360 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2030	31	37	269	47	51	299	58	47	51	31	27
2	483	32	35	58	51	96	210	121	50	37	31	27
3	80	33	34	50	47	786	61	102	50	28	26	27
4	50	30	34	49	60	91	52	57	44	26	28	28
5	43	30	35	51	46	65	49	76	41	25	26	28
6	40	33	36	332	45	59	47	41	40	28	333	28
7	38	33	37	74	43	53	87	55	43	27	59	29
8	36	83	555	424	42	47	46	39	39	38	33	67
9	34	67	183	83	57	56	44	48	38	40	35	48
10	34	36	83	62	1090	52	45	295	38	33	30	32
11	34	34	64	55	162	51	78	46	37	30	29	249
12	34	33	334	54	70	49	45	39	36	38	28	83
13	34	34	233	54	58	48	43	40	36	40	28	102
14	34	37	65	46	54	48	76	38	36	113	211	66
15	33	104	53	46	52	58	244	38	363	36	69	31
16	32	229	48	45	1560	52	57	37	61	30	36	29
17	37	41	44	45	189	367	49	50	36	44	93	28
18	109	36	44	45	78	84	45	37	36	33	31	26
19	284	34	50	43	598	54	44	35	36	56	29	26
20	43	34	47	43	92	61	44	37	34	38	29	26
21	34	34	43	836	67	48	45	43	34	31	31	25
22	32	137	42	74	196	48	46	61	33	30	38	41
23	33	312	40	57	105	48	44	40	36	29	37	28
24	33	47	43	73	70	46	43	36	32	29	31	25
25	32	41	44	282	58	45	42	36	31	31	30	24
26	32	40	47	136	56	61	42	35	32	32	31	24
27	32	44	46	62	55	57	42	170	32	28	32	24
28	31	41	44	56	53	45	122	1220	33	28	29	24
29	30	37	43	65	---	220	175	462	40	28	29	23
30	30	36	41	61	---	73	45	69	28	29	33	23
31	32	---	349	49	---	92	---	50	---	28	30	---
MEAN	126	59.8	91.4	119	182	97.1	77.0	113	49.1	35.9	50.5	42.3
MAX	2030	312	555	836	1560	786	299	1220	363	113	333	249
MIN	30	30	34	43	42	45	42	35	28	25	26	23
IN.	3.40	1.57	2.47	3.21	4.45	2.63	2.02	3.07	1.29	.97	1.37	1.11

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	56.3	69.8	71.4	101.7	120.2	116.1	74.0	76.2	69.0	55.6	61.7	63.5
MAX	125.6	197.2	164.0	207.3	193.8	214.7	126.5	119.3	150.6	95.7	144.3	146.6
(WY)	1990	1986	1984	1978	1979	1980	1979	1985	1982	1984	1985	1979
MIN	30.0	22.6	32.8	31.6	44.7	40.0	30.8	33.8	20.5	27.2	29.5	21.7
(WY)	1988	1982	1981	1981	1986	1985	1981	1986	1986	1986	1987	1986

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	86.4		77.7	
HIGHEST ANNUAL MEAN			105.8	1984
LOWEST ANNUAL MEAN			51.7	1981
HIGHEST DAILY MEAN	2030	Oct 1	2110	Aug 17 1985
LOWEST DAILY MEAN	23	Sep 29	15	Sep 20 1981
INSTANTANEOUS PEAK FLOW	6230	Oct 1	8100	Jul 7 1985
INSTANTANEOUS PEAK STAGE	11.26	Oct 1	12.61	Jul 7 1985
INSTANTANEOUS LOW FLOW	13	Aug 3	11*	Sep 24 1981
ANNUAL RUNOFF (INCHES)	27.5		24.8	
10 PERCENTILE	136		143	
50 PERCENTILE	44		36	
95 PERCENTILE	27		22	

* See REMARKS.

SANTEE RIVER BASIN

02146579 IRVINS CREEK AT LEBANON ROAD NEAR MINT HILL, NC

LOCATION.--Lat 35°09'58", long 80°41'23", Mecklenburg County, Hydrologic Unit 03050103, on left bank at upstream side of bridge on Lebanon Road (Secondary Road 3135), 2.5 mi west of Mint Hill and 3.9 mi upstream from mouth.

DRAINAGE AREA.--5.27 mi^2.

PERIOD OF RECORD.--December 1982 to September 1990 (discontinued).

REVISED RECORDS.--WDR NC 84-1: 1983. WDR NC 87-1: 1983-86 (P).

GAGE.--Water-stage recorder. Datum of gage is 646.88 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those below 10 ft^3/s, which are fair. The drainage area is urbanized and has an impervious area of about 10 percent. No flow occurred periodically in 1983 and 1986.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	257	1.2	1.3	22	3.7	2.5	20	3.0	3.1	1.5	.21	.21
2	107	1.3	1.2	4.3	3.8	7.7	30	4.1	2.5	.83	.21	.21
3	9.3	1.6	1.0	3.5	3.5	91	8.4	3.5	2.2	.70	.21	.21
4	4.3	1.4	1.0	3.3	4.1	12	6.1	3.4	2.1	.67	.22	.21
5	2.9	1.4	1.1	3.0	3.3	6.7	5.0	3.9	1.9	.65	.22	.22
6	2.3	1.6	1.5	25	3.1	4.9	4.3	2.3	1.8	.62	1.6	.22
7	2.1	1.7	1.8	8.3	3.5	3.8	6.9	2.4	1.7	.60	.27	.22
8	1.7	2.5	41	59	3.1	3.2	4.0	2.0	1.5	1.7	.48	.20
9	1.3	3.0	18	12	4.6	3.8	3.5	2.4	1.4	.96	.31	.20
10	1.2	2.2	11	6.6	100	3.2	3.5	18	1.4	.63	.23	.21
11	1.1	2.0	8.2	4.8	18	2.6	4.9	3.4	1.2	.61	.23	12
12	1.0	1.9	33	3.7	7.8	2.3	3.3	2.4	1.1	.56	.22	3.3
13	1.0	1.8	39	3.0	5.5	2.1	2.9	2.1	1.1	.77	.21	35
14	1.0	1.9	8.6	2.6	4.7	2.0	3.8	1.9	1.1	2.5	5.4	5.9
15	1.0	4.8	5.2	2.3	4.3	2.1	26	1.8	3.5	2.0	.44	.75
16	1.0	8.0	3.6	2.4	149	2.3	6.1	1.6	1.8	.94	.52	.37
17	1.3	2.0	3.1	2.4	23	13	4.2	2.4	1.2	.78	.47	.29
18	2.9	1.3	2.8	2.3	8.7	6.5	3.2	1.8	1.1	.64	.25	.29
19	7.5	1.1	2.8	1.9	70	2.8	3.1	1.5	1.0	.68	.23	.29
20	1.9	1.0	2.3	1.9	13	2.7	2.9	1.5	.99	.65	.22	.29
21	1.4	1.0	1.9	44	7.0	2.5	2.9	1.6	.98	14	.23	.30
22	1.2	3.6	1.5	7.4	15	2.3	2.7	3.0	.99	1.6	.27	.39
23	1.1	18	1.3	4.9	12	2.2	2.6	1.8	.94	.37	.25	.31
24	1.1	2.9	1.3	5.0	7.5	2.1	2.3	1.5	.88	.28	.25	.30
25	1.1	2.0	1.5	32	4.2	2.0	2.1	2.3	.87	.27	.24	.31
26	1.1	1.7	1.7	21	3.2	2.9	2.1	3.0	.84	.26	.24	.31
27	1.6	1.8	1.5	7.6	2.9	2.7	2.0	8.8	.83	.25	.24	.28
28	1.2	1.6	1.6	5.9	2.8	2.1	3.5	113	.99	.24	.22	.30
29	1.3	1.4	1.7	6.3	---	19	6.5	33	1.0	.23	.21	.31
30	1.3	1.6	1.7	5.4	---	8.4	3.0	5.7	.72	.23	.25	.34
31	1.3	---	9.9	4.2	---	12	---	3.9	---	.22	.21	---
MEAN	13.6	2.64	6.87	10.3	17.5	7.59	6.06	7.84	1.42	1.19	.48	2.12
MAX	257	18	41	59	149	91	30	113	3.5	14	5.4	35
MIN	1.0	1.0	1.0	1.9	2.8	2.0	2.0	1.5	.72	.22	.21	.20
IN.	2.98	.56	1.50	2.24	3.47	1.66	1.28	1.72	.30	.26	.10	.45

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	3.30	4.98	7.76	9.00	13.2	10.8	5.26	4.64	2.76	2.19	4.51	4.43
MAX	13.6	16.8	19.6	18.3	21.2	20.8	8.92	11.7	9.77	5.86	11.6	19.4
(WY)	1990	1986	1984	1984	1984	1983	1983	1989	1985	1984	1985	1987
MIN	.555	.847	2.15	3.34	3.68	2.31	1.70	1.16	.573	.531	.476	.223
(WY)	1984	1985	1989	1989	1986	1985	1986	1986	1986	1986	1990	1983

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	6.42		5.94	
HIGHEST ANNUAL MEAN			8.55	1984
LOWEST ANNUAL MEAN			4.26	1986
HIGHEST DAILY MEAN	257	Oct 1	302	Sep 7 1987
LOWEST DAILY MEAN	.20	Sep 8	0*	Aug 20 1983
INSTANTANEOUS PEAK FLOW	995	Oct 1	1350	Aug 19 1986
INSTANTANEOUS PEAK STAGE	8.01	Oct 1	8.53	Sep 7 1987
INSTANTANEOUS LOW FLOW	.17	Aug 13	0*	Aug 20 1983
ANNUAL RUNOFF (INCHES)	16.5		15.3	
10 PERCENTILE	11		9.3	
50 PERCENTILE	1.8		1.6	
95 PERCENTILE	.20		.26	

* See REMARKS.

02146579 IRVINS CREEK AT LEBANON ROAD NEAR MINT HILL, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1980, Water years 1983 to September 1990 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1982 to September 1990.
WATER TEMPERATURE: December 1982 to September 1990.

INSTRUMENTATION.--Water-quality monitor since Dec. 1982. Continuous water-quality monitor was removed Nov. 1990.

REMARKS.--Station operated as part of Charlotte-Mecklenburg County Water-Quality Study. Interruptions in the daily record are due to malfunctions of the monitor.

COOPERATION.--Chemical samples were collected by the U.S. Geological Survey. Laboratory analyses, other than organics, were performed by the Mecklenburg County Department of Environmental Health Laboratory.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 439 microsiemens, Mar. 15, 1989; minimum, <28 microsiemens July 29, 1984, June 7, July 1, 1985, Sept. 11, 1987 and Aug. 28, 1988.
WATER TEMPERATURE: Maximum, 33.5°C, Aug. 5, 1986; minimum, 0.0°C, Jan. 20, 1985, several days during December 1985, January 1986, Jan. 7, 1988, and Dec. 13, 18, 1989.

EXTREMES FOR CURRENT PERIOD.--
SPECIFIC CONDUCTANCE: Maximum, 203 microsiemens, Sept. 11; minimum, 40 microsiemens, Feb. 16.
WATER TEMPERATURE: Maximum, 32.5°C, July 22, minimum, 0.5°C, Dec. 23, 24.

SPECIFIC CONDUCTANCE, US/CM ‡ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	94	54	78	144	136	141	138	130	134	105	84	96
2	80	57	73	145	138	141	148	137	141	110	102	105
3	98	82	89	140	134	137	146	141	144	116	110	112
4	119	101	108	156	135	142	150	144	146	123	114	116
5	---	---	---	142	135	138	157	145	149	120	115	117
6	---	---	---	139	133	136	144	126	134	119	80	95
7	131	126	128	138	133	136	129	124	128	104	96	100
8	135	131	133	194	134	144	128	85	98	87	49	68
9	148	134	138	164	134	145	101	94	97	88	78	83
10	141	136	139	141	132	135	111	102	106	96	88	92
11	144	139	141	142	136	139	114	105	109	100	96	97
12	153	141	146	144	139	141	117	86	104	101	98	99
13	150	142	145	146	143	144	103	85	93	105	100	101
14	154	148	150	147	142	145	114	103	108	104	102	103
15	150	142	146	146	112	131	120	113	116	106	103	104
16	149	139	144	120	90	105	124	120	122	106	103	105
17	147	145	146	129	114	121	130	124	126	105	103	104
18	149	130	146	135	129	131	131	126	128	106	103	105
19	122	98	108	139	132	134	133	129	130	111	105	107
20	125	114	121	143	138	139	152	134	140	111	103	109
21	131	124	127	143	139	141	139	135	136	101	55	73
22	132	128	130	142	99	138	144	137	141	98	85	91
23	134	128	131	110	84	97	160	145	151	109	97	100
24	143	132	135	122	110	117	152	147	150	105	100	103
25	138	134	136	128	122	126	150	143	147	95	46	80
26	140	134	137	132	130	131	155	141	144	89	71	80
27	148	127	136	136	131	133	147	144	146	98	88	92
28	138	130	133	137	131	134	144	137	141	101	95	97
29	138	134	136	139	134	137	152	136	142	102	88	99
30	144	135	139	144	135	140	144	140	142	103	92	98
31	143	135	139	---	---	---	146	104	138	105	101	103
MONTH	---	---	---	194	84	134	160	85	130	123	46	98

SANTEE RIVER BASIN

02146579 IRVINS CREEK AT LEBANON ROAD NEAR MINT HILL, NC--Continued

SPECIFIC CONDUCTANCE, US/CM ‡ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	110	104	106	105	102	103	144	77	126	159	132	145
2	114	107	110	116	96	105	102	77	94	153	120	138
3	117	109	112	74	53	63	118	103	110	146	136	140
4	117	110	113	74	67	70	149	118	124	159	136	148
5	117	112	114	80	74	76	125	120	122	152	136	144
6	119	115	116	100	78	92	130	125	128	155	152	154
7	118	110	114	102	98	99	132	121	124	159	151	154
8	120	114	117	107	101	103	135	124	128	161	155	158
9	123	85	120	106	104	105	139	136	137	165	157	162
10	66	41	54	110	105	106	150	139	143	157	98	130
11	59	48	53	116	108	111	178	158	174	151	136	143
12	64	59	62	117	110	113	171	147	155	162	150	154
13	67	65	66	119	113	117	151	143	146	168	155	158
14	70	67	69	134	119	123	147	129	138	167	157	160
15	73	70	72	130	118	124	180	78	113	166	159	162
16	77	40	61	129	122	126	116	106	111	176	161	165
17	85	47	68	131	102	116	122	116	118	170	155	162
18	90	80	86	119	106	112	124	121	122	166	157	161
19	78	42	52	125	119	121	130	122	124	178	164	168
20	60	53	56	129	120	124	128	122	125	173	165	169
21	66	60	62	130	123	126	128	123	126	175	168	170
22	66	58	63	134	126	130	136	125	128	173	139	159
23	70	61	66	147	126	133	131	126	129	165	148	156
24	72	68	69	140	128	135	133	128	131	177	165	169
25	75	72	73	144	131	138	140	127	132	181	170	173
26	77	75	76	151	134	140	134	128	132	182	173	176
27	79	77	78	141	131	136	135	131	134	183	104	177
28	102	79	81	147	135	141	143	122	135	126	87	105
29	---	---	---	150	113	125	134	118	126	111	80	101
30	---	---	---	132	119	125	145	137	140	119	111	114
31	---	---	---	131	119	125	---	---	---	127	119	122
MONTH	123	40	82	151	53	115	180	77	129	183	80	152
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	132	125	127	163	127	151	167	143	156	190	163	176
2	137	131	134	148	131	141	167	152	160	196	160	175
3	142	137	139	160	144	151	166	147	156	192	161	174
4	145	139	142	167	143	154	168	142	156	192	165	178
5	148	140	143	172	153	162	172	152	161	198	166	182
6	163	139	145	169	150	159	178	83	147	190	162	176
7	149	139	145	173	146	161	137	106	126	194	167	182
8	151	138	145	176	108	159	143	131	138	200	176	189
9	162	141	149	164	126	147	139	104	119	197	177	187
10	152	140	146	159	151	156	145	133	139	195	177	186
11	150	139	143	174	158	166	154	132	144	203	50	160
12	159	139	145	181	169	174	168	137	154	107	74	93
13	147	135	141	178	160	172	176	155	164	115	53	93
14	144	133	140	160	106	140	176	62	149	76	73	75
15	154	97	130	143	99	121	127	96	110	81	71	74
16	133	106	119	160	140	151	138	119	128	86	77	80
17	141	132	135	161	141	151	144	115	126	96	85	88
18	150	135	140	169	157	162	153	130	140	100	89	94
19	143	137	140	162	157	160	166	138	149	99	87	93
20	144	135	139	163	154	159	173	151	161	100	88	95
21	154	126	140	174	41	144	168	145	159	104	97	100
22	146	138	142	128	109	119	160	153	156	107	94	100
23	146	141	144	140	124	130	166	156	161	106	97	103
24	153	137	144	155	136	144	167	148	159	112	106	109
25	145	131	139	154	144	149	167	150	161	133	104	108
26	141	133	137	153	137	146	175	152	165	114	104	107
27	152	133	142	163	140	151	177	151	165	110	105	106
28	158	128	149	165	139	151	182	156	170	140	107	112
29	155	137	146	171	140	155	188	160	173	147	109	124
30	168	150	157	176	152	164	180	162	171	119	108	111
31	---	---	---	177	147	161	185	157	171	---	---	---
MONTH	168	97	141	181	41	152	188	62	151	203	50	128

SANTEE RIVER BASIN

02146579 IRVINS CREEK AT LEBANON ROAD NEAR MINT HILL, NC--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.6	18.9	19.3	16.4	13.8	15.2	8.9	5.7	7.1	10.6	6.9	8.8
2	22.1	19.4	20.6	13.8	12.6	13.3	9.1	5.6	7.4	8.1	5.1	6.7
3	22.8	18.9	20.8	14.0	11.7	12.8	7.2	3.7	5.4	9.6	6.5	7.9
4	---	---	---	13.3	9.8	11.5	5.0	2.0	3.7	10.7	8.6	9.8
5	---	---	---	13.5	9.3	11.4	7.5	4.0	5.7	12.3	10.6	11.4
6	---	---	---	14.1	12.2	13.2	9.5	6.5	8.0	11.8	10.6	11.2
7	21.7	19.0	20.1	17.2	13.9	15.4	9.8	7.5	8.9	10.5	9.8	10.3
8	19.5	16.9	18.1	17.5	15.6	16.6	8.8	6.8	7.6	9.7	8.6	9.2
9	16.5	13.5	14.9	17.8	14.1	16.8	6.7	5.1	5.8	9.9	8.4	9.0
10	15.9	12.0	13.7	14.1	11.3	13.0	7.1	4.8	5.9	10.3	7.7	8.8
11	17.0	12.3	14.4	13.5	9.9	12.0	7.9	6.6	7.3	10.3	6.7	8.5
12	17.8	13.6	15.5	14.8	11.0	13.0	8.2	6.9	7.8	9.6	6.9	8.4
13	18.8	14.9	16.8	15.2	11.4	13.3	7.5	6.6	7.0	7.7	5.2	6.4
14	19.6	17.3	18.2	15.8	12.7	14.4	7.3	5.0	6.2	8.1	4.7	6.4
15	19.7	16.1	17.8	17.3	14.2	15.6	7.6	5.2	6.5	10.3	6.6	8.1
16	20.6	17.1	18.6	17.4	12.3	15.4	7.1	3.9	5.2	11.9	7.8	9.6
17	21.1	18.8	19.8	11.9	9.3	10.3	4.8	3.1	4.0	12.4	7.9	10.1
18	21.0	20.1	20.5	10.1	7.6	8.9	6.2	4.0	5.0	13.9	10.1	11.9
19	20.3	16.6	18.7	9.4	7.3	8.3	5.1	4.6	4.8	12.4	11.4	11.8
20	16.1	12.1	13.8	11.2	7.1	9.1	5.3	3.4	4.4	12.7	10.7	11.7
21	13.3	10.0	11.6	11.2	9.2	10.3	5.4	2.1	3.7	13.2	11.0	12.2
22	14.2	10.4	12.1	9.0	7.4	8.3	3.4	.7	1.6	11.7	8.6	10.1
23	14.0	10.6	12.4	9.5	7.1	8.5	1.3	.5	.8	11.7	7.6	9.6
24	14.5	11.4	12.9	7.4	5.4	6.5	1.9	.5	.9	11.3	10.1	10.6
25	14.2	10.9	12.5	7.8	4.1	6.0	2.2	.7	1.4	13.8	10.9	11.9
26	14.2	10.8	12.5	11.4	7.3	9.3	2.9	1.0	2.0	11.6	8.0	10.1
27	14.8	11.0	12.9	11.7	10.0	10.9	3.5	1.1	2.3	10.1	6.8	8.3
28	15.1	12.1	13.5	14.3	10.8	12.7	5.4	2.0	3.7	11.1	6.5	8.6
29	16.0	12.4	14.2	12.4	7.7	10.5	6.9	3.1	5.2	12.9	9.4	11.0
30	17.3	13.8	15.6	8.7	6.0	7.2	9.6	6.8	8.0	11.2	7.6	9.7
31	18.1	15.8	16.8	---	---	---	12.0	7.9	9.8	11.9	7.6	9.6
MONTH	---	---	---	17.8	4.1	11.7	12.0	.5	5.3	13.9	4.7	9.6
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.6	7.0	9.1	12.5	8.8	10.4	20.1	12.0	14.8	23.6	18.8	20.7
2	13.5	8.9	11.2	10.5	8.9	9.8	18.8	13.9	16.1	24.2	19.1	21.3
3	16.1	11.3	13.2	11.4	9.9	10.4	16.9	12.3	14.6	21.2	20.0	20.6
4	16.2	12.0	14.1	12.6	8.1	10.0	16.9	10.2	12.9	22.0	19.2	20.5
5	11.9	8.3	10.1	13.3	8.4	10.5	18.3	10.6	14.0	22.9	19.4	21.2
6	11.0	6.4	8.7	14.6	8.4	11.1	17.9	13.2	15.3	19.1	16.0	17.6
7	13.4	9.7	11.3	11.8	9.1	10.4	17.6	12.5	14.7	20.8	14.2	17.0
8	13.2	8.1	10.5	9.5	7.8	8.6	17.1	10.3	13.2	21.0	14.4	17.3
9	12.9	9.2	11.1	10.5	8.3	9.4	17.4	10.0	13.2	18.3	17.0	17.7
10	13.4	11.8	12.9	16.7	10.0	12.7	16.5	12.4	14.3	22.4	17.7	19.9
11	13.2	9.6	11.2	18.5	11.6	14.8	17.6	13.7	15.8	20.7	14.9	17.5
12	12.2	8.3	9.9	19.7	13.2	16.0	17.1	10.7	13.4	21.7	15.4	18.0
13	12.1	7.6	9.8	20.4	13.6	16.6	17.2	10.4	13.3	20.4	17.3	18.7
14	14.4	9.2	11.6	19.8	14.1	16.8	15.2	11.7	13.5	23.3	16.8	19.4
15	16.6	11.6	13.6	19.2	15.1	17.1	20.2	14.5	16.8	23.4	17.6	20.2
16	15.1	13.6	14.4	20.1	17.1	18.3	21.1	15.3	17.7	24.2	18.7	21.1
17	15.0	11.7	13.5	19.0	17.4	17.9	22.2	14.0	17.6	22.8	19.7	21.1
18	11.5	9.2	10.1	19.6	14.4	16.6	19.2	12.5	15.6	22.4	16.9	19.1
19	11.8	8.8	10.3	18.1	12.6	15.0	18.7	10.7	14.0	21.9	15.7	18.5
20	12.7	9.2	10.7	15.3	9.6	12.4	18.7	13.6	15.7	23.3	17.7	19.9
21	11.9	7.0	9.5	16.3	7.3	11.0	19.9	15.1	17.2	23.4	19.1	20.9
22	13.4	9.7	11.4	17.3	8.7	12.3	21.2	15.4	17.8	20.6	16.7	18.9
23	13.4	11.5	12.5	19.5	10.8	14.4	22.3	14.0	17.6	19.7	14.9	16.9
24	11.9	8.0	9.9	19.0	11.9	14.7	23.2	15.3	18.6	19.9	16.2	17.8
25	9.8	5.8	7.3	17.8	11.5	14.1	23.6	16.7	19.5	21.0	17.2	18.9
26	8.5	3.7	5.9	14.8	12.2	13.4	23.9	17.1	19.9	23.4	18.2	20.4
27	10.4	5.0	7.2	17.8	11.6	13.9	24.2	17.5	20.3	23.9	20.0	21.6
28	11.8	6.9	9.3	16.7	10.1	12.9	20.1	17.6	18.7	22.9	20.1	21.8
29	---	---	---	13.4	12.2	12.8	21.4	17.9	19.5	21.3	19.3	20.6
30	---	---	---	13.0	11.5	12.2	22.6	17.4	19.6	22.6	17.1	19.4
31	---	---	---	15.9	12.0	13.5	---	---	---	22.7	17.2	19.5
MONTH	16.6	3.7	10.7	20.4	7.3	13.2	24.2	10.0	16.2	24.2	14.2	19.5

SANTEE RIVER BASIN

02146579 IRVINS CREEK AT LEBANON ROAD NEAR MINT HILL, NC--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	23.9	17.8	20.3	30.1	23.8	25.6	29.1	24.0	26.1	26.4	21.7	23.9
2	22.3	19.4	20.5	28.4	22.2	24.7	28.2	23.7	25.5	26.6	20.9	24.0
3	24.1	19.2	21.2	29.1	20.3	24.0	28.6	22.8	25.2	27.2	23.1	24.9
4	25.0	19.7	21.8	29.8	21.5	24.9	29.1	23.0	25.6	25.4	22.8	24.0
5	23.7	18.0	20.5	29.6	22.7	25.7	27.9	23.9	25.9	25.7	20.5	22.9
6	24.8	17.5	20.6	30.3	23.6	26.4	27.3	24.1	25.3	27.1	21.7	24.1
7	26.6	19.5	22.4	30.6	23.8	26.7	27.3	22.8	24.8	27.7	22.9	24.9
8	27.8	21.2	23.8	30.6	24.9	26.8	26.7	23.0	24.6	27.7	23.5	25.3
9	27.6	21.6	23.7	31.4	24.5	27.3	27.2	23.2	24.6	26.5	24.3	25.3
10	25.9	21.2	23.3	31.4	25.3	27.7	26.6	21.8	23.9	27.5	23.0	24.9
11	25.4	19.5	22.2	31.5	25.2	27.8	28.1	21.7	24.4	26.6	23.5	24.7
12	25.2	18.6	21.4	28.9	25.1	26.8	27.8	21.8	24.4	29.2	23.3	26.1
13	25.1	17.5	20.8	29.3	24.6	26.3	28.7	23.5	25.6	26.3	23.6	24.9
14	26.6	19.5	22.6	28.5	24.6	25.9	26.8	23.7	24.9	25.7	23.8	24.8
15	24.8	21.8	23.1	30.1	24.8	26.5	29.5	23.3	25.5	26.5	22.8	24.2
16	26.1	21.9	23.5	30.1	23.7	26.1	28.4	23.4	25.4	24.2	21.0	22.3
17	26.3	20.7	23.1	29.0	24.3	26.2	27.2	23.9	25.1	22.8	19.2	20.7
18	27.9	20.8	23.8	27.2	24.3	25.6	29.2	22.6	25.3	20.9	16.0	18.4
19	28.8	22.5	24.9	26.2	23.6	24.9	29.6	23.2	25.9	21.3	17.3	19.3
20	26.2	21.1	23.6	27.4	23.7	25.4	29.2	24.1	26.3	23.7	17.5	21.2
21	28.3	21.6	24.5	30.6	24.1	26.1	28.7	24.6	26.0	23.2	20.4	22.0
22	27.1	23.2	24.9	32.5	26.2	28.5	26.6	23.6	25.1	23.9	20.3	22.0
23	28.3	23.0	24.9	31.5	25.1	27.7	26.7	23.6	25.0	21.0	17.4	19.0
24	26.5	20.6	23.3	30.1	24.8	26.9	27.1	23.5	25.1	17.7	13.7	15.9
25	26.9	20.3	23.1	25.6	23.6	24.3	28.6	23.8	25.8	17.9	12.3	15.0
26	26.3	20.8	23.3	28.0	21.8	24.4	28.2	24.0	25.8	18.4	13.2	15.6
27	27.0	21.3	23.8	28.1	21.4	24.4	29.1	23.5	25.8	19.3	14.2	16.9
28	29.1	21.6	24.6	29.5	23.6	25.7	29.4	23.3	25.9	20.0	15.8	17.9
29	29.6	22.3	25.2	29.7	22.6	25.5	27.7	23.3	25.5	20.5	14.1	17.7
30	30.0	22.6	25.8	29.1	24.0	26.0	27.3	12.5	24.4	20.3	16.7	18.4
31	---	---	---	29.8	23.5	26.1	26.6	22.8	24.6	---	---	---
MONTH	30.0	17.5	23.0	32.5	20.3	26.0	29.6	12.5	25.3	29.2	12.3	21.7

02146600 McALPINE CREEK AT SARDIS ROAD NEAR CHARLOTTE, NC

LOCATION.--Lat 35°08'14", long 80°46'05", Mecklenburg County, Hydrologic Unit 03050103, near left bank on downstream end of bridge pier at Sardis Road (Secondary Road 3356), 1.7 mi downstream from Irvins Creek, and 7 mi southeast of City Hall, Charlotte.

DRAINAGE AREA.--39.6 mi^2.

PERIOD OF RECORD.--April 1962 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 553.39 ft above National Geodetic Vertical Datum of 1929 (levels by City of Charlotte).

REMARKS.--No estimated daily discharges. Records good. Occasional minor fluctuation and regulation of unknown origin. Creek channel improved by dredging in 1917 and maintained by the Mecklenburg County Drainage Commission to present time. This drainage basin is mostly within the city of Charlotte, is urbanized, and has an impervious area of about 15 percent; expected development by 1995, is about 22 percent. Minimum discharge for period of record, no flow for part of Nov. 15, 1972, was result of upstream construction; minimum discharge not affected by construction, 0.17 ft^3/s July 19, 1986. Minimum discharge for current water year also occurred Sept. 7.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 6, 1962 reached a stage of about 14.0 ft from floodmarks, discharge, 4,150 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1600	9.6	12	210	22	20	130	16	16	24	2.1	2.4
2	1020	9.7	12	36	22	40	300	38	16	16	2.7	2.4
3	61	11	11	26	21	745	49	32	16	5.6	2.1	2.5
4	29	9.3	11	24	28	75	31	20	16	4.8	2.0	2.1
5	20	9.2	11	23	24	40	25	37	14	4.3	1.7	1.8
6	16	9.4	11	198	18	32	24	15	13	3.8	94	1.7
7	14	10	12	55	19	27	45	19	13	3.6	20	1.7
8	13	12	338	399	18	24	23	12	13	14	5.1	1.7
9	12	20	166	77	24	28	20	14	12	23	10	2.8
10	11	10	74	43	738	25	19	152	12	8.5	3.9	2.7
11	11	9.2	52	30	138	23	34	25	11	8.1	3.1	12
12	10	9.3	214	26	45	22	20	15	10	4.3	2.6	31
13	11	9.4	271	22	30	21	17	13	9.8	6.4	2.2	113
14	10	9.8	54	20	26	20	45	12	9.4	35	113	58
15	10	43	33	20	23	20	230	11	45	21	45	9.5
16	10	83	25	18	1060	23	43	10	27	5.8	9.9	6.2
17	10	19	21	18	192	119	28	20	15	8.5	42	4.4
18	18	13	19	18	51	54	22	12	12	5.3	8.9	3.8
19	138	11	21	18	526	26	18	9.3	8.6	7.1	6.5	3.9
20	21	11	22	17	79	24	17	9.3	6.8	6.0	5.4	3.5
21	14	11	17	442	41	20	17	9.3	6.6	40	4.7	3.3
22	13	24	16	53	101	19	16	40	6.4	24	9.4	6.5
23	11	169	14	32	75	18	16	15	6.3	6.1	5.5	4.9
24	11	24	13	30	43	17	15	9.9	5.7	4.6	5.0	2.9
25	10	17	14	211	28	16	14	9.5	5.4	3.8	4.1	3.3
26	10	14	15	162	23	21	13	9.0	5.5	4.5	7.1	2.8
27	10	15	15	47	22	27	13	63	5.7	3.2	6.4	2.6
28	10	15	15	34	21	17	25	681	6.8	2.8	3.9	4.5
29	10	13	15	36	---	133	70	352	13	2.5	3.2	4.4
30	9.8	12	16	39	---	53	19	33	5.5	2.3	7.1	3.3
31	9.9	---	85	25	---	98	---	18	---	2.2	3.4	---
MEAN	102	21.4	52.4	77.7	123	59.6	45.3	55.8	12.1	10.0	14.3	10.2
MAX	1600	169	338	442	1060	745	300	681	45	40	113	113
MIN	9.8	9.2	11	17	18	16	13	9.0	5.4	2.2	1.7	1.7
IN.	2.97	.60	1.53	2.26	3.25	1.74	1.28	1.63	.34	.29	.42	.29

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	27.2	26.3	41.5	64.3	77.4	83.7	44.8	34.1	28.4	24.1	24.4	24.1
MAX	145.5	109.2	128.1	156.7	168.8	200.1	120.3	173.1	103.4	66.5	102.9	162.1
(WY)	1972	1986	1984	1978	1979	1977	1962	1975	1982	1965	1967	1987
MIN	3.16	4.65	7.55	7.46	16.9	13.6	7.45	8.04	3.60	4.04	3.42	1.46
(WY)	1963	1982	1966	1981	1968	1985	1967	1968	1986	1977	1968	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	48.4		41.5	
HIGHEST ANNUAL MEAN			72.4	1975
LOWEST ANNUAL MEAN			19.6	1970
HIGHEST DAILY MEAN	1600	Oct 1	2550	Oct 9 1976
LOWEST DAILY MEAN	1.7	Aug 5	.26	Jul 19 1986
INSTANTANEOUS PEAK FLOW	3890	Oct 1	6690	Mar 24 1979
INSTANTANEOUS PEAK STAGE	13.67	Oct 1	16.7	Mar 24 1979
INSTANTANEOUS LOW FLOW	1.4*	Aug 6	.17*	Jul 19 1986
ANNUAL RUNOFF (INCHES)	16.6		14.2	
10 PERCENTILE	79		72	
50 PERCENTILE	16		13	
95 PERCENTILE	2.5		2.4	

* See REMARKS.

SANTEE RIVER BASIN

02146700 McMULLEN CREEK AT SHARON VIEW ROAD NEAR CHARLOTTE, NC

LOCATION.--Lat 35°08'27", long 80°49'13", Mecklenburg County, Hydrologic Unit 03050103, on left bank downstream of culvert wingwall at Sharon View Road (Secondary Road 3673), 3.3 mi south of Queens College, Charlotte, and 6.9 mi upstream from mouth.

DRAINAGE AREA.--6.95 mi^2.

PERIOD OF RECORD.--April 1962 to current year.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 592.91 ft above National Geodetic Vertical Datum of 1929 (levels by City of Charlotte). Prior to Oct. 13, 1970, at site 73 ft upstream at same datum. Oct. 13, 1970 to Dec. 30, 1971, at site 154 ft downstream at datum 2.00 ft lower.

REMARKS.--No estimated daily discharges. Records good. Creek channel improved by dredging in 1928. The drainage area is in the eastern part of the city and has an impervious area of about 15 percent. No flow occurred periodically from 1962 to 1973. Minimum discharge for current water year also occurred Sept. 28-30.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 6, 1962 reached a stage of 7.5 ft, former site and datum, from floodmarks, discharge, 1,040 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	353	.94	1.2	30	2.3	2.5	17	3.9	1.4	5.3	.13	.25
2	67	.98	1.2	4.3	2.3	18	23	7.1	1.3	1.7	1.2	.17
3	6.5	1.4	1.2	3.2	2.3	147	4.9	5.7	1.4	.52	.28	.16
4	3.0	.88	1.2	3.0	4.7	9.1	3.2	6.4	1.3	.43	.22	.12
5	1.8	.85	1.2	3.3	2.3	4.8	2.8	5.9	1.1	.32	.15	.10
6	1.6	1.1	1.2	50	1.8	4.4	2.3	1.5	.95	.32	54	.11
7	1.4	1.3	1.6	9.1	1.8	3.2	8.6	3.7	.95	.30	2.5	.12
8	1.3	3.5	83	78	1.8	2.7	2.0	1.3	.96	4.9	.54	3.6
9	1.2	3.6	28	9.5	7.9	4.6	1.8	2.5	.86	1.9	.79	1.2
10	1.2	1.0	9.9	4.9	151	2.9	2.2	30	.81	14	.68	.33
11	1.2	.81	5.7	3.9	19	2.6	6.6	1.8	.75	2.1	.51	.17
12	1.6	.81	54	3.1	6.0	2.4	2.1	1.4	.66	.50	.27	.34
13	1.7	.82	33	2.5	3.9	2.6	1.7	1.3	.59	3.8	.22	8.3
14	1.3	1.4	5.8	2.2	3.2	2.2	8.6	1.3	.64	11	53	2.5
15	1.0	11	3.6	2.1	2.9	2.8	29	1.4	19	1.4	4.3	.38
16	.87	22	2.7	2.1	243	2.3	3.0	1.2	2.8	.63	.90	.20
17	1.2	1.5	2.3	2.1	18	36	2.1	6.5	1.1	.49	1.3	.19
18	8.2	1.2	2.0	2.1	7.2	6.4	1.7	1.5	.86	.56	.56	.10
19	28	1.2	3.1	2.0	96	3.0	1.6	1.1	.78	.74	.39	.11
20	2.0	1.2	2.4	2.1	9.5	3.5	1.6	1.3	.69	.59	.40	.13
21	1.3	1.1	1.8	152	4.9	2.2	1.6	2.3	.63	.58	.51	.13
22	1.2	12	1.6	7.1	34	2.1	1.6	6.8	.59	.83	1.3	.73
23	1.0	30	1.4	3.9	13	2.0	1.4	1.4	.54	.70	.94	.32
24	1.1	2.0	1.4	7.0	5.9	1.9	1.7	1.0	.51	.27	.51	.13
25	1.1	1.5	1.5	31	3.6	1.8	1.5	1.0	.46	.21	.34	.10
26	.91	1.4	1.7	20	3.0	5.4	1.5	1.0	.48	.22	.80	.14
27	.91	2.1	1.6	4.8	2.9	3.3	1.4	64	.59	.19	.47	.13
28	.85	1.7	1.6	3.6	2.7	1.9	14	135	.46	.15	.36	.08
29	.84	1.5	1.4	4.6	---	33	12	25	.65	.19	.29	.15
30	.90	1.2	1.5	3.8	---	6.0	2.0	2.8	.46	.21	2.3	.11
31	.93	---	42	2.6	---	14	---	1.7	---	.14	1.4	---
MEAN	16.0	3.73	9.74	14.8	23.5	10.9	5.48	10.6	1.48	1.78	4.24	.69
MAX	353	30	83	152	243	147	29	135	19	14	54	8.3
MIN	.84	.81	1.2	2.0	1.8	1.8	1.4	1.0	.46	.14	.13	.08
IN.	2.66	.60	1.62	2.46	3.52	1.80	.88	1.76	.24	.30	.70	.11

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	5.10	5.32	8.26	12.0	13.9	15.1	6.96	6.86	5.85	5.62	4.37	5.51
MAX	25.6	21.3	24.3	33.5	28.1	38.8	19.0	31.3	24.8	14.4	21.0	23.8
(WY)	1972	1986	1977	1978	1979	1977	1962	1975	1973	1971	1985	1987
MIN	.213	.542	.861	1.02	1.77	1.74	1.13	1.08	.747	.606	.243	.084
(WY)	1964	1970	1966	1981	1968	1985	1981	1962	1966	1963	1968	1970

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	8.52		7.89	
HIGHEST ANNUAL MEAN			13.8	1975
LOWEST ANNUAL MEAN			3.19	1970
HIGHEST DAILY MEAN	353	Oct 1	463	Aug 17 1985
LOWEST DAILY MEAN	.08	Sep 28	0*	Aug 31 1962
INSTANTANEOUS PEAK FLOW	1320	Oct 1	3150	Jun 10 1982
INSTANTANEOUS PEAK STAGE	9.04	Oct 1	10.89	Jun 10 1982
INSTANTANEOUS LOW FLOW	.07*	Sep 27	0*	Aug 31 1962
ANNUAL RUNOFF (INCHES)	16.6		15.4	
10 PERCENTILE	16		15	
50 PERCENTILE	1.5		1.2	
95 PERCENTILE	0.1		0.1	

* See REMARKS

02146750 McALPINE CREEK BELOW McMULLEN CREEK NEAR PINEVILLE, NC

LOCATION.--Lat 35°03'59", long 80°52'12", Mecklenburg County, Hydrologic Unit, 03050103, on right bank at McAlpine Creek Wastewater Treatment Plant of Charlotte, 150 ft downstream from McMullen Creek, 735 ft upstream from effluent outfall, and 2.1 mi south of Pineville.

DRAINAGE AREA.--92.4 mi^2.

PERIOD OF RECORD.--April 1974 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 516.38 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1977 at datum 1.00 ft higher.

REMARKS.--Records fair except estimated daily discharges, which are poor. Records for periods of heavy overbank flow may be affected by variable backwater not adequately defined. The drainage area includes the eastern side of the city of Charlotte and has an impervious area of about 12 percent.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1964, about 12.9 ft (former datum), Apr. 1, 1973, from information by wastewater treatment plant operator.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2060	e23	30	688	52	61	162	34	41	9.3	6.8	6.3
2	4890	e23	28	243	47	65	874	52	31	31	6.7	3.6
3	e700	e24	25	72	47	1480	327	60	28	18	8.4	3.4
4	e100	e22	23	54	55	686	93	43	28	10	7.6	3.1
5	e50	e22	23	53	79	203	64	68	25	9.9	6.7	3.2
6	e40	e23	24	421	50	112	52	41	24	8.7	23	3.0
7	e35	e30	25	448	42	79	84	30	22	7.5	122	5.0
8	e30	e35	636	897	39	68	58	27	22	23	26	8.0
9	e29	e25	963	681	40	67	43	26	20	113	19	20
10	e28	e22	551	210	1330	71	39	317	18	36	16	5.3
11	e27	e22	283	102	980	58	61	171	18	33	9.5	5.1
12	e27	e21	288	69	325	53	46	38	17	14	6.7	21
13	e24	e21	1110	52	126	51	37	27	16	11	6.5	43
14	e26	e25	555	42	85	49	39	25	16	56	11	640
15	e25	66	178	41	69	47	558	23	77	53	182	98
16	e25	344	92	39	762	50	285	23	143	23	49	19
17	e26	96	61	36	1870	199	66	30	35	19	42	12
18	e50	36	50	35	404	387	48	32	22	17	23	8.1
19	e500	27	48	34	1200	83	38	22	18	19	12	7.0
20	e60	26	53	32	743	59	34	19	16	32	9.5	6.7
21	e35	27	43	844	249	49	33	18	15	38	9.6	6.5
22	e32	30	38	505	248	42	31	24	14	141	14	7.4
23	e30	601	35	118	471	39	30	29	13	32	14	8.9
24	e27	230	31	70	210	37	30	22	12	17	10	7.1
25	e26	57	29	214	104	35	29	19	12	13	8.7	5.8
26	e25	40	31	761	75	36	28	18	12	11	28	5.1
27	e24	37	33	290	69	55	27	24	12	11	37	5.1
28	e23	41	30	102	64	43	30	999	12	8.8	13	4.4
29	e23	35	30	74	---	226	158	1520	14	7.7	8.3	5.2
30	e23	31	29	98	---	333	48	301	13	8.6	9.2	4.8
31	e23	---	51	68	---	251	---	62	---	7.6	11	---
MEAN	292	68.7	175	238	351	164	115	134	25.5	27.1	24.4	32.7
MAX	4890	601	1110	897	1870	1480	874	1520	143	141	182	640
MIN	23	21	23	32	39	35	27	18	12	7.5	6.5	3.0
IN.	3.64	.83	2.18	2.98	3.96	2.04	1.39	1.67	.31	.34	.30	.39

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	79.0	108.8	152.0	246.1	248.5	276.0	116.2	111.4	66.9	81.3	76.4	99.1
MAX	320.8	414.4	497.3	549.8	506.4	544.0	301.6	397.4	208.5	354.6	406.9	510.4
(WY)	1977	1986	1984	1978	1984	1980	1979	1975	1982	1984	1985	1987
MIN	6.82	11.5	24.0	18.6	39.0	35.8	21.9	18.2	7.43	7.07	8.66	5.03
(WY)	1979	1982	1981	1981	1978	1981	1981	1981	1986	1977	1977	1983

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	136.4		138.6	
HIGHEST ANNUAL MEAN			235.5	1984
LOWEST ANNUAL MEAN			70.6	1976
HIGHEST DAILY MEAN	4890*	Oct 2	5340*	Jan 11 1984
LOWEST DAILY MEAN	3.0	Sep 6	.46	Sep 30 1983
INSTANTANEOUS PEAK FLOW	6340*	Oct 2	7340*	Dec 6 1983
INSTANTANEOUS PEAK STAGE	14.92*	Oct 2	14.92*	Oct 2 1989
INSTANTANEOUS LOW FLOW	1.6	Sep 8	.45	Sep 30 1983
ANNUAL RUNOFF (INCHES)	20.0		20.4	
10 PERCENTILE	330		274	
50 PERCENTILE	34		33	
95 PERCENTILE	6.7		4.9	

* See REMARKS

SANTEE RIVER BASIN

02146900 TWELVE MILE CREEK NEAR WAXHAW, NC

LOCATION.--Lat 34°57'08", long 80°45'21", Union County, Hydrologic Unit 03050103, on left bank 90 ft upstream from bridge on State Highway 16, 680 ft downstream from West Fork Twelve Mile Creek, and 2.5 mi north of Waxhaw.

DRAINAGE AREA.--76.5 mi^2.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1949-60. October 1960 to current year.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 489.04 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 13, 1962, water-stage recorder at site 70 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records fair. No flow also occurred Oct. 6, 1968, Oct. 7-15, 1970, and Oct. 1-22, 1983.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1900, 23.6 ft Sept. 7, 1949, from floodmarks. No flow observed on Oct. 6, 1954.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1740	18	23	88	63	64	175	30	34	5.2	2.3	1.3
2	5180	18	22	65	58	61	561	27	28	5.9	2.0	1.3
3	1230	20	22	40	65	774	213	25	25	5.9	1.8	1.1
4	237	19	21	37	70	319	94	25	23	5.3	1.7	.91
5	119	18	20	37	177	131	64	29	19	5.0	1.7	1.1
6	73	17	20	199	66	91	54	27	17	4.5	1.9	1.9
7	57	18	20	222	54	73	62	22	16	4.0	3.4	1.8
8	48	19	516	853	49	61	53	20	14	16	3.2	1.7
9	45	28	751	496	49	61	43	19	13	15	21	1.7
10	34	31	423	174	1570	63	41	163	12	7.4	10	1.8
11	31	21	298	88	929	56	49	73	12	5.5	4.9	2.0
12	29	18	241	65	239	52	43	31	11	5.1	3.7	3.0
13	27	17	1090	50	124	48	37	24	9.7	7.0	2.7	67
14	26	17	347	43	88	46	35	22	9.6	23	2.1	629
15	25	23	146	40	72	44	338	19	13	12	7.0	28
16	24	117	94	39	600	50	182	18	27	7.4	8.8	12
17	23	75	65	37	1450	129	65	43	20	6.2	6.1	7.1
18	23	30	55	37	267	320	46	58	13	5.5	4.3	5.7
19	50	24	52	36	1530	87	38	21	11	6.2	3.4	5.0
20	51	22	52	35	715	59	36	17	9.3	7.0	2.7	4.4
21	27	22	47	77	211	48	35	16	8.2	11	6.1	4.2
22	23	20	41	79	237	44	34	17	7.8	16	41	4.5
23	21	214	36	44	573	41	32	17	8.2	9.2	7.9	4.6
24	20	113	35	39	228	40	31	15	7.4	6.3	5.0	3.9
25	20	43	32	98	119	38	28	14	6.9	5.1	4.0	3.5
26	19	34	33	564	83	37	27	13	6.5	4.5	3.3	3.4
27	19	31	33	170	77	51	26	18	6.2	3.9	2.9	3.3
28	18	30	33	88	69	44	25	634	6.1	3.4	2.7	3.1
29	18	28	33	79	---	172	51	1120	5.8	3.1	2.1	3.0
30	18	25	34	210	---	238	36	138	5.5	2.8	1.8	2.2
31	18	---	37	98	---	330	---	49	---	2.6	1.5	---
MEAN	300	37.7	151	136	351	118	85.1	89.2	13.5	7.32	5.58	27.1
MAX	5180	214	1090	853	1570	774	561	1120	34	23	41	629
MIN	18	17	20	35	49	37	25	13	5.5	2.6	1.5	.91
IN.	4.52	.55	2.27	2.06	4.78	1.79	1.24	1.34	.20	.11	.08	.40

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	45.9	32.4	68.8	126.7	168.4	165.3	88.4	47.8	33.3	40.1	37.7	33.1
MAX	336.4	160.5	261.2	330.8	351.1	424.8	289.3	178.4	106.1	237.7	248.6	161.0
(WY)	1965	1986	1984	1978	1990	1980	1973	1989	1976	1978	1981	1987
MIN	.393	2.18	5.97	11.5	22.7	25.8	14.2	6.19	1.26	2.33	.934	.146
(WY)	1984	1962	1966	1981	1986	1985	1981	1981	1986	1986	1983	1968

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	108.9		73.5	
HIGHEST ANNUAL MEAN			124.6	1984
LOWEST ANNUAL MEAN			25.4	1970
HIGHEST DAILY MEAN	5180	Oct 2	5180	Oct 2 1989
LOWEST DAILY MEAN	.91	Sep 4	0*	Oct 6 1968
INSTANTANEOUS PEAK FLOW	7100	Oct 2	7700	Apr 1 1973
INSTANTANEOUS PEAK STAGE	20.92	Oct 2	20.92	Oct 2 1989
INSTANTANEOUS LOW FLOW	.65	Sep 5	0*	Oct 5 1968
ANNUAL RUNOFF (INCHES)	19.3		13.1	
10 PERCENTILE	219		137	
50 PERCENTILE	28		19	
95 PERCENTILE	1.8		1.1	

* See REMARKS.

02149000 COVE CREEK NEAR LAKE LURE, NC

LOCATION.--Lat 35°25'24", long 82°06'42", Rutherford County, Hydrologic Unit 03050105, on left bank 40 ft upstream from bridge on U.S. Highways 64 and 74, 1.0 mi upstream from mouth, and 5 mi east of town of Lake Lure.

DRAINAGE AREA.--79.0 mi^2.

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.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 815.4 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 20, 1954, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Minimum discharge for period of record occurred several days in Sept. and Oct. 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1916 reached a stage of about 23 ft, from records of North Carolina State Highway Commission.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1110	112	109	156	147	211	253	168	124	74	68	199
2	801	105	105	128	143	228	259	171	124	74	81	145
3	379	104	103	121	139	429	236	166	126	70	70	125
4	250	101	100	132	301	330	225	167	121	69	69	113
5	199	101	101	133	228	266	217	163	115	68	66	105
6	172	123	99	176	185	239	212	152	113	66	70	99
7	154	121	98	165	168	221	207	150	110	66	70	93
8	141	112	240	232	152	211	198	146	108	65	136	88
9	132	109	227	210	147	210	194	163	235	75	89	109
10	125	103	178	174	754	201	198	343	137	71	75	122
11	120	101	164	154	384	194	227	210	121	72	79	130
12	115	100	364	144	251	188	195	179	112	71	68	197
13	110	99	385	133	208	183	189	168	108	94	65	149
14	106	97	242	128	187	179	187	158	106	193	66	186
15	103	112	195	124	173	176	188	150	104	116	75	134
16	102	547	168	121	1020	820	182	146	107	89	72	111
17	157	202	151	119	622	2110	179	152	107	79	64	99
18	163	152	143	119	361	721	172	143	101	77	62	91
19	349	133	138	115	482	473	168	138	97	100	62	89
20	182	125	132	116	357	381	170	141	93	92	60	89
21	151	116	127	179	286	331	172	139	92	85	87	85
22	137	139	120	141	492	303	169	182	92	97	121	92
23	126	323	e120	130	459	284	167	141	92	95	141	84
24	120	190	e120	133	328	271	164	134	85	78	379	78
25	115	156	e115	275	269	259	160	131	82	180	1410	79
26	112	143	115	234	242	251	157	131	81	102	286	78
27	108	132	110	181	230	241	153	144	81	83	195	76
28	107	126	109	159	220	232	179	168	82	76	142	75
29	105	118	107	173	---	249	239	164	78	77	121	75
30	104	112	109	182	---	238	180	137	79	75	109	75
31	114	---	144	158	---	262	---	128	---	71	525	---
MEAN	202	144	153	156	319	351	193	160	107	87.1	161	109
MAX	1110	547	385	275	1020	2110	259	343	235	193	1410	199
MIN	102	97	98	115	139	176	153	128	78	65	60	75
IN.	2.95	2.03	2.23	2.28	4.21	5.13	2.73	2.34	1.51	1.27	2.35	1.54

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	111.4	115.5	129.9	133.6	169.9	194.3	183.3	149.5	130.2	100.0	106.2	97.8
MAX	380.5	263.6	278.4	259.5	327.3	479.2	391.2	383.8	283.0	189.5	377.1	332.5
(WY)	1965	1980	1984	1978	1960	1979	1980	1975	1974	1974	1974	1979
MIN	24.5	33.1	38.2	39.5	79.8	68.6	69.6	59.2	37.3	33.1	31.5	24.5
(WY)	1955	1955	1989	1956	1988	1988	1989	1988	1988	1988	1956	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	177.9		135.7	
HIGHEST ANNUAL MEAN			212.8	1974
LOWEST ANNUAL MEAN			65.3	1956
HIGHEST DAILY MEAN	2110	Mar 17	3190	Oct 4 1964
LOWEST DAILY MEAN	60	Aug 20	21	Sep 8 1954
INSTANTANEOUS PEAK FLOW	3920	Aug 25	7050	Jun 5 1957
INSTANTANEOUS PEAK STAGE	13.04	Aug 25	18.53	Jun 5 1957
INSTANTANEOUS LOW FLOW	56	Aug 21	21*	Sep 8 1954
ANNUAL RUNOFF (INCHES)	30.6		23.3	
10 PERCENTILE	272		227	
50 PERCENTILE	137		105	
95 PERCENTILE	71		42	

* See REMARKS.

SANTEE RIVER BASIN

02151000 SECOND BROAD RIVER AT CLIFFSIDE, NC

LOCATION.--Lat 35°14'08", long 81°45'57", Rutherford County, Hydrologic Unit 03050105, on left bank 0.2 mi downstream from dam at Cliffside Mills, at Cliffside, and 1.3 mi upstream from mouth.

DRAINAGE AREA.--220 mi^2.

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

REVISED RECORDS.--WSP 892: 1928(M). WSP 1553: 1935-39(m). WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 670.5 ft above National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).

REMARKS.--No estimated daily discharges. Records good. Considerable diurnal fluctuation and some low-flow regulation by mills above station. Minimum discharge for period of record also occurred Aug. 3, 1937, and July 24, 1943.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2990	246	270	412	452	465	498	394	293	124	170	183
2	3920	244	269	361	421	462	538	426	255	210	177	168
3	1250	241	271	287	396	749	495	384	281	203	175	147
4	719	239	231	311	741	802	458	389	280	152	173	111
5	530	233	241	336	797	608	447	395	267	152	168	143
6	442	235	249	360	559	534	429	346	255	211	163	110
7	386	276	254	417	484	488	433	347	253	126	222	141
8	343	269	380	722	439	460	400	333	245	167	169	124
9	314	263	618	736	416	461	402	330	243	212	172	146
10	301	253	502	522	1250	440	402	474	262	171	172	117
11	292	242	441	442	1670	432	477	449	250	293	172	145
12	291	235	574	397	820	412	422	375	242	201	117	119
13	279	229	1190	363	622	408	403	351	237	197	168	178
14	267	227	705	340	523	405	394	341	213	289	120	159
15	251	229	524	318	470	395	497	331	232	433	169	170
16	253	591	443	308	1660	408	435	311	224	328	174	148
17	260	536	395	303	2550	2470	410	299	184	231	174	153
18	317	394	368	300	1000	2750	397	308	203	233	161	117
19	738	335	342	298	1470	1000	399	296	214	230	149	113
20	526	303	322	292	1050	753	356	293	205	358	114	135
21	404	291	321	541	754	626	382	294	181	270	117	114
22	349	288	289	459	828	552	376	302	190	322	221	127
23	315	642	255	391	1120	506	368	311	190	269	726	137
24	299	523	259	392	785	480	364	299	188	255	585	104
25	287	419	275	835	626	456	357	267	186	257	297	109
26	277	347	265	960	545	447	350	293	152	291	347	112
27	273	336	265	613	503	439	351	268	175	271	185	109
28	266	317	251	491	483	424	341	383	154	236	224	109
29	255	305	254	453	---	445	546	424	172	205	146	93
30	245	297	252	682	---	459	416	323	162	172	152	118
31	246	---	278	518	---	576	---	311	---	166	182	---
MEAN	577	319	373	457	837	655	418	343	220	233	208	132
MAX	3920	642	1190	960	2550	2750	546	474	293	433	726	183
MIN	245	227	231	287	396	395	341	267	152	124	114	93
IN.	3.02	1.62	1.95	2.39	3.96	3.43	2.12	1.80	1.11	1.22	1.09	.67

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	263.6	241.8	308.7	369.2	418.1	453.2	392.7	304.0	266.2	232.9	255.4	211.4
MAX	1438	598.5	673.6	1182	999.2	1242	1044	949.8	587.9	640.7	1421	879.2
(WY)	1965	1978	1968	1937	1960	1975	1936	1975	1975	1941	1928	1945
MIN	57.4	91.6	90.2	91.8	151.7	169.3	165.9	123.8	91.5	71.3	59.9	55.8
(WY)	1955	1956	1956	1956	1941	1955	1986	1941	1956	1986	1956	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	395.5		309.8	
HIGHEST ANNUAL MEAN			499.6	1965
LOWEST ANNUAL MEAN			151.3	1955
HIGHEST DAILY MEAN	3920	Oct 2	13200	Aug 16 1928
LOWEST DAILY MEAN	93	Sep 29	6.0	Jun 9 1940
INSTANTANEOUS PEAK FLOW	4670	Oct 1	15000	Aug 14 1940
INSTANTANEOUS PEAK STAGE	7.31	Oct 1	17.93	Aug 14 1940
INSTANTANEOUS LOW FLOW	15	Apr 29	4*	Sep 27 1935
ANNUAL RUNOFF (INCHES)	24.4		19.1	
10 PERCENTILE	634		515	
50 PERCENTILE	311		227	
95 PERCENTILE	124		90	

* See REMARKS.

SANTEE RIVER BASIN

02151500 BROAD RIVER NEAR BOILING SPRINGS, NC

LOCATION.--Lat 35°12'39", long 81°41'52", Cleveland County, Hydrologic Unit 03050105, on right bank 0.5 mi upstream from Sandy Run Creek, 3 mi downstream from Second Broad River, and 3.5 mi southwest of Boiling Springs.

DRAINAGE AREA.--875 mi^2.

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

REVISED RECORDS.--WDR NC-81-1: Drainage area. WDR NC-88: 1986(m).

GAGE.--Water-stage recorder. Datum of gage is 639.92 ft above National Geodetic Vertical Datum of 1929 (Duke Power Company bench mark). Prior to July 20, 1934, at site 500 ft upstream at datum 1 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Considerable diurnal fluctuation and some regulation caused by powerplants above station. Peak stage and peak discharge for period of record from former site, present datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e7900	1310	1390	1880	1980	2370	2500	1860	1340	549	761	3770
2	e10100	963	1420	1950	1760	2150	2380	2020	1320	704	701	1940
3	e4350	1310	1170	1450	1730	3080	2750	1910	967	761	699	996
4	e3300	1120	1080	1530	3300	3510	2170	1830	1160	730	681	941
5	3040	723	1310	1860	3670	2910	2010	1840	1270	739	713	1100
6	2130	843	1440	1610	2610	2530	2290	1570	1370	762	872	1070
7	2000	1630	1410	1950	2120	2540	2430	1460	1020	716	963	1000
8	1390	1300	1940	2840	1760	2490	1780	1620	1040	508	899	726
9	1520	1510	2840	2880	2050	2380	1620	1720	1080	500	1090	602
10	1680	906	2210	2200	3750	1970	2240	2260	1400	798	941	582
11	1530	992	1560	2060	5640	1790	2620	2750	1450	926	751	1100
12	1330	715	2230	1560	3610	1910	1890	2190	1240	910	669	1070
13	1160	628	4090	1440	2940	2460	1890	1770	1200	789	588	924
14	1310	1150	3350	1400	2290	2320	1770	1600	996	1190	745	834
15	1130	1220	2590	1480	1830	1680	2310	1630	1060	1750	771	1030
16	1080	2180	2210	1340	7780	2310	1920	1540	1210	1170	869	757
17	1210	2870	1960	1660	11200	12500	2070	1510	850	883	829	627
18	1880	2080	1510	1530	4930	13400	2060	1520	946	928	737	733
19	2610	1630	1470	1480	5910	5540	1620	1420	987	818	555	817
20	2320	1290	1450	1400	4990	4210	1680	1320	971	1340	444	798
21	1780	1380	1370	2030	3760	3810	1750	1250	945	1690	820	699
22	1510	1210	1360	2250	3850	3570	1640	1450	967	941	931	592
23	1170	2340	1390	1680	5380	3410	1500	1330	924	1080	1820	549
24	1460	2490	1180	1410	3460	2940	1680	1420	850	1120	1870	564
25	1360	1740	1180	3040	3330	2540	1730	1270	775	1050	1760	650
26	1380	1480	1300	3370	3060	2370	1650	1340	877	1230	3230	933
27	1130	1340	1410	2390	2640	2800	1590	1230	963	1030	1210	561
28	935	1890	1370	1900	2560	2520	1610	1330	750	975	1120	753
29	918	1500	1390	1930	---	2560	2660	1830	855	790	1010	606
30	1020	1430	1310	2930	---	2750	2250	1490	833	1100	902	580
31	1220	---	1230	2340	---	2910	---	1360	---	775	2100	---
MEAN	2157	1439	1714	1960	3710	3427	2002	1634	1054	944	1034	930
MAX	10100	2870	4090	3370	11200	13400	2750	2750	1450	1750	3230	3770
MIN	918	628	1080	1340	1730	1680	1500	1230	750	500	444	549
IN.	2.84	1.84	2.26	2.58	4.42	4.52	2.55	2.15	1.34	1.24	1.36	1.19

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	1273	1221	1466	1705	1902	2083	1927	1551	1315	1130	1232	1088
MAX	5499	2703	2875	4750	4304	4868	4525	3441	2812	2505	6893	3100
(WY)	1965	1949	1984	1937	1960	1975	1936	1973	1973	1949	1928	1945
MIN	237.1	406.5	449.1	421.6	819.8	782.7	820.7	682.0	419.8	351.0	294.6	287.6
(WY)	1955	1955	1956	1956	1941	1988	1986	1988	1988	1986	1956	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	1823		1492	
HIGHEST ANNUAL MEAN			2328	1973
LOWEST ANNUAL MEAN			767.5	1988
HIGHEST DAILY MEAN	13400	Mar 18	63900	Aug 16 1928
LOWEST DAILY MEAN	444	Aug 20	105	Oct 10 1954
INSTANTANEOUS PEAK FLOW	18700	Mar 17	73300*	Aug 16 1928
INSTANTANEOUS PEAK STAGE	11.87	Mar 17	24.3*	Aug 16 1928
INSTANTANEOUS LOW FLOW	387	Aug 20	40	Oct 17 1954
ANNUAL RUNOFF (INCHES)	28.3		23.1	
10 PERCENTILE	3020		2510	
50 PERCENTILE	1470		1180	
95 PERCENTILE	672		469	

***** Indicates not enough data, therefore statistic is not computed

* See REMARKS.

SANTEE RIVER BASIN

02152100 FIRST BROAD RIVER NEAR CASAR, NC

LOCATION.--Lat 35°29'35", long 81°40'56", Cleveland County, Hydrologic Unit 03050105, on right bank 570 ft upstream from bridge on Secondary Road 1530, 0.5 mi upstream from No Business Creek, and 4.0 mi southwest of Casar.

DRAINAGE AREA.--60.5 mi^2.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1949-56, March 1959 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 890 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Minimum discharge for current water year also occurred Sept. 29, 30.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1916 and August 1940 reached a stage of about 25 ft, from information by local resident. A discharge of 14.5 ft^3/s was measured on Sept. 21, 1955.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1550	54	61	140	130	141	164	108	85	50	47	52
2	621	53	60	102	119	142	198	123	82	50	47	48
3	250	53	59	86	113	260	163	107	83	48	46	46
4	154	52	58	86	221	231	146	113	80	47	45	45
5	119	52	58	90	202	177	136	122	75	46	44	44
6	103	60	58	117	150	155	130	104	74	45	48	43
7	92	63	57	130	133	140	127	101	74	44	47	42
8	85	58	123	257	120	131	118	95	72	63	45	41
9	79	56	144	220	112	131	115	100	73	62	46	55
10	78	52	111	146	705	126	118	203	72	51	43	47
11	79	51	100	116	373	120	153	145	69	51	43	54
12	77	51	281	103	218	116	124	116	67	49	41	54
13	62	50	346	92	167	114	117	107	65	62	39	46
14	60	50	179	86	145	112	119	99	65	113	40	49
15	58	55	130	83	132	112	170	93	65	150	42	46
16	56	143	108	80	696	131	136	90	66	72	65	42
17	81	87	94	78	495	1180	127	90	66	59	45	40
18	77	71	88	78	256	440	117	87	62	56	42	38
19	190	63	84	77	434	256	111	82	60	100	41	39
20	96	61	81	76	301	202	110	84	58	109	40	40
21	78	58	78	143	220	175	110	85	58	70	50	39
22	71	68	75	115	274	161	109	109	64	66	54	41
23	65	223	84	100	317	151	106	87	85	62	578	40
24	62	120	89	95	237	144	103	82	60	55	138	36
25	59	91	90	317	189	139	100	80	57	67	82	37
26	58	81	77	286	166	134	98	79	56	61	67	37
27	56	75	77	170	155	129	96	87	55	53	65	36
28	56	72	64	133	148	124	105	186	54	51	56	35
29	54	67	63	146	---	140	151	189	52	51	51	35
30	54	63	63	230	---	132	111	112	53	50	49	35
31	54	---	79	160	---	183	---	92	---	48	58	---
MEAN	149	71.8	101	133	247	194	126	108	66.9	63.3	69.2	42.7
MAX	1550	223	346	317	705	1180	198	203	85	150	578	55
MIN	54	50	57	76	112	112	96	79	52	44	39	35
IN.	2.85	1.32	1.92	2.54	4.26	3.71	2.33	2.06	1.23	1.21	1.32	.79

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	79.2	69.4	88.3	97.3	127.7	136.6	124.4	101.1	80.4	64.3	69.3	58.4
MAX	318.4	191.2	184.9	200.0	285.6	385.6	291.2	254.4	167.7	137.7	261.9	132.1
(WY)	1965	1978	1962	1978	1960	1975	1983	1975	1975	1984	1970	1959
MIN	24.7	27.3	26.6	44.4	50.8	44.6	48.1	33.9	23.4	19.2	19.5	27.2
(WY)	1964	1982	1989	1989	1988	1988	1967	1988	1988	1988	1988	1988

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	113.8		91.3	
HIGHEST ANNUAL MEAN			139.3	1960
LOWEST ANNUAL MEAN			43.4	1988
HIGHEST DAILY MEAN	1550	Oct 1	3130	Mar 14 1975
LOWEST DAILY MEAN	35	Sep 28	11	Aug 27 1988
INSTANTANEOUS PEAK FLOW	3380	Oct 1	7760	Oct 17 1975
INSTANTANEOUS PEAK STAGE	9.93	Oct 1	16.70	Oct 17 1975
INSTANTANEOUS LOW FLOW	34*	Sep 28	10	Aug 28 1988
ANNUAL RUNOFF (INCHES)	25.5		20.5	
10 PERCENTILE	187		151	
50 PERCENTILE	83		66	
95 PERCENTILE	42		29	

* See REMARKS.

Lakes and Reservoirs in South Atlantic Slope basin

02067800; 02067820 TALBOTT AND TOWNES RESERVOIRS.--on Dan River. The two reservoirs are operated as a unit for storage of water for Pinnacles hydroelectric plant. Talbott Dam (drainage area, 20.2 mi^2), lat 36°40'36", long 80°23'51", Patrick County, VA, Hydrologic Unit 03010103, 4.5 mi northeast of Kibler. Townes Dam (drainage area, 32.9 mi^2), lat 36°41'11", long 80°25'49", Patrick County, VA, Hydrologic Unit 03010103, 4 mi north of Kibler. PERIOD OF RECORD, February 1939 to December 1945 and January 1948 to September 1960 (combined monthend contents only published in WSP 1723), October 1960 to current year.

Total capacity of Talbott Reservoir, 350,000,000 ft^3 and Townes Reservoir, 60,000,000 ft^3. Storage was started in Talbott Reservoir on Feb. 13, 1939, and in Townes Reservoir several months earlier. Records furnished by city of Danville, VA. (See sta 02068500)

02077280 HYCO LAKE.--Lat 36°30'28", long 79°02'48", Person County, Hydrologic Unit 03010104, at outlet control structure 0.4 mi northwest of dam on Hyco River, 1.1 mi southwest of McGehees Mill and 8 mi northwest of Roxboro. DRAINAGE AREA, 189 mi^2. PERIOD OF RECORD, October 1964 to current year. Prior to October 1970, published as "Roxboro Steam-Electric Generating Plant Lake." GAGE, water-stage recorder and tape gage. Prior to Feb. 11, 1965, staff gage at upstream end of outlet control structure. Datum of gage is 399.79 ft, 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 gage height) Mar. 19, 1965. Total capacity at top of spillway is 3,288,000,000 ft^3. Lake cannot be drawn below -0.03 ft (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 upstream from Black Gut Creek, and 2.7 mi northwest of Thelma. DRAINAGE AREA, 8,339 mi^2. 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 ft^3. Usable capacity of 20,127,000,000 ft^3 between elevations 165 ft and 203 ft (top of spillway gates) of which 2,788,000,000 ft^3 between elevations 200 ft and 203 ft is reserved for flood control. Storage for power generation is 10,673,000,000 ft^3 between elevations 185 ft and 200 ft. 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 upstream from bridge on State Highway 48, and 2.2 mi north of Roanoke Rapids. DRAINAGE AREA, 8,371 mi^2. PERIOD OF RECORD, June 1955 to September 1960 (monthend contents only published in WSP 1723), October 1960 to current year. GAGE, water-stage recorder and staff gage. Datum of gage is National Geodetic Vertical Datum of 1929.

Lake, used for hydroelectric power development, was put in operation June 25, 1955, and has a total capacity of 3,360,220,000 ft^3 at normal highwater elevation of 132.0 ft and 3,515,290,000 ft^3 at elevation 132.75 ft (top of gates). Records furnished by Virginia Electric and Power Co. (See sta 02080500)

02087182 FALLS LAKE.--Lat 35°56'00", long 78°35'00", Wake County, Hydrologic Unit 03020201, at Falls Dam on Neuse River at Falls, 10 mi north of Raleigh, and 235 mi above mouth. DRAINAGE AREA, 770 mi^2. PERIOD OF RECORD, February 1979 to current year. Datum of gage is National Geodetic Vertical Datum of 1929.

Lake, used for flood control, water supply, low-flow augmentation, and recreation. Temporary storage began May 1981 for water supply for city of Raleigh during drought conditions. Jan. 13, 1983, gates closed and normal pool elevation of 250 ft reached Dec. 7, 1983. (See sta 02087183)

02098197 B. EVERETT JORDAN LAKE.--Lat 35°39'17", long 79°04'02", Chatham County, Hydrologic Unit 03030002, at B. Everett Jordan Dam on Haw River, 0.3 mi downstream of mouth of New Hope River, 2.5 mi north of Moncure, 4.2 mi upstream of mouth of Haw River, and 202.2 mi upstream from mouth of Cape Fear River. DRAINAGE AREA, 1,689 mi^2. PERIOD OF RECORD, December 1972 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, water supply, low-flow augmentation, and recreation. Some storage was affected during construction and then operated temporarily as a "dry reservoir" January 1975 to August 1981, and reservoir began filling September 1981 and reached normal pool elevation of 216 ft Feb. 4, 1982. Total capacity is 32,825,074,000 ft^3 at elevation 240.0 ft of which 23,454,011,000 ft^3 is controlled flood storage. (See sta 02098198)

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 upstream from Fish Trap Creek, 2.0 mi upstream from Millers Creek, and 4.0 mi west of Wilkesboro. DRAINAGE AREA, 350 mi^2, approximately. PERIOD OF RECORD, August 1962 to current year. GAGE, water-stage recorder and staff gage at dam. Datum of gage is National Geodetic Vertical Datum of 1929.

Lake, used for flood control, low-flow augmentation, and recreation. Some storage was affected during construction in July 1962, but gates were closed Aug. 22, 1962, and reservoir reached minimum pool elevation on Sept. 11, 1962. Total capacity is 6,664,680,000 ft^3 of which 6,316,200,000 ft^3 is controlled storage. Records furnished by Corps of Engineers. (See sta 02129000)

02122400 HIGH ROCK LAKE.--Lat 35°36'02", long 80°14'06", Davidson County, Hydrologic Unit 03040103, at High Rock Dam on Yadkin River, 0.8 mi northwest of High Rock, 2 mi upstream from Lick Creek, and 256 mi upstream from mouth of Pee Dee River in Winyah Bay. DRAINAGE AREA, 4,000 mi^2, approximately. PERIOD OF RECORD, November 1927 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year. GAGE, water-stage recorder and staff gage at dam. Datum of gage is 30.9 ft below 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 ft^3 and usable capacity is 10,230,000,000 ft^3 between elevations 625 ft and 655 ft gage datum (top of gates). Records furnished by Yadkin, Inc. (See sta 02129000)

Lakes and Reservoirs in South Atlantic Slope basin--Continued

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 upstream from Garr Creek, 3.8 mi northeast of New London, and 250 mi upstream from mouth of Pee Dee River in Winyah Bay. DRAINAGE AREA, 4,120 mi^2, approximately. PERIOD OF RECORD, April 1962 to current year. GAGE, remote water-stage recorder in powerhouse. Datum of gage is 30.9 ft below 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 ft^3 and usable capacity is 293,800,000 ft^3 between elevations 593 ft and 596 ft gage datum. Records furnished by Yadkin, Inc. (See sta 02129000)

02122844 BADIN LAKE.--Lat 35°35'10", long 80°05'34", Stanly County, Hydrologic Unit 03040103, at Badin Dam on Yadkin River, 1.5 mi northeast of Badin, 2.5 mi upstream from Falls Dam, and 242 mi upstream from mouth of Pee Dee River in Winyah Bay. DRAINAGE AREA, 4,180 mi^2, approximately. PERIOD OF RECORD, December 1917 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year. GAGE, water-stage recorder and staff gage at dam. Datum of gage is 30.9 ft below 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 ft^3 and usable capacity is 5,616,584,000 ft^3 between elevations 510.00 ft and 541.10 ft. 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 upstream from Norfolk Southern Railroad bridge, 3.5 mi southeast of Norwood, 5 mi upstream from Rocky River, and 224 mi upstream from mouth in Winyah Bay. DRAINAGE AREA, 4,600 mi^2, approximately. PERIOD OF RECORD, February 1928 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year. GAGE, water-stage recorder and float-tape gage at dam. Datum of gage is 38.67 ft 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 ft^3 and usable capacity is 5,927,040,000 ft^3 between elevations 200.5 ft and 239.5 ft 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 upstream from Cartledge Creek, 6.5 mi northwest of Rockingham, and 195 mi upstream from mouth in Winyah Bay. DRAINAGE AREA, 6,830 mi^2, approximately. PERIOD OF RECORD, December 1929 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year. GAGE, self-synchronous motor, dial indicator and staff gage at dam. Datum of gage is 39.08 ft 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 ft^3 and usable capacity is 1,850,000,000 ft^3 between elevations 120.0 ft and 139.0 ft 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 northeast of Bridgewater, and 279 mi upstream from mouth of Wateree River. DRAINAGE AREA, 380 mi^2, approximately. PERIOD OF RECORD, March 1920 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year. GAGE, float gage with self-synchronous motor to indicator in powerhouse. Staff gage at Catawba River Dam is also read when lake elevation drops below 1,160 ft (60 ft gage datum) and lake becomes two separate reservoirs. Datum of gage is 1,100.00 ft 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 gage datum (crest of spillway) is 12,581,800,000 ft^3 and usable capacity is 7,943,700,000 ft^3 between elevations (gage datum) 65.0 ft and 100.0 ft. 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 west of Rhodhiss, 1.8 mi south of Granite Falls, and 243 mi upstream from mouth of Wateree River. DRAINAGE AREA, 1,090 mi^2, approximately. PERIOD OF RECORD, September 1935 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year. GAGE, float gage, indicator and reference point at dam. Datum of gage is 895.1 ft 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 ft^3 and usable capacity is 1,717,000,000 ft^3 between elevations (gage datum) 85.0 ft and 100.0 ft (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 upstream from Lower Little River, 7 mi south of Taylorsville, and 226 mi upstream from mouth of Wateree River. DRAINAGE AREA, 1,310 mi^2, approximately. PERIOD OF RECORD, September 1935 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year. GAGE, float gage and indicator at dam. Datum of gage is 835.0 ft 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 ft^3. Sept. 30, 1935 to Sept. 30, 1957, the usable capacity considered as 2,277,970,200 ft^3 between elevations (gage datum) 85.0 ft and 100.0 ft (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 ft^3 between elevations 75.0 ft and 100.0 ft (top of flood gates) from Oct. 1, 1964 to present, usable capacity considered as 2,277,800,000 ft^3 between elevations (gage datum) 85.0 ft and 100.0 ft (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 upstream from bridge on U.S. Highways 64 and 70, 4.2 mi north of Catawba, and 216 mi upstream from mouth of Wateree River. DRAINAGE AREA, 1,450 mi^2, approximately. PERIOD OF RECORD, December 1915 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year. GAGE, float gage, indicator and staff gage at dam. Datum of gage is 738.1 ft 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 ft^3. Capacity has been reduced by silting. Prior to October 1957, the usable capacity considered as 473,980,000 ft^3 and October 1957 to Sept. 30, 1964, as 388,300,000 ft^3 between elevations (gage datum) 90.0 ft and 100.0 ft (crest of spillway). From Oct. 1, 1964 to present, usable capacity considered as 208,200,000 ft^3 between elevations (gage datum) 95.0 ft and 100.0 ft (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, Hydrologic Unit 03050101, at Cowans Ford Dam on Catawba River, 0.8 mi upstream from Derr Creek, 7.8 mi southwest of Davidson, and 182 mi upstream from mouth of Wateree River. DRAINAGE AREA, 1,790 mi^2, 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 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 ft^3 and usable capacity is 26,910,400,000 ft^3 between elevations (gage datum) 75.0 ft and 100.0 ft (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 03050101, at Mountain Island Dam on Catawba River, 1.5 mi downstream from bridge on State Highway 16, 3 mi northeast of Mount Holly, and 167 mi upstream from mouth of Wateree River. DRAINAGE AREA, 1,860 mi^2, approximately. PERIOD OF RECORD, December 1923 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year. GAGE, float gage, indicator and stage gage at dam. Datum of gage is 547.5 ft 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 ft^3. Prior to October 1964 usable capacity is considered 1,132,000,000 ft^3 between elevations (gage datum) 90.0 ft and 100.0 ft (crest of spillway) October 1964 to present considered as 845,000,000 ft^3 between elevations (gage datum) 93.0 ft and 100.0 ft (crest of spillway). Records furnished by Duke Power Co.

OTHER RESERVOIRS.--The following smaller reservoirs in the South Atlantic Slope basin are described below, but records of contents are not published herein:

02077229 LAKE ROXBORO.--Lat 79°08'26", long 36°20'55", Caswell County, Hydrologic Unit 03010104, part of Roxboro's municipal water supply on South Hyco Creek near Roseville. DRAINAGE AREA, 23.2 mi^2. Total capacity 380,991,000 ft^3. Dam completed and filled April 1978. (See sta 02077250)

02077302 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 mi^2. Total capacity is approximately 522,720,000 ft^3 with a surface area of about 650 acres at a normal elevation of 385 ft, 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 on Aug. 22, 1974.

02077665 MAYO STEAM-ELECTRIC GENERATING PLANT LAKE.--Lat 36°32'15", long 78°52'30", Person County, Hydrologic Unit 03010104, cooling water reservoir for Carolina Power and Light Company plant, on Mayo Creek near Bethel Hill. DRAINAGE AREA, 52.2 mi^2. Total capacity is 3,831,000,000 ft^3 with a surface area of 2,800 acres at a normal elevation of 434 ft National Geodetic Vertical Datum of 1929. Dam completed and storage began Aug. 1, 1980; water in reservoir first reached normal water level elevation of 434 ft on April 16, 1983. (See sta 02077660)

02086490 LAKE MICHIE.--Lat 36°09'02", long 79°49'49", Durham County, Hydrologic Unit 03020201, at Durham municipal dam on Flat River, 3 mi southeast of Bahama, and 5 mi upstream from confluence with Eno River. DRAINAGE area, 170 mi^2, approximately. PERIOD OF RECORD, October 1962 to April 1975.
Lake, used for municipal water supply, began filling in May 1926 and reached spillway elevation Dec. 26, 1926. Total capacity is 618,000,000 ft^3 between elevations (gage datum) 300.0 ft and 341.0 ft (crest of spillway). (See sta 02087000)

02087339 LAKE JOHNSON.--Lat 35°45'44", long 78°42'17", Wake County, Hydrologic Unit 03020201, part of Raleigh's municipal water supply, on Walnut Creek near Raleigh. DRAINAGE AREA, 7.05 mi^2. Total capacity is 98,900,000 ft^3. 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 mi^2. Total capacity is 13,400,000 ft^3. 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 mi^2, approximately. Total capacity is 267,400,000 ft^3. 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 mi^2, approximately. Total capacity is 133,700,000 ft^3. 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 mi^2. Total capacity 133,680,000 ft^3. 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 mi^2, approximately. Total capacity is 107,000,000 ft^3. 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 mi^2, approximately. Total capacity is 294,000,000 ft^3. 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 mi^2. Total capacity is 869,000,000 ft^3. Dam completed Oct. 18, 1968, and reservoir first filled Aug. 17, 1969. (See sta 02094500)

Lakes and Reservoirs in South Atlantic Slope basin--Continued

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 mi^2, approximately. Prior to October 1971 published as "Stony Creek Reservoir." Total capacity is 427,800,000 ft^3. 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 mi^2, approximately. Prior to October 1971 published as "Lake Burlington." Total capacity is 64,900,000 ft^3. 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 southwest of Deep River. DRAINAGE AREA, 32 mi^2, approximately. Total capacity is 468,000,000 ft^3. Dead storage (non-withdrawal) is minor. Total surface area, about 725 acres. Dam completed and storage began in May 1970. Reservoir first filled Dec. 24, 1970. (See sta 02099500)

02099096 HIGH POINT MUNICIPAL LAKE.--Lat 35°59'43", long 79°56'42", Guilford County, Hydrologic Unit 03030003, High Point's municipal water supply, on Deep River near High Point. DRAINAGE AREA, 61.4 mi^2. Total capacity is 220,588,000 ft^3. 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 mi^2, approximately. Usable capacity is 69,700,000 ft^3. Completed and filled in 1908. Hydroelectric power operation stopped Dec. 31, 1962.

02102190 SHEARON HARRIS MAIN RESERVOIR.--Lat 35°34'00", long 78°57'55", Chatham County, Hydrologic Unit 03030004, cooling water reservoir for Carolina Power and Light Co. plant, on Buckhorn Creek near Corinth. DRAINAGE AREA, 71 mi^2. Total capacity is 3,136,320,000 ft^3 with a surface area of 4,150 acres at a normal elevation of 220 ft, National Geodetic Vertical Datum of 1929. Dam completed Dec. 23, 1981, and storage began Dec. 1, 1980. (See sta 02102192)

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 mi^2. Total capacity is 284,100,000 ft^3 of which 281,400,000 ft^3 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 mi^2. Total surface area, about 640 acres. Lake reached spillway elevation September 1961.

SOUTH ATLANTIC SLOPE BASIN

Lakes and Reservoirs in South Atlantic Slope basin--Continued

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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)
	02067800 & 02067820 Talbott & Townes Reservoirs			02077280 Hyco Lake			02079964 Lake Gaston		
Sept. 30		328	-	10.62	3,389	-	199.47	19,140	-
Oct. 31		333	+5	10.52	3,373	-16	199.88	19,497	+357
Nov. 30		261	-72	10.54	3,376	+3	199.98	19,584	+87
Dec. 31		233	-28	10.73	3,406	+30	199.65	19,298	-286
CAL YR 1989		-	-87		-	+34		-	+27
Jan. 31		327	+94	10.72	3,405	-1	199.64	19,289	-9
Feb. 28		344	+17	10.58	3,383	-22	199.77	19,402	+113
Mar. 31		332	-12	10.75	3,410	+27	200.13	19,716	+314
Apr. 30		328	-4	10.61	3,388	-22	199.47	19,140	-576
May 31		338	+10	10.81	3,418	+30	200.62	20,142	+1,002
June 30		307	-31	10.46	3,364	-54	199.18	18,888	-1,254
July 31		332	+25	9.95	3,285	-79	199.42	19,096	+208
Aug. 31		319	-13	9.58	3,225	-60	199.39	19,070	-26
Sept. 30		278	-41	8.86	3,107	-118	199.53	19,192	+122
WTR YR 1990		-	-50		-	-282		-	+52

Date	Elevation (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)
	02080100 Roanoke Rapids Lake			02087182 Falls Lake			02098197 B. Everett Jordan Lake		
Sept. 30	128.9	2,775	-	250.33	4,877	-	216.2	9,497	-
Oct. 31	131.1	3,180	+405	250.15	4,786	-91	216.3	9,559	+62
Nov. 30	126.3	2,345	-835	250.13	4,776	-10	216.2	9,497	-62
Dec. 31	129.6	2,898	+553	250.27	4,846	+70	216.1	9,434	-63
CAL YR 1989		-	+90		-	+390		-	+181
Jan. 31	131.1	3,180	+282	250.37	4,897	+51	217.8	10,513	+1,079
Feb. 28	129.5	2,879	-301	250.63	5,029	+132	216.0	9,371	-1,142
Mar. 31	130.3	3,026	+147	252.80	6,214	+1,185	219.3	11,533	+2,162
Apr. 30	129.9	2,953	-73	251.20	5,324	-890	216.2	9,497	-2,036
May 31	132.4	3,446	+493	252.01	5,762	+438	218.4	10,913	+1,416
June 30	130.2	3,008	-438	250.70	5,064	-698	215.9	9,312	-1,601
July 31	130.2	3,008	0	249.83	4,630	-434	214.2	8,329	-983
Aug. 31	130.5	3,062	+54	249.56	4,503	-127	213.2	7,780	-549
Sept. 30	129.9	2,953	-109	247.94	3,800	-703	210.5	6,429	-1,351
WTR YR 1990		-	+178		-	-1,077		-	-3,068

SOUTH ATLANTIC SLOPE BASIN

Lakes and Reservoirs in South Atlantic Slope basin--Continued

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

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)
	02111391 W. Kerr Scott Reservoir			02122400 High Rock Lake			02122699 Tuckertown Reservoir		
Sept. 30	1,030.60	1,841.05	-	653.8	10,303	-	595.23	1,773	-
Oct. 31	1,030.15	1,807.17	-33.9	652.3	9,396	-907	595.64	1,815	+42
Nov. 30	1,030.11	1,798.70	-8.5	651.7	9,038	-358	594.78	1,726	-89
Dec. 31	1,030.64	1,841.05	+42.4	648.5	7,312	-1,726	595.88	1,840	+114
CAL YR 1989		-	+63.8		-	+2,851		-	+84
Jan. 31	1,030.18	1,807.17	-33.9	653.6	10,182	+2,870	595.10	1,759	-81
Feb. 28	1,030.08	1,798.70	-8.5	654.4	10,683	+501	594.99	1,748	-11
Mar. 31	1,030.25	1,807.17	+8.5	652.4	9,456	-1,227	594.89	1,737	-11
Apr. 30	1,030.27	1,815.64	+8.5	654.0	10,427	+971	594.88	1,736	-1
May 31	1,030.02	1,790.23	-25.4	655.0	11,090	+663	595.99	1,851	+115
June 30	1,029.88	1,785.90	-4.3	653.0	9,819	-1,271	594.60	1,709	-142
July 31	1,030.20	1,807.17	+21.3	652.6	9,577	-242	594.65	1,714	+5
Aug. 31	1,030.10	1,798.70	-8.5	652.0	9,215	-362	594.79	1,727	+13
Sept. 30	1,029.95	1,790.23	-8.5	649.1	7,616	-1,599	594.40	1,690	-37
WTR YR 1990		-	-50.8		-	-2,687		-	-83

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)
	02122844 Badin Lake			02123736 Lake Tillery			02128800 Blewett Falls Lake		
Sept. 30	540.3	10,311	-	235.0	4,970	-	137.4	1,682	-
Oct. 31	539.5	10,124	-187	237.8	5,557	+587	130.0	940	-742
Nov. 30	540.3	10,311	+187	239.2	5,859	+302	131.1	1,050	+110
Dec. 31	539.4	10,101	-210	237.6	5,514	-345	130.2	960	-90
CAL YR 1989		-	-70		-	-215		-	-330
Jan. 31	539.6	10,147	+46	238.5	5,708	+194	134.8	1,420	+460
Feb. 28	540.8	10,427	+280	239.3	5,881	+173	134.9	1,430	+10
Mar. 31	541.0	10,474	+47	236.9	5,364	-517	138.4	1,787	+357
Apr. 30	540.0	10,241	-233	239.1	5,837	+473	135.2	1,460	-327
May 31	541.1	10,498	+257	238.7	5,750	-87	137.6	1,703	+243
June 30	539.0	10,007	-491	238.7	5,750	0	131.4	1,080	-623
July 31	539.5	10,124	+117	237.9	5,578	-172	138.0	1,745	+665
Aug. 31	539.9	10,217	+93	239.4	5,903	+325	137.3	1,672	-73
Sept. 30	538.7	9,937	-280	239.0	5,815	-88	138.4	1,787	+115
WTR YR 1990		-	-374		-	+845		-	+105

SOUTH ATLANTIC SLOPE BASIN

Lakes and Reservoirs in South Atlantic Slope basin--Continued

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Date	02138519 Lake James			02141490 Rhodhiss Lake			02141961 Lake Hickory		
	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)
Sept. 30	99.9	12,554	-	99.9	1,702	-	100.0	2,278	-
Oct. 31	96.1	11,514	-1,040	96.6	1,230	-472	97.0	1,758	-520
Nov. 30	96.2	11,540	+26	96.6	1,230	0	98.3	1,979	+221
Dec. 31	96.1	11,514	-26	97.1	1,298	+68	97.4	1,825	-154
CAL YR 1989		-	+54		-	-27		-	+50
Jan. 31	94.0	10,967	-547	97.4	1,339	+41	97.0	1,758	-67
Feb. 28	99.4	12,413	+1,446	99.5	1,641	+302	99.2	2,136	+378
Mar. 31	98.5	12,163	-250	97.9	1,409	-232	98.8	2,066	-70
Apr. 30	95.3	11,303	-860	96.5	1,216	-193	97.1	1,775	-291
May 31	97.2	11,808	+505	96.8	1,257	+41	97.0	1,758	-17
June 30	97.9	11,998	+190	97.3	1,325	+68	97.1	1,775	+17
July 31	98.2	12,080	+82	96.6	1,230	-95	97.0	1,758	-17
Aug. 31	98.4	12,135	+55	96.9	1,270	+40	96.5	1,674	-84
Sept. 30	96.2	11,540	-595	97.0	1,284	+14	97.3	1,808	+134
WTR YR 1990		-	-1,014		-	-418		-	-470

Date	02142441 Lookout Shoals Lake			02142647 Lake Norman			02142676 Mountain Island Lake		
	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)
Sept. 30	100.4	226	-	99.7	47,170	-	97.4	500	-
Oct. 31	97.0	80	-146	98.0	44,820	-2,350	97.0	450	-50
Nov. 30	97.9	117	+37	97.0	43,470	-1,350	97.1	462	+12
Dec. 31	93.3	0	-117	97.1	43,600	+130	96.4	378	-84
CAL YR 1989		-	-138		-	+920		-	-48
Jan. 31	91.0	0	0	97.1	43,600	0	95.7	296	-82
Feb. 28	99.0	164	+164	99.5	46,890	+3,290	97.4	500	+204
Mar. 31	97.3	92	-72	99.0	46,190	-700	97.1	462	-38
Apr. 30	97.6	105	+13	97.7	44,420	-1,770	97.6	525	+63
May 31	97.2	88	-17	99.2	46,470	+2,050	96.0	330	-195
June 30	97.3	92	+4	97.3	43,880	-2,590	96.5	390	+60
July 31	97.8	113	+21	97.9	44,680	+800	96.2	354	-36
Aug. 31	97.1	84	-29	97.5	44,140	-540	95.8	307	-47
Sept. 30	97.4	94	+10	97.0	43,470	-670	95.9	318	+11
WTR YR 1990		-	-132		-	-3,700		-	-182

OHIO RIVER BASIN

KANAWHA RIVER BASIN

03161000 SOUTH FORK NEW RIVER NEAR JEFFERSON, NC

LOCATION.--Lat 36°23'35", long 81°24'26", Ashe County, Hydrologic Unit 05050001, on right bank 600 ft upstream from bridge on State Highways 16 and 88, 0.2 mi downstream from Bear Creek, and 4 mi southeast of Jefferson.

DRAINAGE AREA.--205 mi^2.

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). WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,657.04 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 14, 1934, nonrecording gage on bridge 400 ft downstream at same datum. Oct. 14, 1934, to Mar. 25, 1935, nonrecording gage at present site and datum. U.S. Army Corps of Engineers satellite data transmitter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location. Maximum discharge, 52,800 ft^3/s, from rating curve extended above 5,100 ft^3/s on basis of slope-area measurement of peak flow. Minimum discharge for period of record, 52 ft^3/s, result of freeze up. Minimum discharge for current water year also occurred on Sept. 28, 29, and 30.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 15, 1916, reached a stage of 18.0 ft, from floodmarks witnessed by local resident, discharge, 35,200 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1800	509	512	1490	549	604	621	507	429	231	185	236
2	2180	488	497	793	519	608	579	527	408	418	178	229
3	1450	479	495	621	503	707	566	869	398	327	175	220
4	1090	465	482	588	686	790	550	756	387	247	175	208
5	927	455	488	622	667	660	531	711	366	231	178	203
6	828	455	469	616	570	619	521	602	354	218	457	198
7	754	485	453	635	551	587	541	544	343	212	581	193
8	701	472	492	670	531	565	502	503	335	209	269	188
9	659	461	514	724	502	573	484	488	332	214	255	210
10	624	447	471	631	908	564	483	685	346	221	308	310
11	602	430	472	590	1010	538	539	638	337	204	480	243
12	576	420	570	553	706	521	509	537	303	203	360	300
13	558	411	672	530	625	508	474	510	296	228	265	335
14	545	405	538	504	583	498	462	487	291	1270	249	273
15	529	472	494	499	557	496	461	457	327	1360	240	247
16	516	3730	e470	480	987	666	450	447	390	592	215	235
17	650	1340	e446	462	1380	3230	442	495	346	415	209	203
18	801	868	e456	454	862	2290	434	467	313	396	207	191
19	1670	728	e470	447	967	1270	418	406	348	369	221	188
20	1050	665	e451	435	861	996	413	399	299	353	198	193
21	803	628	e408	509	718	844	422	452	278	319	202	189
22	704	601	e350	487	764	761	481	458	296	318	223	192
23	649	895	e272	436	1040	701	440	481	282	329	407	198
24	619	728	e485	430	896	665	416	408	263	280	497	184
25	596	640	e547	571	774	680	402	386	254	250	506	173
26	568	613	e587	601	680	633	393	382	248	236	601	172
27	551	592	e562	511	647	603	386	376	244	224	423	169
28	535	571	e508	479	634	582	401	439	238	216	328	166
29	521	556	e465	513	---	609	801	850	231	213	284	167
30	514	529	e485	812	---	648	562	582	224	213	263	168
31	515	---	796	614	---	651	---	473	---	203	248	---
MEAN	809	685	496	591	738	796	489	527	317	346	303	213
MAX	2180	3730	796	1490	1380	3230	801	869	429	1360	601	335
MIN	514	405	272	430	502	496	386	376	224	203	175	166
IN.	4.55	3.73	2.79	3.32	3.75	4.48	2.66	2.96	1.72	1.95	1.70	1.16

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	369.7	405.9	407.8	459.7	521.8	589.4	559.2	459.2	384.5	339.3	356.7	338.0
MAX	872.6	1889	797.4	966.2	972.9	1316	1350	1052	905.0	903.7	2613	1212
(WY)	1930	1978	1958	1946	1983	1979	1983	1973	1976	1941	1940	1979
MIN	117.5	123.9	146.2	140.2	197.2	308.2	275.5	219.9	163.5	110.7	93.7	99.5
(WY)	1955	1932	1934	1940	1934	1925	1925	1941	1956	1930	1925	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	525.1		432.0	
HIGHEST ANNUAL MEAN			669.0	1949
LOWEST ANNUAL MEAN			246.7	1956
HIGHEST DAILY MEAN	3730	Nov 16	27700	Aug 14 1940
LOWEST DAILY MEAN	166	Sep 28	65	Sep 9 1925
INSTANTANEOUS PEAK FLOW	5680	Nov 16	52800	Aug 14 1940
INSTANTANEOUS PEAK STAGE	7.51	Nov 16	22.50	Aug 14 1940
INSTANTANEOUS LOW FLOW	165	Sep 27	52	Dec 24 1943
ANNUAL RUNOFF (INCHES)	34.8		28.6	
10 PERCENTILE	786		719	
50 PERCENTILE	485		349	
95 PERCENTILE	194		144	

TENNESSEE RIVER BASIN

03439000 FRENCH BROAD RIVER AT ROSMAN, NC

LOCATION.--Lat 35°08'32", long 82°49'28", Transylvania County, Hydrologic Unit 06010105, on left bank 50 ft upstream from bridge on U.S. Highway 178 at Rosman, 1.0 mi upstream from East Fork, and at mile 216.4.

DRAINAGE AREA.--67.9 mi^2.

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 above National Geodetic Vertical Datum of 1929. Prior to June 30, 1909, nonrecording gage at site 500 ft downstream at different datum. Jan. 1, 1936 to July 6, 1937, nonrecording gage at present site and datum. The National Weather Service has gage height and rainfall telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Minimum discharge, for period of record, 23 ft^3/s, result of freezeup. Minimum daily for period of record, 37 ft^3/s, occurred several days in Sept. and Oct. 1954. Minimum discharge for current water year also occurred on Sept. 29, 30.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of 13.9 ft, from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1650	192	219	382	330	471	400	269	194	103	86	91
2	1030	190	213	285	317	572	380	282	195	99	88	86
3	631	184	207	261	308	707	365	259	195	96	91	82
4	472	178	204	329	548	567	352	725	186	94	93	79
5	391	178	202	312	406	508	340	477	177	93	95	77
6	345	220	198	346	361	473	335	377	173	98	102	74
7	310	206	199	318	341	442	324	332	168	101	87	71
8	284	218	392	403	317	444	308	303	164	92	106	68
9	264	220	306	346	320	482	302	356	160	100	91	150
10	250	198	274	313	1010	446	360	643	158	140	90	93
11	239	184	263	291	578	420	337	407	153	114	85	82
12	228	178	432	274	470	400	305	353	147	99	79	97
13	217	176	421	256	418	380	294	328	145	119	92	113
14	208	173	337	249	386	363	289	301	143	388	92	100
15	202	377	305	241	365	364	282	284	141	209	83	128
16	e195	937	279	236	2160	949	273	272	140	136	78	92
17	e290	373	263	231	1040	2180	263	274	140	115	74	82
18	e410	303	253	230	754	1030	250	252	157	126	74	77
19	e476	272	250	221	738	779	243	241	138	177	74	75
20	329	256	241	254	620	666	e235	262	129	186	73	74
21	284	236	232	415	561	596	e235	252	127	157	75	72
22	262	327	223	288	992	550	e230	232	126	130	83	113
23	247	452	e212	265	847	513	e228	223	122	117	80	83
24	235	318	e209	275	689	488	e232	218	119	108	81	73
25	223	289	e206	456	605	466	e240	212	116	112	308	71
26	215	272	e204	387	557	468	e229	208	115	103	121	70
27	209	258	198	332	522	442	221	232	114	98	120	68
28	206	249	196	306	494	418	395	254	115	93	94	67
29	201	233	193	465	---	424	385	259	111	94	85	66
30	195	225	206	430	---	440	294	210	108	99	95	65
31	209	---	460	362	---	438	---	200	---	91	101	---
MEAN	352	269	258	315	609	577	298	306	146	125	96.0	84.6
MAX	1650	937	460	465	2160	2180	400	725	195	388	308	150
MIN	195	173	193	221	308	363	221	200	108	91	73	65
IN.	5.98	4.42	4.38	5.35	9.34	9.80	4.89	5.20	2.40	2.13	1.63	1.39

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	175.1	199.3	241.4	270.1	309.8	330.3	321.2	259.8	207.9	178.6	180.7	163.7
MAX	734.1	578.2	481.9	672.3	647.9	786.7	582.5	512.8	456.8	624.1	474.7	447.3
(WY)	1965	1980	1984	1937	1939	1979	1983	1973	1989	1989	1940	1950
MIN	42.2	56.7	72.6	72.0	130.2	135.2	108.2	114.5	79.8	75.8	65.3	43.6
(WY)	1955	1955	1940	1981	1963	1988	1986	1941	1988	1986	1954	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	284.6		236.1	
HIGHEST ANNUAL MEAN			370.3	1949
LOWEST ANNUAL MEAN			135.8	1981
HIGHEST DAILY MEAN	2180	Mar 17	5630	Oct 4 1964
LOWEST DAILY MEAN	65	Sep 30	37	Sep 25 1954
INSTANTANEOUS PEAK FLOW	4460	Feb 16	13500	Oct 4 1964
INSTANTANEOUS PEAK STAGE	10.16	Feb 16	14.95	Oct 4 1964
INSTANTANEOUS LOW FLOW	65*	Sep 28	23*	Jan 3 1940
ANNUAL RUNOFF (INCHES)	56.9		47.2	
10 PERCENTILE	482		413	
50 PERCENTILE	238		190	
95 PERCENTILE	77		74	

* See REMARKS.

TENNESSEE RIVER BASIN

03440000 CATHEYS CREEK NEAR BREVARD, NC

LOCATION.--Lat 35°12'40", long 82°47'00", Transylvania County, Hydrologic Unit 06010105, on right bank 1,200 ft downstream from Kuykendall Creek, 1.0 mi upstream from U.S. Highway 64, 2.1 mi upstream from mouth, and 3.2 mi southwest of Brevard.

DRAINAGE AREA.--11.7 mi^2.

PERIOD OF RECORD.--Oct. 1944 to Sept. 1955, Nov. 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,230 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 2, 1946, at site 0.9 mi downstream at different datum. October 2, 1946 to Jan. 9, 1947, at site 0.8 mi downstream from present gage at different datum. Jan. 10, 1947 to Oct. 3, 1951, at present site at different datum. Oct. 3, 1951 to Sept. 30, 1955 at site 40 ft downstream at different datum.

REMARKS.--Records good except those above 600 ft^3/s and for estimated daily discharges, which are fair. Maximum discharge, 1,830 ft^3/s, from rating curve extended above 600 ft^3/s by logarithmic plotting. City of Brevard diverted about 1.5 ft^3/s from Catheys Creek for municipal water supply. Minimum discharge for current water year also occurred on Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e210	33	41	51	48	71	73	53	32	17	18	16
2	e120	31	40	43	47	83	70	52	33	17	17	15
3	80	31	39	41	47	97	68	50	32	17	16	14
4	65	30	39	49	75	82	66	180	31	16	15	13
5	57	30	38	46	57	75	64	79	30	16	15	13
6	51	37	37	52	52	71	63	62	29	23	16	13
7	47	32	38	49	50	67	62	55	29	20	14	13
8	45	36	56	60	47	68	60	51	28	18	14	14
9	42	35	48	53	49	70	58	60	27	17	16	24
10	40	32	45	49	112	66	66	90	28	20	15	15
11	39	31	44	46	71	64	65	64	26	17	14	15
12	37	30	63	44	61	63	60	57	25	17	14	16
13	36	29	59	42	57	62	58	54	25	24	20	17
14	35	29	51	40	54	60	57	50	25	48	18	17
15	35	142	48	40	52	61	56	47	24	27	15	21
16	36	220	46	39	289	135	54	45	25	20	14	16
17	78	72	44	38	142	375	53	45	24	19	13	15
18	56	58	43	38	106	158	52	42	23	19	13	14
19	57	52	42	36	103	119	51	41	23	20	13	14
20	48	49	41	43	89	104	50	44	22	20	13	14
21	44	47	40	54	82	94	50	41	22	18	13	14
22	41	61	38	43	140	90	50	39	22	17	19	18
23	40	65	e37	40	120	87	52	38	21	17	14	15
24	38	54	e36	43	99	84	53	37	21	19	14	14
25	37	51	e35	62	89	80	51	35	20	17	20	13
26	36	48	e35	53	83	81	50	35	20	15	15	13
27	35	46	e34	48	79	77	49	37	20	15	15	13
28	34	45	e32	45	76	74	66	46	19	15	13	13
29	33	43	34	61	---	75	62	42	18	15	16	13
30	33	42	35	56	---	79	56	35	18	15	16	13
31	36	---	62	51	---	78	---	34	---	14	19	---
MEAN	52.3	51.4	42.6	46.9	84.9	91.9	58.2	52.9	24.7	19.0	15.4	14.9
MAX	210	220	63	62	289	375	73	180	33	48	20	24
MIN	33	29	32	36	47	60	49	34	18	14	13	13
IN.	5.15	4.90	4.20	4.63	7.55	9.06	5.55	5.21	2.36	1.87	1.52	1.42

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	22.2	30.6	34.8	40.6	46.0	54.0	48.1	38.8	32.3	31.9	26.3	24.8
MAX	52.3	77.9	63.2	81.4	84.9	110.1	64.2	57.3	78.2	94.9	63.3	67.8
(WY)	1990	1949	1949	1946	1990	1952	1952	1949	1989	1949	1949	1950
MIN	7.30	8.69	14.5	14.5	24.7	20.7	27.2	17.2	11.6	10.9	9.64	8.21
(WY)	1955	1955	1989	1955	1989	1988	1988	1988	1988	1988	1988	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	46.0		35.7	
HIGHEST ANNUAL MEAN			59.7	1949
LOWEST ANNUAL MEAN			18.3	1988
HIGHEST DAILY MEAN	375	Mar 17	467	Nov 26 1986
LOWEST DAILY MEAN	13	Aug 17	6.6	Sep 28 1954
INSTANTANEOUS PEAK FLOW	1240	Nov 15	1830*	Nov 26 1986
INSTANTANEOUS PEAK STAGE	4.75	Nov 15	5.25	Nov 26 1986
INSTANTANEOUS LOW FLOW	9.8*	Sep 6	3.6	Sep 28 1988
ANNUAL RUNOFF (INCHES)	53.4		41.4	
10 PERCENTILE	79		63	
50 PERCENTILE	41		30	
95 PERCENTILE	14		11	

* See REMARKS.

TENNESSEE RIVER BASIN

03441000 DAVIDSON RIVER NEAR BREVARD, NC

LOCATION.--Lat 35°16'23", long 82°42'21", Transylvania County, Hydrologic Unit 06010105, on right bank 150 ft upstream from bridge on State Highway 280, 2.1 mi downstream from Avery Creek, 3.3 mi northeast of Brevard, and at mile 2.2.

DRAINAGE AREA.--40.4 mi^2.

PERIOD OF RECORD.--October 1920 to September 1990 (discontinued). 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 above National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to May 17, 1934, nonrecording gage at site 50 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Minimum discharge for current water year also occurred on Sept. 28, 29, 30.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1869, 11.9 ft June 1876 (from studies by Tennessee Valley Authority).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1010	124	141	211	179	242	210	153	113	53	41	63
2	629	122	137	162	172	292	199	149	113	52	49	50
3	407	117	132	148	168	368	191	138	112	49	43	43
4	317	113	128	209	324	299	182	1010	106	49	41	39
5	267	110	127	197	239	267	176	417	101	47	38	37
6	234	143	124	221	209	248	172	309	98	49	40	34
7	209	128	124	198	196	232	166	258	95	50	37	33
8	192	133	250	258	181	236	159	229	92	50	40	48
9	176	133	197	219	183	264	155	260	89	49	55	63
10	166	119	173	193	458	236	167	425	89	50	61	43
11	157	115	165	177	308	222	178	298	84	50	52	39
12	148	110	315	164	255	210	154	255	81	44	62	51
13	141	108	290	152	228	201	148	233	79	51	45	45
14	135	108	226	146	210	194	145	211	77	207	43	42
15	130	241	201	141	198	193	144	196	76	88	39	53
16	131	766	181	136	959	472	138	184	75	59	37	39
17	336	275	167	132	523	1100	135	179	77	52	35	33
18	272	220	159	132	394	536	131	165	72	55	34	31
19	307	193	159	126	392	408	128	156	70	83	33	30
20	226	179	151	145	330	351	127	168	66	74	32	29
21	196	163	143	230	299	314	127	157	65	67	35	28
22	179	216	136	162	516	289	125	145	64	57	49	36
23	166	283	e138	149	446	270	146	139	62	52	40	30
24	158	211	e136	158	362	255	151	136	60	49	41	26
25	150	191	e133	285	317	242	149	131	58	50	93	26
26	145	178	128	236	290	237	131	127	57	47	48	26
27	140	168	120	197	272	225	125	140	59	44	62	25
28	133	160	118	180	257	212	213	151	68	42	40	25
29	131	151	117	231	---	222	227	145	61	44	38	25
30	128	145	125	220	---	230	171	122	56	44	62	25
31	138	---	234	193	---	235	---	116	---	44	123	---
MEAN	234	181	164	184	317	300	159	223	79.2	58.1	48.0	37.2
MAX	1010	766	315	285	959	1100	227	1010	113	207	123	63
MIN	128	108	117	126	168	193	125	116	56	42	32	25
IN.	6.68	4.99	4.67	5.26	8.16	8.57	4.39	6.36	2.19	1.66	1.37	1.03

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	94.5	106.1	132.0	152.2	166.0	183.3	174.5	144.8	113.7	93.9	97.5	90.1
MAX	379.2	362.0	323.1	373.7	362.9	465.5	349.3	292.7	253.6	284.9	404.1	296.6
(WY)	1965	1980	1933	1937	1939	1929	1957	1923	1967	1989	1928	1928
MIN	18.2	24.5	31.7	37.8	66.5	74.1	57.7	54.6	37.9	37.2	24.0	17.5
(WY)	1955	1955	1940	1956	1941	1988	1986	1941	1988	1986	1925	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	164.6		128.8	
HIGHEST ANNUAL MEAN			207.6	1949
LOWEST ANNUAL MEAN			70.6	1988
HIGHEST DAILY MEAN	1100	Mar 17	2860	Oct 16 1932
LOWEST DAILY MEAN	25	Sep 27	14	Sep 28 1954
INSTANTANEOUS PEAK FLOW	3590	May 4	8400	Aug 15 1928
INSTANTANEOUS PEAK STAGE	7.04	May 4	11.80	Aug 15 1928
INSTANTANEOUS LOW FLOW	24*	Sep 27	13	Oct 11 1954
ANNUAL RUNOFF (INCHES)	55.3		43.3	
10 PERCENTILE	288		231	
50 PERCENTILE	143		102	
95 PERCENTILE	35		35	

* See REMARKS.

TENNESSEE RIVER BASIN

03441440 LITTLE RIVER ABOVE HIGH FALLS NEAR CEDAR MOUNTAIN, NC

LOCATION.--Lat 35°11'32", long 82°36'49", Transylvania County, Hydrologic Unit 06010105, on left bank 100 ft upstream from High Falls, 0.2 mi upstream from Grassy Creek, 1.0 mi downstream from Reasonover Creek, 3.8 mi northeast of Cedar Mountain, and at mile 7.8.

DRAINAGE AREA.--26.8 mi^2.

PERIOD OF RECORD.--October 1962 to September 1990 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,513.27 ft above National Geodetic Vertical Datum of 1929 (Tennessee Valley Authority bench mark).

REMARKS.--Records good except those for estimated daily discharges, which are fair. E. I. du Pont de Nemours and Company plant 0.5 mi above gage diverted about 0.2 ft^3/s for industrial use. Since 1969, more than 7.82 mi^2 of total drainage area affected by occasional filling and/or draining of recreational lakes on tributaries upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	943	89	89	e175	149	163	160	96	57	33	37	82
2	832	87	84	e150	139	201	153	99	58	30	38	64
3	432	85	80	e130	131	340	141	125	57	27	62	56
4	302	82	75	e185	183	250	134	106	55	26	43	50
5	251	82	76	e175	157	209	129	100	51	25	42	46
6	218	94	77	e190	145	190	124	89	52	33	45	43
7	194	91	77	e170	152	173	120	84	54	34	38	42
8	172	92	169	e210	128	168	113	82	52	27	39	41
9	157	98	157	149	121	178	110	97	58	27	36	82
10	148	85	e133	133	381	161	122	369	58	27	47	60
11	139	78	e120	123	264	153	159	195	50	32	38	50
12	128	80	e209	115	199	144	123	149	45	30	38	55
13	121	77	e230	106	169	138	115	130	43	37	35	57
14	113	75	e170	102	154	133	111	118	43	194	62	57
15	109	93	e163	98	141	135	111	105	43	156	53	62
16	109	326	e158	96	783	324	105	97	42	80	66	51
17	198	166	e150	93	561	1090	99	99	41	57	45	45
18	209	130	e145	92	319	546	95	89	43	50	40	40
19	324	115	e139	88	304	338	90	82	46	62	37	38
20	198	106	e135	94	250	279	90	86	38	71	36	37
21	162	100	e130	169	213	244	89	82	37	63	33	36
22	143	120	e125	126	343	218	85	75	38	58	43	48
23	132	177	e125	123	326	202	83	73	40	48	40	39
24	123	129	e120	113	253	190	80	71	34	41	40	32
25	117	119	e120	201	212	177	78	67	34	57	152	31
26	115	114	e115	178	189	171	78	65	34	50	82	30
27	107	106	e115	144	178	167	81	65	37	40	58	29
28	105	101	e110	128	172	154	124	68	53	36	48	28
29	98	92	e110	206	---	164	149	77	54	36	45	28
30	93	89	e120	236	---	160	106	65	38	44	58	28
31	96	---	e195	172	---	173	---	60	---	38	124	---
MEAN	213	109	130	144	240	237	112	102	46.2	50.6	51.6	46.2
MAX	943	326	230	236	783	1090	160	369	58	194	152	82
MIN	93	75	75	88	121	133	78	60	34	25	33	28
IN.	9.14	4.55	5.58	6.20	9.32	10.18	4.66	4.39	1.92	2.18	2.22	1.93

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	95.3	102.3	116.5	118.4	129.4	149.2	128.1	110.9	93.1	70.9	70.4	70.0
MAX	349.0	267.9	222.5	234.8	264.5	344.4	247.1	222.1	172.3	181.5	153.2	185.2
(WY)	1965	1980	1984	1978	1966	1979	1980	1973	1989	1989	1974	1975
MIN	20.0	16.4	43.2	29.0	60.5	54.9	42.1	42.6	27.9	26.6	19.4	14.8
(WY)	1982	1982	1981	1981	1986	1988	1986	1988	1988	1977	1981	1981

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	122.9		104.4	
HIGHEST ANNUAL MEAN			154.9	1979
LOWEST ANNUAL MEAN			47.6	1981
HIGHEST DAILY MEAN	1090	Mar 17	2840	Oct 4 1964
LOWEST DAILY MEAN	25	Jul 5	8.1	Oct 3 1981
INSTANTANEOUS PEAK FLOW	1550	Mar 17	5600	Oct 4 1964
INSTANTANEOUS PEAK STAGE	4.18	Mar 17	7.30	Oct 4 1964
INSTANTANEOUS LOW FLOW	22	Jul 6	7.0	Sep 24 1981
ANNUAL RUNOFF (INCHES)	62.3		52.9	
10 PERCENTILE	206		186	
50 PERCENTILE	101		80	
95 PERCENTILE	33		26	

TENNESSEE RIVER BASIN

03443000 FRENCH BROAD RIVER AT BLANTYRE, NC

LOCATION.--Lat 35°17'56", long 82°37'26", Transylvania County, Hydrologic Unit 06010105, on left bank 40 ft upstream from bridge on Secondary Road 1503, 700 ft east of railroad at Blantyre, 3.5 mi downstream from Little River, and at mile 183.7.

DRAINAGE AREA.--296 mi^2.

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 above National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to July 5, 1930, nonrecording gage at same site and datum. The National Weather Service has telemetry at station.

REMARKS.--Records good except those above 2,600 ft^3/s and for estimated daily discharges, which are fair. Considerable diurnal fluctuation at low flow caused by powerplant about 8 mi above station. Maximum gage height, 25.50 ft, from floodmarks.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1791, 27.1 ft July 16, 1916, from floodmarks (from studies by Tennessee Valley Authority).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4190	963	1000	2220	1460	e1780	1690	1110	780	368	464	690
2	6190	921	970	1440	1340	1940	1620	1080	763	356	496	576
3	5680	909	942	1210	1280	3180	1540	1150	700	337	426	516
4	3760	886	916	1320	1860	2920	1470	2200	709	314	412	489
5	2210	871	908	1520	1930	2210	1420	1970	718	323	418	459
6	1730	951	877	1550	1550	1950	1370	1480	653	324	450	405
7	1570	1050	866	1480	1440	1790	1370	1310	642	410	449	359
8	1440	1010	1430	1740	1330	1710	1290	1170	647	399	413	335
9	1340	996	1520	1640	1240	1880	1260	1150	683	377	447	661
10	1260	843	1310	1430	3060	1770	1270	2480	680	399	598	615
11	1200	842	1210	1290	4080	1660	1610	1950	635	513	439	501
12	1150	818	1700	1200	2920	1580	1350	1470	597	395	440	506
13	1100	837	2220	1110	1900	1510	1260	1310	555	402	420	651
14	1060	832	1650	1060	1660	1450	1220	1200	507	1160	512	670
15	1020	918	1440	1020	1540	1420	1200	1110	506	1280	443	645
16	1000	3220	1300	995	3220	2330	1170	1040	555	729	381	559
17	1720	2670	1180	968	6580	5540	1130	1020	560	559	344	466
18	1620	1550	1120	961	5740	6970	1090	994	537	557	367	425
19	2240	1310	1090	946	4190	5160	1060	915	571	669	370	398
20	1680	1210	1060	949	3260	3600	1040	935	521	833	359	417
21	1420	1140	1010	1640	2510	2680	1040	966	458	755	337	388
22	1290	1240	973	1340	2690	2290	1040	879	483	661	451	376
23	1200	2030	892	1150	3700	2120	1030	847	493	572	377	394
24	1150	1530	882	1090	3460	1980	1050	830	413	522	392	339
25	1100	1350	940	1800	e2600	1880	1040	808	402	574	1020	361
26	1060	1260	939	1930	e2000	1800	977	789	394	523	866	355
27	1020	1180	890	1500	e1900	1810	956	848	393	469	652	343
28	991	1140	849	1330	e1850	1680	1090	977	467	437	593	322
29	962	1080	835	1470	---	1680	1670	1160	501	425	514	281
30	952	1040	850	2240	---	1700	1250	892	386	446	560	283
31	966	---	1310	1680	---	1880	---	804	---	426	974	---
MEAN	1783	1220	1132	1394	2582	2382	1252	1189	564	533	496	459
MAX	6190	3220	2220	2240	6580	6970	1690	2480	780	1280	1020	690
MIN	952	818	835	946	1240	1420	956	789	386	314	337	281
IN.	6.95	4.60	4.41	5.43	9.09	9.28	4.72	4.63	2.13	2.08	1.93	1.73

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	760.4	830.4	1027	1175	1267	1382	1303	1079	871.3	737.9	761.6	690.3
MAX	3504	2486	2142	2783	2582	3169	2509	2339	1872	2214	2259	1828
(WY)	1965	1980	1962	1937	1990	1979	1936	1973	1989	1949	1928	1979
MIN	156.8	234.8	301.3	260.3	560.8	549.6	473.2	433.6	278.3	290.0	191.1	168.7
(WY)	1955	1955	1956	1956	1941	1988	1986	1988	1988	1925	1925	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	1242		989.1	
HIGHEST ANNUAL MEAN			1564	1949
LOWEST ANNUAL MEAN			534.3	1988
HIGHEST DAILY MEAN	6970	Mar 18	22700	Oct 5 1964
LOWEST DAILY MEAN	281	Sep 29	123	Oct 10 1954
INSTANTANEOUS PEAK FLOW	7550	Mar 18	30000	Oct 5 1964
INSTANTANEOUS PEAK STAGE	19.27	Mar 18	25.50*	Oct 5 1964
INSTANTANEOUS LOW FLOW	279	Sep 29	119	Oct 1 1954
ANNUAL RUNOFF (INCHES)	57.0		45.4	
10 PERCENTILE	2100		1730	
50 PERCENTILE	1030		802	
95 PERCENTILE	368		295	

* See REMARKS.

TENNESSEE RIVER BASIN

03446000 MILLS RIVER NEAR MILLS RIVER, NC

LOCATION.--Lat 35°23'55", long 82°35'42", Henderson County, Hydrologic Unit 06010105, on right bank 1.5 mi downstream from confluence of North and South Forks, 1.8 mi northwest of Mills River, 4.2 mi northwest of Horseshoe, and at mile 4.6.

DRAINAGE AREA.--66.7 mi^2.

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 above National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to Oct. 1, 1926, nonrecording gage at site 500 ft upstream at datum 2.97 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are fair. City of Hendersonville diverted about 7.7 ft^3/s from North Fork and Bradley Creek for municipal water supply. Maximum discharge, 13,400 ft^3/s, from rating curve extended above 6,200 ft^3/s on basis of slope-area measurement of peak flow. Minimum discharge, 16 ft^3/s, result of freezeup. Minimum discharge for current water year also occurred Sept. 29, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1440	177	200	269	228	348	277	181	147	77	68	90
2	992	171	194	213	222	383	265	175	145	74	64	71
3	617	167	189	199	223	492	255	169	145	71	64	62
4	471	161	183	225	495	415	245	697	140	70	64	57
5	391	158	182	226	367	374	238	410	132	68	59	57
6	338	194	178	264	312	347	231	305	129	67	60	54
7	300	183	176	245	285	326	227	267	126	65	58	51
8	275	176	340	315	261	320	217	237	128	86	58	54
9	254	173	284	287	250	337	211	245	136	81	74	95
10	240	161	247	258	510	307	219	469	127	73	114	75
11	227	155	238	241	404	292	237	337	117	84	68	70
12	215	152	337	225	342	280	208	287	112	72	62	80
13	205	148	348	210	305	269	200	260	109	76	57	79
14	197	147	294	203	283	260	197	238	107	279	61	68
15	189	294	270	196	268	256	195	221	106	156	68	67
16	185	1180	247	191	1280	491	189	209	109	97	59	60
17	415	437	231	185	847	1450	184	213	109	87	55	53
18	325	334	222	182	606	811	179	194	104	111	54	51
19	410	287	217	177	578	591	173	184	100	118	53	50
20	308	262	207	185	493	501	177	190	95	146	53	50
21	269	242	197	244	442	445	177	193	94	157	77	50
22	246	276	e185	196	617	406	169	174	92	126	122	50
23	230	350	e182	184	629	376	183	167	89	99	76	51
24	219	280	e188	192	521	354	171	162	86	88	69	49
25	209	260	e197	308	456	334	164	158	85	87	86	47
26	202	247	189	287	414	324	160	154	84	81	75	46
27	194	236	174	244	386	312	158	157	86	74	61	43
28	188	228	174	226	364	293	217	186	98	69	56	40
29	183	215	168	261	---	293	248	206	88	71	53	40
30	179	207	170	274	---	293	195	160	81	72	68	40
31	190	---	266	242	---	309	---	151	---	72	148	---
MEAN	332	255	222	231	442	406	206	237	110	95.3	69.8	58.3
MAX	1440	1180	348	315	1280	1450	277	697	147	279	148	95
MIN	179	147	168	177	222	256	158	151	81	65	53	40
IN.	5.75	4.27	3.83	3.99	6.91	7.02	3.44	4.10	1.84	1.65	1.21	.98

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	126.4	144.2	164.6	192.8	220.9	245.6	239.6	192.7	151.4	122.5	128.3	115.6
MAX	464.7	510.2	338.1	534.1	448.2	519.6	467.9	412.0	326.3	355.6	505.5	353.7
(WY)	1965	1980	1962	1937	1939	1979	1957	1973	1967	1989	1940	1979
MIN	24.8	35.2	40.7	43.5	88.9	87.5	79.7	76.2	41.7	38.6	43.7	23.7
(WY)	1955	1955	1940	1956	1941	1988	1986	1988	1988	1988	1986	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	221.0		170.2	
HIGHEST ANNUAL MEAN			271.8	1949
LOWEST ANNUAL MEAN			86.8	1988
HIGHEST DAILY MEAN	1450	Mar 17	4470	Aug 13 1940
LOWEST DAILY MEAN	40	Sep 28	18	Sep 30 1954
INSTANTANEOUS PEAK FLOW	2510	Nov 16	13400*	Aug 30 1940
INSTANTANEOUS PEAK STAGE	6.59	Nov 16	13.62	Aug 30 1940
INSTANTANEOUS LOW FLOW	40*	Sep 28	16*	Dec 24 1943
ANNUAL RUNOFF (INCHES)	45.0		34.6	
10 PERCENTILE	382		303	
50 PERCENTILE	193		137	
95 PERCENTILE	54		47	

* See REMARKS.

TENNESSEE RIVER BASIN

0344894205 NORTH FORK SWANNANOA RIVER NEAR WALKERTOWN, NC

LOCATION.--Lat 35°41'07", long 82°19'58", Buncombe County, Hydrologic Unit 06010105, on left bank above Sugar Springs Cove and 0.6 miles above Burnett Reservoir, and 2.3 miles north of Walkertown.

DRAINAGE AREA.--14.5 mi^2.

PERIOD OF RECORD.--February 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,650 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those above 700 ft^3/s and for estimated daily discharges, which are fair. Maximum discharge, 3,370 ft^3/s, from rating curve extended above 700 ft^3/s by logarithmic plotting.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	258	23	37	83	61	57	50	40	55	8.7	12	34
2	165	22	35	52	55	85	46	39	49	9.0	11	26
3	107	21	32	46	53	168	43	35	44	7.7	11	21
4	81	20	31	59	92	113	40	154	39	7.3	9.9	17
5	64	19	29	61	71	91	38	100	35	6.7	10	15
6	52	23	28	122	61	79	38	78	32	6.4	14	13
7	44	21	27	86	56	70	36	67	29	6.2	10	11
8	38	21	58	106	51	64	34	56	27	8.7	22	10
9	35	21	56	87	50	70	33	81	35	7.7	29	10
10	32	20	46	74	287	68	34	265	28	6.7	24	9.5
11	29	19	42	63	131	61	50	115	25	6.7	20	16
12	27	18	94	55	96	55	40	87	22	15	16	17
13	25	18	86	49	81	51	36	73	21	30	13	13
14	23	18	67	45	70	47	35	61	19	179	12	16
15	22	39	58	42	62	44	33	53	21	64	11	13
16	21	288	e49	40	614	236	32	47	24	34	9.8	10
17	54	84	e44	37	246	661	31	49	21	38	9.0	9.0
18	74	63	e41	36	153	222	30	42	19	81	8.6	8.0
19	114	52	39	35	183	140	28	38	17	66	7.9	7.6
20	64	47	36	44	132	109	27	41	15	47	7.9	7.2
21	50	41	34	97	108	91	27	42	14	36	7.9	6.7
22	44	69	32	59	136	80	27	47	14	32	16	13
23	39	132	e31	50	126	71	25	45	13	35	25	8.8
24	36	79	e30	49	101	63	26	39	12	28	19	7.0
25	33	65	e28	101	85	58	24	35	11	24	20	6.5
26	31	57	e27	88	76	52	23	33	11	21	22	5.8
27	29	53	e27	70	69	48	22	36	10	19	17	5.6
28	27	53	e26	63	63	44	44	115	10	16	13	5.4
29	25	46	e24	92	---	48	60	125	9.2	19	11	5.3
30	24	40	26	90	---	47	44	94	8.8	15	14	5.2
31	25	---	85	71	---	56	---	68	---	13	83	---
MEAN	54.6	49.7	42.1	66.2	120	102	35.2	71.0	23.0	28.8	16.6	11.8
MAX	258	288	94	122	614	661	60	265	55	179	83	34
MIN	21	18	24	35	50	44	22	33	8.8	6.2	7.9	5.2
IN.	4.34	3.83	3.35	5.27	8.65	8.08	2.71	5.65	1.77	2.29	1.32	.91

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	54.6	49.7	42.1	66.2	78.4	89.0	39.6	67.6	45.6	35.9	14.7	38.0
MAX	54.6	49.7	42.1	66.2	120.3	101.6	44.0	71.0	68.1	43.0	16.6	64.3
(WY)	1990	1990	1990	1990	1990	1990	1989	1990	1989	1989	1990	1989
MIN	54.6	49.7	42.1	66.2	36.6	76.4	35.2	64.1	23.0	28.8	12.8	11.8
(WY)	1990	1990	1990	1990	1989	1989	1990	1989	1990	1990	1989	1990

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	51.4		*****	
HIGHEST ANNUAL MEAN			51.4	1990
LOWEST ANNUAL MEAN			51.4	1990
HIGHEST DAILY MEAN	661	Mar 17	788	Sep 22 1989
LOWEST DAILY MEAN	5.2	Sep 30	5.2	Sep 30 1990
INSTANTANEOUS PEAK FLOW	1600	Mar 17	3370*	Sep 22 1989
INSTANTANEOUS PEAK STAGE	6.31	Mar 17	7.57	Sep 22 1989
INSTANTANEOUS LOW FLOW	4.9	Sep 30	4.9	Sep 30 1990
ANNUAL RUNOFF (INCHES)	48.2		*****	
10 PERCENTILE	96		96	
50 PERCENTILE	38		38	
95 PERCENTILE	7.6		7.6	

***** Indicates not enough data, therefore statistic is not computed

* See REMARKS.

TENNESSEE RIVER BASIN

03450000 BEETREE CREEK NEAR SWANNANOA, NC

LOCATION.--Lat 35°39'11", long 82°24'20", Buncombe County, Hydrologic Unit 06010105, on left bank 0.5 mi downstream from Wolfe Branch, 0.8 mi upstream from Beetree Reservoir dam, 3.8 mi north of Swannanoa, and 4.8 mi above mouth.

DRAINAGE AREA.--5.46 mi^2.

PERIOD OF RECORD.--February 1926 to September 1975, October 1979 to September 1981, Oct. 1985 to September 1986, and May 1987 to current year.

REVISED RECORDS.--WSP 823: Drainage area. WSP 893: 1928, 1936-37 (M). WSP 953: 1929 (M). WSP 1276: 1932.

GAGE.--Water-stage recorder and masonry control. Datum of gage is 2,728.39 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Maximum discharge, 1,370 ft^3/s, from rating curve extended above 240 ft^3/s on basis of computation of peak flow over weir. Minimum discharge, 0.3 ft^3/s occurred several days in September and October 1954. Minimum discharge for current water year also occurred on Sept. 8, 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	7.7	13	23	22	25	17	11	19	2.6	2.6	2.2
2	42	7.2	13	18	21	28	16	11	17	2.6	2.5	1.9
3	30	6.9	12	18	20	41	15	11	15	2.3	2.6	1.8
4	23	6.3	12	19	27	38	14	48	13	2.2	2.4	1.6
5	18	5.9	11	19	24	33	13	34	12	2.1	2.3	1.4
6	15	7.9	11	33	22	30	13	26	11	2.1	3.1	1.4
7	12	6.9	10	30	21	26	13	22	9.6	2.1	2.4	1.3
8	11	6.5	19	30	19	25	12	19	10	2.5	3.0	1.2
9	9.9	6.4	19	26	19	25	11	22	14	2.5	3.2	1.3
10	9.0	5.9	16	23	58	23	12	46	10	2.2	4.7	1.5
11	8.1	5.6	16	20	45	22	14	33	9.0	2.2	3.0	4.5
12	7.5	5.4	26	18	36	20	12	27	8.0	7.3	2.4	3.4
13	6.8	5.1	27	17	31	19	11	23	7.3	5.6	2.3	2.2
14	6.3	5.1	23	16	28	18	11	20	6.7	16	2.1	2.6
15	5.8	19	21	15	25	17	11	17	6.6	9.2	2.0	2.7
16	5.6	110	19	14	186	57	9.9	15	6.9	5.4	1.9	1.9
17	15	38	e17	13	98	198	9.7	16	6.5	4.8	1.7	1.6
18	19	28	e15	13	64	84	9.0	13	5.8	6.9	1.7	1.5
19	30	23	14	12	73	58	8.2	12	5.2	10	1.7	1.5
20	21	20	13	13	58	47	7.9	14	4.6	9.4	1.8	1.4
21	18	18	12	22	47	39	8.0	13	4.4	7.8	1.8	1.4
22	15	25	e12	18	49	35	7.9	15	4.2	7.6	4.8	3.3
23	14	40	e11	18	46	32	7.2	14	4.0	8.1	4.5	2.0
24	13	29	e11	18	41	28	7.3	12	3.7	6.2	2.5	1.7
25	12	24	e10	26	36	25	7.0	11	3.5	5.3	2.2	1.6
26	11	22	e9.5	28	32	23	6.7	10	3.4	4.5	2.0	1.5
27	10	20	e9.0	25	29	21	6.5	12	3.2	3.8	1.8	1.4
28	9.3	18	8.7	23	27	20	11	24	3.1	3.5	1.6	1.3
29	8.8	16	8.5	25	---	20	13	30	2.8	3.9	1.5	1.3
30	8.2	14	9.4	26	---	18	11	28	2.7	3.2	1.5	1.3
31	8.2	---	20	23	---	18	---	23	---	2.8	4.2	---
MEAN	15.5	18.4	14.5	20.7	43.0	35.9	10.8	20.4	7.74	5.05	2.51	1.86
MAX	58	110	27	33	186	198	17	48	19	16	4.8	4.5
MIN	5.6	5.1	8.5	12	19	17	6.5	10	2.7	2.1	1.5	1.2
IN.	3.27	3.77	3.05	4.37	8.20	7.58	2.22	4.31	1.58	1.07	.53	.38

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	6.30	8.44	10.3	12.9	15.5	18.8	16.6	11.8	8.42	6.38	6.54	5.17
MAX	33.8	45.3	25.4	38.5	43.0	43.1	34.1	28.5	27.0	37.9	61.8	21.2
(WY)	1930	1980	1933	1937	1990	1975	1936	1973	1949	1949	1940	1928
MIN	.652	1.23	1.58	1.99	4.46	5.25	5.21	4.68	1.82	1.34	1.15	.510
(WY)	1955	1955	1940	1940	1941	1988	1986	1948	1988	1930	1956	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	16.2		10.6	
HIGHEST ANNUAL MEAN			17.8	1949
LOWEST ANNUAL MEAN			6.18	1981
HIGHEST DAILY MEAN	198	Mar 17	528	Aug 13 1940
LOWEST DAILY MEAN	1.2	Sep 8	.30	Sep 30 1954
INSTANTANEOUS PEAK FLOW	439	Mar 17	1370*	Aug 13 1940
INSTANTANEOUS PEAK STAGE	4.28	Mar 17	6.20	Aug 13 1940
INSTANTANEOUS LOW FLOW	1.2*	Sep 7	.3*	Sep 29 1954
ANNUAL RUNOFF (INCHES)	40.3		26.4	
10 PERCENTILE	32		22	
50 PERCENTILE	12		7.1	
95 PERCENTILE	1.6		1.1	

* See REMARKS.

03451000 SWANNANOA RIVER AT BILTMORE, NC

LOCATION.--Lat 35°34'06", long 82°32'42", Buncombe County, Hydrologic Unit 06010105, on left bank at Biltmore, 100 ft downstream from Biltmore Avenue Bridge, 200 ft upstream from Southern Railway bridge, and 1.6 mi upstream from mouth.

DRAINAGE AREA.--130 mi^2.

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 above National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Dec. 1, 1920 to Sept. 30, 1926, nonrecording gage at site 100 ft upstream at same datum. The National Weather Service has telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Considerable regulation by Lake Craig 3.6 mi above station from 1925 to 1950 (reservoir silted). City of Asheville diverted an average of 36.4 ft^3/s for water supply from Burnett Lake on North Fork Swannanoa River 20 mi above station (station 03448959) and Bee Tree Lake on Bee Tree Creek 13 mi above station (station 03450000); an average of 42.1 ft^3/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 ft^3/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. Maximum discharge, 18,400 ft^3/s, from rating curve extended above 9,100 ft^3/s on basis of computation of peak flow over dam 3.6 mi above station. Minimum discharge, 1.1 ft^3/s, occurred several days in October 1941. Minimum discharge for current water year also occurred on Sept. 28.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed, 26 ft, discharge, 40,000 ft^3/s in April 1791, from studies by Tennessee Valley Authority. Flood of July 1916 reached a stage of 20.7 ft, discharge, 23,000 ft^3/s, from flood profile by Tennessee Valley Authority. Flood of Aug. 16, 1928, reached a stage of 18.74 ft, from floodmarks, discharge, 17,800 ft^3/s. High stages are subject to backwater from French Broad River.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	909	106	144	311	231	321	292	218	232	66	57	84
2	746	101	139	220	216	347	279	207	206	66	56	67
3	507	97	130	191	233	630	252	188	198	62	57	60
4	367	95	114	203	482	551	237	882	174	59	57	52
5	285	96	112	212	329	465	224	559	152	56	57	50
6	231	151	104	415	279	407	219	411	138	56	63	51
7	194	119	108	365	255	360	220	345	127	52	53	47
8	168	106	309	410	233	334	202	286	133	90	98	44
9	145	106	253	365	224	335	192	300	329	113	126	52
10	128	96	220	316	868	317	196	638	217	84	104	49
11	116	93	193	278	698	303	233	527	146	86	72	63
12	108	93	386	243	506	283	199	402	124	141	64	90
13	99	89	438	215	403	263	188	340	112	191	61	61
14	93	87	340	193	344	250	185	296	104	480	57	55
15	93	348	286	181	309	239	183	256	101	212	58	59
16	88	1510	247	170	2590	713	177	225	107	124	53	51
17	252	548	216	159	1680	3140	167	256	102	105	49	44
18	343	346	193	151	943	1610	158	201	94	103	50	40
19	558	259	179	146	1040	903	148	178	87	118	49	41
20	337	215	162	162	766	677	146	201	79	132	48	42
21	256	184	e139	344	618	552	150	193	80	161	56	38
22	208	318	e136	244	692	479	149	188	79	136	85	87
23	183	597	e129	206	643	425	156	179	80	123	73	60
24	162	393	e126	206	557	390	256	165	75	94	64	44
25	148	310	e121	338	470	361	231	154	71	97	63	41
26	137	271	e118	350	415	332	159	147	69	82	57	42
27	125	230	e113	307	376	309	142	263	68	73	49	39
28	123	208	e103	276	345	282	241	432	71	67	47	37
29	119	180	98	278	---	296	343	435	75	74	43	40
30	110	160	106	294	---	286	253	353	73	69	47	42
31	114	---	210	270	---	301	---	280	---	61	251	---
MEAN	240	250	183	259	598	531	206	313	123	111	68.5	52.4
MAX	909	1510	438	415	2590	3140	343	882	329	480	251	90
MIN	88	87	98	146	216	239	142	147	68	52	43	37

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	100.5	123.4	139.1	182.0	226.9	278.3	251.9	184.6	135.8	102.3	103.6	90.5
MAX	569.1	603.9	384.7	580.8	598.0	740.3	559.8	479.6	387.0	503.4	828.3	421.1
(WY)	1965	1980	1962	1937	1990	1975	1936	1973	1949	1949	1940	1979
MIN	13.7	27.0	35.3	32.3	65.7	45.7	55.6	45.5	17.7	18.2	18.8	13.8
(WY)	1955	1982	1989	1956	1988	1988	1986	1988	1988	1986	1956	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	242.7		159.4	
HIGHEST ANNUAL MEAN			276.7	1949
LOWEST ANNUAL MEAN			55.9	1988
HIGHEST DAILY MEAN	3140	Mar 17	7560	Aug 13 1940
LOWEST DAILY MEAN	37	Sep 28	1.2	Oct 14 1941
INSTANTANEOUS PEAK FLOW	4390	Mar 17	18400*	Aug 13 1940
INSTANTANEOUS PEAK STAGE	10.15	Mar 17	19.00	Aug 13 1940
INSTANTANEOUS LOW FLOW	29*	Sep 27	1.1*	Oct 9 1941
ANNUAL RUNOFF (INCHES)	25.3		16.7	
10 PERCENTILE	445		319	
50 PERCENTILE	177		107	
95 PERCENTILE	49		28	

* See REMARKS.

TENNESSEE RIVER BASIN

03451500 FRENCH BROAD RIVER AT ASHEVILLE, NC

LOCATION.--Lat 35°36'33", long 82°34'43", Buncombe County, Hydrologic Unit 06010105, on right bank 27 ft upstream from Pearson Bridge (Secondary Road 1348) at Asheville, 1.4 mi downstream from bridge on U.S. Highways 19 and 23, 3.2 mi downstream from Swannanoa River, and at mile 145.8.

DRAINAGE AREA.--945 mi^2.

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 above 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 upstream at datum 11.52 ft higher. Oct. 1, 1922 to Aug. 9, 1930, nonrecording gage at present site and datum. The National Weather Service has telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Many small diversions from tributaries above station for water supply. Diversions by city of Asheville and others from upstream tributaries in the Swannanoa River basin totaled about 36.4 ft^3/s (station 03451000), of which 42.1 ft^3/s was discharged as treated effluent 4 mi downstream from station. Slight diurnal fluctuation and occasional slight regulation at low flow caused by powerplant 46 mi upstream and small reservoirs above station. Maximum discharge, 110,000 ft^3/s, from floodmarks, from rating curve extended above 43,000 ft^3/s. Minimum discharge, 239 ft^3/s, occurred several days in August and September 1925.

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, from studies by Tennessee Valley Authority.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8680	1850	2170	3740	3030	3710	3560	2480	1950	1080	1070	2650
2	9250	1770	2110	3260	2830	3670	3320	2350	1880	1040	1100	1610
3	9100	1710	2060	2600	2720	5810	3140	2300	1860	995	1150	1340
4	8370	1680	2000	2500	4760	6000	3020	4540	1760	943	1070	1240
5	6640	1660	1970	2960	4510	5100	2920	4650	1730	907	1110	1170
6	4090	1810	1940	3540	3560	4270	2840	3420	1690	912	1070	1100
7	3090	2080	1900	3480	3160	3840	2850	2970	1590	901	1060	1020
8	2770	1910	2950	3770	2950	3570	2700	2630	1660	1020	1090	962
9	2530	1880	3550	3840	2800	3690	2600	2530	2150	1220	1140	1090
10	2370	1760	3050	3270	6520	3650	2580	4010	2160	1060	1510	1520
11	2250	1600	2750	2920	7230	3430	2990	4430	1720	1160	1250	1380
12	2150	1580	3340	2690	6160	3250	2920	3380	1570	1230	1060	1280
13	2060	1540	4880	2510	4660	3130	2650	2950	1490	1230	1050	1300
14	2010	1560	3990	2380	3580	3030	2540	2690	1430	2450	1140	1420
15	1910	1870	3270	2290	3280	2950	2490	2490	1390	3070	1200	1380
16	1840	8500	2950	2230	11500	4630	2440	2350	1420	2040	1130	1310
17	2740	6350	2680	2180	12900	15000	2370	2410	1450	1490	970	1140
18	3410	4420	2500	2140	11000	15500	2300	2320	1420	1400	932	1030
19	4480	3030	2400	2120	10500	12700	2230	2130	1360	1480	940	974
20	3790	2660	2340	2100	7920	9460	2210	2150	1370	1750	938	962
21	2920	2470	2240	3090	5900	6880	2220	2190	1280	1940	1010	972
22	2560	2530	2130	3060	5870	5220	2200	2110	1250	2030	1900	1090
23	2340	4800	e2060	2550	6800	4550	2170	1990	1230	1720	1410	1050
24	2210	3870	e2040	2420	6360	4250	2320	1940	1210	1400	1220	916
25	2110	3040	e2010	3420	5630	4010	2320	1890	1140	1370	1880	865
26	2010	2770	e1990	4240	4620	3810	2140	1850	1130	1370	2090	926
27	1950	2600	e1960	3440	4170	3730	2060	1980	1100	1240	1580	881
28	1890	2480	1920	2960	3920	3550	2270	2800	1160	1150	1370	853
29	1840	2350	1870	2860	---	3420	3450	3020	1240	1110	1230	817
30	1800	2230	1870	3920	---	3460	2930	2480	1230	1170	1200	797
31	1810	---	2270	3600	---	3680	---	2090	---	1110	2730	---
MEAN	3451	2679	2489	2970	5673	5256	2625	2694	1501	1387	1277	1168
MAX	9250	8500	4880	4240	12900	15500	3560	4650	2160	3070	2730	2650
MIN	1800	1540	1870	2100	2720	2950	2060	1850	1100	901	932	797
IN.	4.21	3.16	3.04	3.62	6.25	6.41	3.10	3.29	1.77	1.69	1.56	1.38

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	1580	1603	2098	2360	2629	2983	2733	2189	1870	1725	1681	1468
MAX	7025	5121	5700	6068	5673	7928	5705	4961	5774	11500	8362	4967
(WY)	1965	1980	1915	1937	1990	1899	1899	1973	1909	1916	1901	1906
MIN	352.8	507.2	635.8	547.9	1083	1037	973.0	859.3	546.8	559.0	327.8	345.9
(WY)	1955	1932	1956	1956	1931	1988	1986	1988	1988	1986	1925	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	2749		2072	
HIGHEST ANNUAL MEAN			3671	1901
LOWEST ANNUAL MEAN			1004	1988
HIGHEST DAILY MEAN	15500	Mar 18	66000	Jul 16 1916
LOWEST DAILY MEAN	797	Sep 30	239	Sep 21 1925
INSTANTANEOUS PEAK FLOW	18200	Mar 17	110000*	Jul 16 1916
INSTANTANEOUS PEAK STAGE	8.75	Mar 17	23.10	Jul 16 1916
INSTANTANEOUS LOW FLOW	789	Sep 30	239*	Aug 28 1925
ANNUAL RUNOFF (INCHES)	39.5		29.8	
10 PERCENTILE	4540		3650	
50 PERCENTILE	2250		1620	
95 PERCENTILE	989		642	

* See REMARKS.

03453500 FRENCH BROAD RIVER AT MARSHALL, NC
(National stream-quality accounting network station)

LOCATION.--Lat 35°47'10", long 82°39'39", Madison County, Hydrologic Unit 06010105, on right bank 0.7 mi upstream from Hayes Creek, 1.0 mi downstream from Ivy River, 1.5 mi southeast of Marshall, and at mile 126.7.

DRAINAGE AREA.--1,332 mi^2.

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 above National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). The National Weather Service has telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Small diversions from tributaries for water supply. Slight diurnal fluctuation and occasional slight regulation at low flow caused by small reservoirs above station. Prior to July 1963, some regulation by Weaver plant of Carolina Power and Light Company 15 mi upstream, after Nov. 1986 the same power plant was operated by the Metropolitan Sewage Treatment Plant. Minimum discharge, 193 ft^3/s, also occurred Sept. 14, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed since at least 1791, 22.0 ft July 16, 1916, discharge, 115,000 ft^3/s, and flood of Aug. 30, 1940, reached a stage of 16.6 ft, discharge, 70,000 ft^3/s, from highwater marks, flood profiles, and studies by Tennessee Valley Authority.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10500	2040	2460	4870	3940	4540	4220	2990	2360	1130	1070	3130
2	10400	2020	2360	4340	3550	4400	3940	2830	2210	1080	1100	1740
3	9820	1970	2290	3300	3350	6400	3730	2680	2190	1010	1170	1420
4	9160	1920	2200	3060	5530	6840	3550	5060	2050	959	1100	1260
5	7590	1860	2180	3520	5780	5950	3400	5950	1950	921	1110	1190
6	5150	1970	2150	4580	4590	5030	3290	4460	1930	911	1120	1120
7	3670	2390	2090	4710	3980	4550	3300	3690	1710	903	1070	1050
8	3230	2180	3380	5070	3650	4250	3070	3230	1740	940	1040	969
9	2930	2150	4590	5180	3380	4280	2990	2990	2400	1280	1150	958
10	2710	2040	3910	4370	7550	4310	2890	4640	2380	1090	1510	1560
11	2570	1830	3400	3760	8960	4060	3030	5350	1930	1170	1410	1540
12	2450	1800	4220	3400	7580	3850	3240	4180	1710	1270	1110	1310
13	2330	1760	6190	3080	6020	3670	3040	3500	1600	1380	1060	1280
14	2240	1740	5200	2850	4600	3560	2900	3150	1530	2850	1120	1460
15	2160	1780	4190	2720	4120	3470	2860	2890	1500	3640	1270	1460
16	2090	9090	3660	2630	16600	5790	2810	2700	1510	2420	1130	1340
17	2690	7420	3210	2540	15900	22300	2720	2930	1520	1640	1010	1190
18	3730	5430	3000	2490	12200	17400	2660	2760	1490	1490	919	1030
19	4700	3650	2830	2430	12400	13700	2540	2460	1440	1600	926	983
20	4880	3060	2760	2400	9640	10600	2470	2420	1410	1760	907	970
21	4010	2800	e2660	3870	7450	8000	2490	2510	1360	2050	976	964
22	3270	3030	e2630	3920	6860	6290	2500	2540	1280	2190	2130	1160
23	2860	6380	e2570	3200	7970	5490	2440	2340	1280	2130	1940	1130
24	2610	5100	e2510	2950	7450	5080	2440	2210	1240	1560	1210	1030
25	2440	3920	e2470	4140	6730	4780	2680	2130	1190	1410	2270	842
26	2320	3400	e2440	5560	5690	4510	2430	2070	1140	1470	2200	935
27	2230	3080	e2380	4580	5110	4390	2310	2110	1130	1330	1700	907
28	2160	2940	e2340	3840	4800	4180	2510	3440	1170	1220	1430	890
29	2090	2720	e2200	3740	---	4050	4140	4130	1220	1160	1270	858
30	2050	2570	e2070	5060	---	4120	3580	3320	1300	1170	1190	829
31	2020	---	2640	4780	---	4200	---	2630	---	1160	2700	---
MEAN	3970	3135	3006	3772	6978	6259	3006	3235	1629	1493	1333	1217
MAX	10500	9090	6190	5560	16600	22300	4220	5950	2400	3640	2700	3130
MIN	2020	1740	2070	2400	3350	3470	2310	2070	1130	903	907	829

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	1765	2012	2434	2761	3304	3697	3372	2683	2162	1784	1718	1538
MAX	8172	5640	5465	5710	6978	7170	6149	5478	4191	5071	4867	3857
(WY)	1965	1980	1962	1946	1990	1975	1983	1973	1989	1949	1961	1950
MIN	449.8	650.9	778.2	714.5	1571	1235	1191	1066	699.7	707.9	635.3	383.5
(WY)	1955	1955	1956	1956	1988	1988	1986	1988	1988	1986	1956	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	3233		2431	
HIGHEST ANNUAL MEAN			3573	1949
LOWEST ANNUAL MEAN			1229	1988
HIGHEST DAILY MEAN	22300	Mar 17	30800	Oct 5 1964
LOWEST DAILY MEAN	829	Sep 30	292	Sep 27 1954
INSTANTANEOUS PEAK FLOW	32400	Mar 17	54000	Nov 6 1977
INSTANTANEOUS PEAK STAGE	10.21	Mar 17	13.64	Nov 6 1977
INSTANTANEOUS LOW FLOW	481	Sep 25	193*	Sep 13 1954
ANNUAL RUNOFF (INCHES)	33.0		24.8	
10 PERCENTILE	5620		4320	
50 PERCENTILE	2580		1950	
95 PERCENTILE	985		747	

* See REMARKS.

TENNESSEE RIVER BASIN

03453500 FRENCH BROAD RIVER AT MARSHALL, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957-67, 1973 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1964 to September 1967, August 1973 to September 1978, March 1979 to September 1984.
WATER TEMPERATURES: October 1957 to September 1967, August 1973 to September 1978, March 1979 to September 1984.

INSTRUMENTATION.--Water-quality monitor since October 1980.

REMARKS.--Station operated as part of NASQAN network from March 1979 to present. Daily records of specific conductance for water years 1958-64 are available in files of district office in Raleigh, NC.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 265 microsiemens Oct. 18, 1981; minimum daily, 33 microsiemens May 31, 1976.
WATER TEMPERATURE: Maximum, 32.5°C, July 5, 1982, July 26, 1984; minimum daily, 0.0°C on several days during the winter months of most years.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
DEC 04...	1000	2120	65	6.6	1.0	3.6	719	12.8	K3	K240	3.7	1.1
MAR 26...	1245	5000	47	7.0	11.0	4.0	724	10.5	K70	K170	3.1	0.99
MAY 22...	1115	2510	62	6.6	18.0	12	714	9.5	380	760	3.5	1.2
AUG 27...	1315	1540	81	6.8	25.0	84	721	7.9	4000	2400	4.4	1.2

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	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)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)
DEC 04...	6.7	48	0.8	1.4	29	24	6.0	4.7	0.10	11	66	0.490
MAR 26...	3.5	37	0.4	0.90	12	10	3.7	2.9	<0.10	9.6	36	--
MAY 22...	6.1	47	0.7	1.2	17	14	4.3	4.8	<0.10	10	46	0.480
AUG 27...	8.3	49	0.9	2.2	27	22	5.0	8.5	<0.10	10	58	0.770

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)
DEC 04...	0.010	0.500	0.130	0.130	0.17	0.17	0.37	0.50	0.070	0.040	0.040	0.12
MAR 26...	<0.010	0.500	0.060	0.070	0.08	0.09	1.8	1.9	0.050	<0.010	0.020	0.06
MAY 22...	0.020	0.500	0.130	0.100	0.17	0.13	0.67	0.80	0.180	0.080	0.050	0.15
AUG 27...	0.030	0.800	0.040	0.070	0.05	0.09	1.2	1.2	0.380	0.090	0.060	0.18

03453500 FRENCH BROAD RIVER AT MARSHALL, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)
DEC 04...	30	<1	12	<0.5	<1.0	<1	<3	2	130	<1	<4	17
MAR 26...	40	<1	11	<0.5	<1.0	<5	<3	<10	83	<10	<4	8
MAY 22...	40	<1	13	<0.5	<1.0	2	<3	2	120	<1	<4	8
AUG 27...	190	<1	15	<0.5	<1.0	<1	<3	2	190	<1	<4	63

DATE	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC 04...	<0.1	<10	<1	<1	<1.0	23	<6	13	9	52	30
MAR 26...	<0.1	<10	<10	<1	<1.0	19	<6	7	34	459	43
MAY 22...	<0.1	<10	6	<1	<1.0	24	<6	6	33	224	63
AUG 27...	<0.1	<10	1	<1	<1.0	24	<6	9	291	1210	61

TENNESSEE RIVER BASIN

03455500 WEST FORK PIGEON RIVER ABOVE LAKE LOGAN NEAR HAZELWOOD, NC

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 upstream from Big Creek, 1.1 mi upstream from Lake Logan, 6.7 mi southeast of Hazelwood, and at mile 9.3.

DRAINAGE AREA.--27.6 mi^2.

PERIOD OF RECORD.--February 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,976.00 ft above National Geodetic Vertical Datum of 1929 (Tennessee Valley Authority bench mark). Landline telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Maximum gage height, 9.50 ft, from floodmarks. Minimum discharge, 9.4 ft/s, also occurred Sept. 30, 1954. Minimum discharge for current year also occurred Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	771	64	81	210	131	154	124	99	80	31	32	46
2	424	61	77	130	127	271	117	108	79	30	32	39
3	269	59	70	117	139	351	109	89	97	28	31	34
4	208	57	85	256	319	214	101	704	80	28	30	30
5	171	55	69	174	179	184	95	264	71	28	29	29
6	147	101	68	221	154	170	101	182	67	34	30	27
7	131	70	68	176	157	157	102	153	64	31	29	26
8	118	92	222	208	134	170	87	134	61	29	49	27
9	107	104	122	161	154	251	82	180	58	29	34	31
10	99	76	99	145	626	176	105	321	57	44	39	33
11	93	69	95	131	264	155	123	167	54	36	30	31
12	86	65	366	119	187	143	88	145	51	40	28	30
13	82	63	195	107	184	133	82	135	49	58	28	29
14	77	61	143	107	165	124	78	122	48	367	27	29
15	74	162	129	102	157	122	79	112	48	116	25	62
16	71	390	e120	100	1320	962	71	105	48	53	24	30
17	219	137	e114	95	461	1220	70	119	46	44	24	26
18	284	115	e107	101	351	449	70	98	44	43	24	25
19	186	103	109	92	372	338	64	91	43	170	23	24
20	119	95	98	140	278	280	62	139	39	84	34	23
21	103	88	88	253	240	240	66	119	38	69	34	22
22	96	190	e84	127	514	211	62	99	38	54	46	41
23	89	211	e78	113	304	189	59	92	37	53	56	26
24	84	125	e74	123	247	173	67	87	37	49	29	22
25	79	114	e69	284	211	159	66	82	35	49	144	21
26	75	108	e66	172	193	155	57	79	34	42	44	21
27	72	101	e62	143	179	142	53	105	37	38	56	20
28	70	96	e58	134	165	129	328	116	38	37	34	20
29	67	89	56	214	---	146	182	117	34	39	31	20
30	66	83	70	171	---	148	112	92	32	36	52	19
31	71	---	330	143	---	152	---	84	---	33	87	---
MEAN	149	107	112	154	283	254	95.4	146	51.5	58.8	39.2	28.8
MAX	771	390	366	284	1320	1220	328	704	97	367	144	62
MIN	66	55	56	92	127	122	53	79	32	28	23	19
IN.	6.21	4.32	4.68	6.43	10.66	10.60	3.86	6.12	2.08	2.46	1.64	1.16

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	73.1	88.5	110.1	118.1	154.6	161.8	144.1	112.3	83.0	61.5	53.5	56.9
MAX	229.0	301.4	234.1	207.4	355.3	312.4	290.6	289.1	213.3	207.5	164.8	260.1
(WY)	1965	1980	1962	1974	1966	1975	1983	1976	1967	1967	1967	1979
MIN	13.5	26.8	29.7	34.0	68.7	53.8	47.8	51.6	30.8	25.3	20.9	13.0
(WY)	1955	1979	1966	1981	1968	1988	1986	1988	1988	1986	1954	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	122.4		101.7	
HIGHEST ANNUAL MEAN			142.7	1979
LOWEST ANNUAL MEAN			59.6	1986
HIGHEST DAILY MEAN	1320	Feb 16	4500	Feb 13 1966
LOWEST DAILY MEAN	19	Sep 30	10	Sep 28 1954
INSTANTANEOUS PEAK FLOW	4770	Feb 16	9740	Feb 13 1966
INSTANTANEOUS PEAK STAGE	6.91	Feb 16	9.50*	Feb 13 1966
INSTANTANEOUS LOW FLOW	19*	Sep 29	9.4*	Sep 29 1954
ANNUAL RUNOFF (INCHES)	60.2		50.0	
10 PERCENTILE	235		189	
50 PERCENTILE	90		71	
95 PERCENTILE	27		22	

* See REMARKS.

TENNESSEE RIVER BASIN

0345577330 WEST FORK PIGEON RIVER NEAR RETREAT, NC

LOCATION.--Lat 35°25'36", long 82°55'12", Haywood County, Hydrologic Unit 06010106, on right bank at upstream side of bridge on NC Highway 215, and 1.6 mi southwest of Retreat.

DRAINAGE AREA.--33.5 mi^2.

PERIOD OF RECORD.--March 1988 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,839 ft above National Geodetic Vertical Datum from topographic map. Landline telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. Considerable regulation at times caused by Lake Logan (station 03455773). Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	816	72	90	283	178	189	169	149	102	34	53	44
2	486	66	89	156	176	314	155	165	100	31	56	44
3	311	63	82	139	177	445	145	148	119	31	57	38
4	237	63	79	293	400	278	137	669	102	29	60	37
5	195	60	80	207	240	237	128	353	91	26	63	36
6	164	109	80	260	210	205	135	256	85	35	64	35
7	145	80	80	204	214	182	140	220	77	37	65	35
8	131	88	243	245	184	190	119	196	75	37	64	36
9	121	116	149	190	175	290	112	219	68	36	62	36
10	110	80	117	170	744	204	124	409	67	32	46	41
11	100	73	110	157	327	178	169	236	65	32	41	37
12	92	69	405	142	267	164	119	210	60	34	45	42
13	86	67	231	132	235	147	112	194	58	40	46	40
14	82	64	162	128	212	140	108	180	57	443	47	38
15	77	142	146	123	198	135	109	164	54	126	48	74
16	75	440	124	121	1760	977	100	153	53	65	48	39
17	225	150	120	115	594	1410	97	173	53	52	48	36
18	277	122	115	120	451	570	99	143	50	49	49	35
19	211	109	121	109	478	441	90	129	48	162	49	35
20	121	108	113	148	365	371	88	182	44	97	52	29
21	103	94	103	298	309	324	91	170	42	88	52	30
22	99	176	87	149	583	288	87	138	42	67	41	30
23	93	248	75	135	387	262	84	126	40	63	32	28
24	89	142	79	140	307	240	87	119	39	57	34	29
25	83	128	96	320	259	222	97	111	39	61	33	33
26	79	121	91	213	238	212	85	106	38	53	32	34
27	77	115	83	174	220	196	83	134	38	48	33	34
28	75	110	82	164	201	178	354	143	42	46	33	34
29	72	99	81	253	---	196	272	156	38	48	35	34
30	72	91	111	230	---	196	164	120	35	45	34	34
31	77	---	395	194	---	206	---	107	---	47	34	---
MEAN	161	115	130	184	360	309	129	193	60.7	66.2	47.0	36.9
MAX	816	440	405	320	1760	1410	354	669	119	443	65	74
MIN	72	60	75	109	175	135	83	106	35	26	32	28
(†)	-0.7	0	+0.6	-0.6	+0.4	-0.2	0	-0.1	-0.1	-0.2	+0.1	-3.5
MEAN‡	160	115	131	183	360	309	129	193	60.6	66.0	47.1	33.4

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	104.4	94.1	90.8	151.5	251.7	194.2	132.4	140.8	103.5	102.5	50.4	68.0
MAX	160.7	115.5	129.6	184.3	360.3	309.3	145.3	192.8	209.9	209.0	68.3	136.5
(WY)	1990	1990	1990	1990	1990	1990	1989	1990	1989	1989	1989	1989
MIN	48.2	72.6	52.1	118.8	143.1	62.6	123.4	62.9	40.0	32.3	35.9	30.6
(WY)	1989	1989	1989	1989	1989	1988	1988	1988	1988	1988	1988	1988

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	148.3	‡ 147.9	*****	
HIGHEST ANNUAL MEAN			148.3	1990
LOWEST ANNUAL MEAN			131.6	1989
HIGHEST DAILY MEAN	1760	Feb 16	1760	Feb 16 1990
LOWEST DAILY MEAN	26	Jul 5	22	Sep 14 1988
INSTANTANEOUS PEAK FLOW	5960	Feb 16	5960	Feb 16 1990
INSTANTANEOUS PEAK STAGE	6.73	Feb 16	6.73	Feb 16 1990
INSTANTANEOUS LOW FLOW	25	Jul 6	22	Sep 15 1988
ANNUAL RUNOFF (INCHES)	60.1		*****	
10 PERCENTILE	284		265	
50 PERCENTILE	107		105	
95 PERCENTILE	34		34	

***** Indicates not enough data, therefore statistic is not computed

† Change in contents, equivalent in cubic feet per second, in Lake Logan.
‡ Adjusted for change in Lake contents.
* See REMARKS.

TENNESSEE RIVER BASIN

03456100 WEST FORK PIGEON RIVER AT BETHEL, NC

LOCATION.--Lat 35°27'48", long 82°54'00", Haywood County, Hydrologic Unit 06010106, on left bank 20 ft downstream from bridge on Secondary Road 1112, 0.6 mi southwest of Bethel, 1.6 mi upstream from confluence with East Fork Pigeon River, and 5.6 mi downstream from Lake Logan.

DRAINAGE AREA.--58.4 mi^2.

PERIOD OF RECORD.--January 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,667.78 ft above National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Landline telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Considerable regulation at times caused by Lake Logan (station 03455773). Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1070	109	141	417	255	301	236	175	130	52	59	58
2	731	103	136	248	243	421	225	185	127	49	62	54
3	504	101	126	217	233	582	214	161	149	47	61	49
4	397	98	120	365	510	409	203	901	132	46	63	45
5	325	95	123	308	338	361	189	436	118	45	66	43
6	276	150	120	366	293	328	192	323	111	52	69	40
7	241	122	118	308	288	302	203	273	104	59	70	39
8	215	123	321	354	255	301	176	240	102	57	78	43
9	194	167	217	290	252	389	166	254	97	61	70	42
10	180	122	175	260	939	309	179	471	97	55	58	48
11	166	112	167	238	522	277	231	280	92	55	49	51
12	155	106	478	217	423	257	169	248	86	58	53	60
13	145	103	344	195	369	241	161	228	83	57	56	55
14	138	101	262	192	328	228	155	209	82	473	55	48
15	131	165	238	182	303	221	155	194	80	157	56	93
16	127	585	204	176	2230	1170	145	180	82	80	54	53
17	275	246	194	167	920	1980	141	210	79	66	55	46
18	307	201	182	170	677	870	145	173	75	63	54	42
19	307	178	187	159	681	642	132	158	73	163	54	42
20	188	165	174	188	540	542	129	204	68	112	57	42
21	163	152	158	385	472	470	131	198	65	102	60	43
22	153	233	138	216	743	418	127	163	65	77	61	49
23	144	377	e120	194	560	382	122	154	63	71	47	43
24	136	231	e130	195	467	348	120	146	60	64	42	42
25	130	207	e150	419	409	320	133	140	59	70	67	46
26	124	193	e145	323	377	307	116	132	60	60	44	46
27	120	181	e130	266	349	286	110	158	57	54	41	45
28	116	169	e127	246	323	260	363	171	63	51	41	45
29	112	156	e124	345	---	273	333	193	59	52	43	44
30	110	147	150	345	---	268	198	150	55	50	48	43
31	116	---	445	283	---	277	---	136	---	51	58	---
MEAN	242	173	189	266	511	443	177	234	85.8	80.9	56.5	48.0
MAX	1070	585	478	419	2230	1980	363	901	149	473	78	93
MIN	110	95	118	159	233	221	110	132	55	45	41	39

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	76.1	120.8	171.6	152.6	255.7	238.7	209.6	174.6	103.1	91.9	67.7	63.6
MAX	241.8	203.3	333.7	265.6	510.7	443.2	481.4	367.9	255.2	280.8	120.9	206.7
(WY)	1990	1986	1984	1990	1990	1990	1983	1984	1989	1989	1985	1989
MIN	36.7	43.0	83.5	53.5	102.1	83.6	83.5	81.7	53.0	49.5	30.8	33.1
(WY)	1982	1982	1989	1981	1986	1988	1986	1986	1988	1988	1986	1986

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	207.2		147.1	
HIGHEST ANNUAL MEAN			207.2	1990
LOWEST ANNUAL MEAN			87.5	1988
HIGHEST DAILY MEAN	2230	Feb 16	3810	Feb 2 1983
LOWEST DAILY MEAN	39	Sep 7	9.2	Sep 2 1986
INSTANTANEOUS PEAK FLOW	5620	Feb 16	9300	Feb 2 1983
INSTANTANEOUS PEAK STAGE	8.19	Feb 16	10.96	Feb 2 1983
INSTANTANEOUS LOW FLOW	35	Aug 27	4.2	Sep 5 1986
ANNUAL RUNOFF (INCHES)	48.2		34.2	
10 PERCENTILE	397		291	
50 PERCENTILE	155		99	
95 PERCENTILE	45		41	

03456500 EAST FORK PIGEON RIVER NEAR CANTON, NC

LOCATION.--Lat 35°27'42", long 82°52'13", Haywood County, Hydrologic Unit 06010106, on right bank 800 ft upstream from bridge on U.S. Highway 276, 0.3 mi downstream from Dix Creek, 1.6 mi upstream from confluence with West Fork Pigeon River, and 5.2 mi southwest of Canton.

DRAINAGE AREA.--51.5 mi^2.

PERIOD OF RECORD.--March 1954 to current year.

REVISED RECORDS.--WDR NC-73-1: 1966(M), 1972(M).

GAGE.--Water-stage recorder. Datum of gage is 2,674.34 ft above National Geodetic Vertical Datum of 1929 (Tennessee Valley Authority bench mark). Landline telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. Maximum discharge, 12,000 ft^3/s, from rating curve extended above 5,470 ft^3/s, on basis of contracted-opening measurement of peak flow. Minimum discharge, 12 ft^3/s, also occurred on Dec. 11, 1981, both result of freezeup. Minimum discharge for current water year also occurred Aug. 20, 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1310	103	119	260	217	268	191	155	94	42	38	80
2	977	99	116	185	207	309	183	152	92	40	37	66
3	645	97	111	168	199	408	175	141	96	38	36	59
4	475	94	106	218	333	314	167	966	90	38	37	54
5	377	91	107	206	264	285	160	420	84	37	36	51
6	311	121	104	253	242	263	157	295	80	36	35	47
7	264	105	102	244	232	244	157	240	77	36	34	45
8	232	101	207	292	217	234	146	206	74	43	40	45
9	208	107	177	260	209	255	141	209	75	44	41	48
10	190	96	151	239	559	224	144	400	75	47	67	48
11	174	93	149	222	379	212	162	250	70	50	42	52
12	160	90	292	208	321	200	139	218	66	43	38	64
13	149	86	245	190	287	191	134	199	63	45	38	50
14	140	86	206	184	263	182	131	181	63	196	37	49
15	132	106	190	177	245	179	130	166	62	94	35	63
16	126	306	169	170	1510	683	125	154	65	54	34	49
17	194	160	159	164	825	1760	123	168	63	64	32	43
18	253	141	150	161	562	806	122	144	59	81	32	41
19	250	130	148	154	525	555	116	133	56	117	30	41
20	178	123	141	160	429	451	115	142	54	98	30	40
21	159	116	132	236	375	385	115	136	52	85	33	38
22	149	154	122	173	680	339	112	123	52	70	62	47
23	140	253	e120	164	575	306	109	118	50	59	46	41
24	133	177	e118	166	466	280	107	112	48	53	39	36
25	127	164	e116	265	395	258	109	108	48	53	241	36
26	121	154	e115	238	351	245	102	104	47	49	73	35
27	116	145	e110	214	318	231	98	106	48	45	57	34
28	113	139	107	203	291	217	237	114	52	42	48	34
29	109	130	103	250	---	217	257	123	46	43	44	34
30	106	124	112	257	---	212	173	103	43	41	52	33
31	112	---	243	229	---	213	---	96	---	44	148	---
MEAN	262	130	147	210	410	352	145	199	64.8	58.9	51.4	46.8
MAX	1310	306	292	292	1510	1760	257	966	96	196	241	80
MIN	106	86	102	154	199	179	98	96	43	36	30	33
IN.	5.87	2.81	3.28	4.70	8.29	7.89	3.13	4.47	1.40	1.32	1.15	1.01

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	108.1	130.2	146.5	150.6	204.3	231.0	213.4	161.3	115.6	74.2	69.7	81.0
MAX	363.5	483.5	336.9	281.6	411.4	541.3	479.6	453.0	338.7	268.0	181.1	436.0
(WY)	1965	1980	1962	1978	1966	1979	1957	1976	1967	1989	1961	1979
MIN	17.1	27.9	42.4	33.8	71.9	60.9	63.2	59.8	35.7	25.3	26.5	16.0
(WY)	1955	1955	1956	1956	1986	1988	1986	1986	1988	1986	1954	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	172.0		140.9	
HIGHEST ANNUAL MEAN			204.4	1979
LOWEST ANNUAL MEAN			71.9	1988
HIGHEST DAILY MEAN	1760	Mar 17	4390	Feb 13 1966
LOWEST DAILY MEAN	30	Aug 19	14	Sep 16 1954
INSTANTANEOUS PEAK FLOW	3550	May 4	12000*	May 28 1973
INSTANTANEOUS PEAK STAGE	6.04	May 4	11.19	May 28 1973
INSTANTANEOUS LOW FLOW	29*	Aug 19	12*	Jan 9 1956
ANNUAL RUNOFF (INCHES)	45.3		37.2	
10 PERCENTILE	303		264	
50 PERCENTILE	127		100	
95 PERCENTILE	37		30	

* See REMARKS.

TENNESSEE RIVER BASIN

03456991 PIGEON RIVER NEAR CANTON, NC

LOCATION.--Lat 35°31'19", long 82°50'53", Haywood County, Hydrologic Unit 06010106, on right bank 600 ft upstream from NC Highway 215 bridge, 1.3 miles upstream from U.S. Highways 19 and 23 at Canton, and at mile 64.9.

DRAINAGE AREA.--130 mi^2.

PERIOD OF RECORD.--May 1907 to June 1909, October 1928 to current year. Monthly discharge only for some periods published in WSP 1306. Published as Pigeon River at Canton, NC (03457000) May 1907 to June 1909, October 1928 to September 1983.

REVISED RECORDS.--WSP 823: Drainage area. WSP 853: 1929-37(M). WSP 1306: 1903(M).

GAGE.--Water-stage recorder. Datum of gage is 2,581.66 ft above National Geodetic Vertical Datum of 1929 (Tennessee Valley Authority bench mark). Prior to June 1909, nonrecording gage at bridge 1.2 mi downstream at different datum. Dec. 6, 1928 to Jan. 3, 1929, nonrecording gage at site 0.8 mi downstream at different datum. Prior to Oct. 1, 1983 water-stage recorder at site 0.8 mile downstream at different datum. Land-line telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Occasional diurnal fluctuation and considerable regulation at low flow caused by Lake Logan on West Fork Pigeon River 11.2 mi upstream (station 03455773). Maximum discharge before regulation 21,500 ft^3/s, Aug. 16, 1928, gage height, 16.40 ft. Maximum discharge since regulation, 31,600 ft^3/s, gage height, 20.75, at former site from floodmarks in gage well. Minimum discharge before regulation, 39 ft^3/s, Sept. 3, 1930. Minimum discharge since regulation, 15 ft^3/s, at former site, result of freezeup. Minimum discharge for current water year also occurred several days in September.

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, discharge, 25,700 ft^3/s, at former site, from studies by Tennessee Valley Authority.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2200	252	293	775	502	598	513	378	284	120	118	165
2	1680	237	281	478	477	713	482	390	277	116	119	143
3	1190	232	265	428	454	1070	463	345	303	109	119	127
4	945	226	248	601	873	769	440	1950	289	108	116	117
5	786	218	256	568	638	680	418	944	256	105	123	109
6	671	303	250	674	565	625	410	707	243	105	125	103
7	589	278	245	590	546	578	428	601	233	121	126	98
8	528	252	555	686	497	563	381	528	228	124	140	103
9	480	323	467	590	476	669	361	518	224	144	138	104
10	446	255	380	532	1610	566	358	949	226	124	154	119
11	412	237	361	490	956	518	461	618	212	135	110	119
12	382	229	808	454	784	488	361	550	198	123	107	148
13	358	223	681	408	687	462	339	509	191	123	111	132
14	337	216	535	397	620	442	327	470	187	712	109	116
15	317	277	491	378	575	429	327	439	184	331	108	180
16	307	983	431	365	4460	1860	309	413	190	172	107	126
17	515	480	404	347	1930	4680	297	464	188	144	102	103
18	562	404	379	346	1300	1840	303	399	175	178	102	97
19	677	362	379	327	1280	1290	280	365	171	297	98	96
20	439	338	362	343	1010	1080	273	413	158	266	102	94
21	388	313	e308	658	882	950	271	425	152	224	111	94
22	360	405	e279	414	1420	869	268	358	151	178	166	113
23	336	739	e256	375	1180	802	256	342	144	154	115	100
24	321	469	e239	372	961	738	252	325	138	138	105	88
25	305	427	e221	709	834	683	267	308	138	144	350	92
26	292	396	e208	609	754	649	243	298	136	130	149	92
27	281	373	e191	508	694	617	233	327	132	119	119	88
28	271	353	e191	474	642	569	552	364	148	113	106	88
29	262	326	e240	651	---	573	731	402	136	114	102	88
30	253	304	287	673	---	557	430	320	125	113	119	88
31	266	---	707	550	---	588	---	296	---	111	249	---
MEAN	553	348	361	509	986	888	368	507	194	168	130	111
MAX	2200	983	808	775	4460	4680	731	1950	303	712	350	180
MIN	253	216	191	327	454	429	233	296	125	105	98	88

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD*, BY WATER YEAR (WY)

MEAN	220.4	261.8	323.3	407.3	476.9	528.1	468.5	335.7	257.6	195.1	194.4	190.7
MAX	786.8	963.9	871.5	1017	1150	1058	1005	981.4	781.0	582.7	1476	817.5
(WY)	1965	1980	1933	1937	1939	1975	1957	1976	1967	1989	1940	1979
MIN	48.2	59.2	64.5	85.3	150.4	155.4	166.9	132.3	96.5	91.0	65.9	50.2
(WY)	1955	1955	1940	1956	1941	1988	1986	1941	1941	1954	1954	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD*	
AVERAGE FLOW	424.1		320.7	
HIGHEST ANNUAL MEAN			503.1	1949
LOWEST ANNUAL MEAN			170.4	1988
HIGHEST DAILY MEAN	4680	Mar 17	12800	Aug 13 1940
LOWEST DAILY MEAN	88	Sep 24	27	Sep 7 1954
INSTANTANEOUS PEAK FLOW	10000	Feb 16	31600*	Aug 30 1940
INSTANTANEOUS PEAK STAGE	9.50	Feb 16	20.75*	Aug 30 1940
INSTANTANEOUS LOW FLOW	88*	Sep 24	15*	Jan 8 1956
ANNUAL RUNOFF (INCHES)	44.3		33.5	
10 PERCENTILE	747		607	
50 PERCENTILE	330		229	
95 PERCENTILE	102		74	

* Regulated period only (1932-1990). See REMARKS.

03459500 PIGEON RIVER NEAR HEPCO, NC

LOCATION.--Lat 35°38'05", long 82°59'21", Haywood County, Hydrologic Unit 06010106, on left bank 95 ft east of Interstate Highway 40, 0.8 mi downstream from Jonathan Creek, 2.0 mi south of Hepco, 2.4 mi upstream from Fines Creek, and at mile 45.1.

DRAINAGE AREA.--350 mi^2.

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 above National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Tennessee Valley Authority has telemetry at upper gage. Landline telemetry at lower gage.

REMARKS.--No estimated daily discharges. 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 ft^3/s-day (stations 03455773, 03458319). Several measurements of water temperature were made during the year. Maximum discharge, 32,700 ft^3/s, from floodmark in gage house, from rating curve extended above 12,000 ft^3/s on basis of slope-area measurements at gage heights 14.94 ft and 15.82 ft. Minimum discharge for current water year also occurred on Sept. 30.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of June 1876 and February 1902 reached a stage of about 18 ft, from flood profiles by Tennessee Valley Authority, discharge, about 42,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4670	508	639	2070	1290	1300	1050	666	571	258	240	340
2	3880	481	606	1190	1190	1450	998	777	556	257	246	285
3	2500	469	581	1010	1140	2280	953	717	615	241	244	253
4	1870	454	552	1250	2010	1720	907	2030	610	234	250	233
5	1510	446	560	1370	1570	1510	868	1620	533	228	238	219
6	1270	569	550	1560	1330	1390	925	1190	496	221	239	208
7	1090	602	537	1370	1270	1310	900	1020	474	242	275	198
8	975	541	1060	1560	1150	1300	816	902	469	238	260	210
9	884	657	970	1370	1080	1400	785	882	463	290	502	217
10	821	549	786	1220	3730	1320	843	1570	508	419	509	284
11	768	504	726	1080	2460	1150	925	1090	463	368	290	292
12	721	481	1570	999	1900	1080	785	946	418	285	249	308
13	679	467	1520	903	1620	1030	756	877	402	347	244	366
14	649	458	1130	867	1440	983	736	817	390	836	249	310
15	620	572	1010	822	1320	939	740	767	385	1160	236	414
16	597	2150	904	798	9420	3550	705	728	394	563	227	337
17	810	1090	823	772	4610	10900	686	987	391	381	215	251
18	757	857	785	779	3120	4390	694	793	375	352	211	225
19	1320	755	763	746	3040	3050	650	692	368	358	205	214
20	787	702	751	785	2420	2470	692	731	338	501	204	213
21	694	653	684	1490	2100	2110	884	775	319	441	228	203
22	648	928	618	979	2470	1860	855	689	324	449	456	368
23	619	1770	522	861	2480	1670	815	647	321	415	345	284
24	594	1040	550	852	2010	1550	711	605	300	340	257	220
25	573	905	610	1630	1730	1430	576	580	293	305	481	210
26	553	834	617	1600	1590	1360	493	564	287	302	322	206
27	536	781	567	1240	1480	1270	475	595	285	282	256	201
28	523	741	564	1120	1390	1180	606	847	328	262	224	197
29	511	689	546	1970	---	1200	1310	859	305	252	209	196
30	502	654	608	2040	---	1180	781	671	280	258	264	191
31	512	---	1680	1490	---	1170	---	597	---	250	479	---
MEAN	1079	744	787	1219	2227	1952	797	878	409	366	286	255
MAX	4670	2150	1680	2070	9420	10900	1310	2030	615	1160	509	414
MIN	502	446	522	746	1080	939	475	564	280	221	204	191

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	408.9	493.6	667.7	858.1	1022	1140	985.5	723.9	530.2	425.8	417.0	379.0
MAX	1353	1627	2125	2275	2227	2455	2009	1630	1502	1141	2246	1214
(WY)	1965	1980	1933	1937	1990	1929	1936	1984	1967	1989	1940	1928
MIN	121.8	132.7	192.8	194.3	319.2	346.4	358.7	283.2	200.3	183.2	162.7	128.6
(WY)	1955	1954	1940	1940	1941	1988	1986	1941	1988	1986	1953	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	909.7		669.2	
HIGHEST ANNUAL MEAN			942.8	1949
LOWEST ANNUAL MEAN			340.9	1988
HIGHEST DAILY MEAN	10900	Mar 17	17100	Aug 13 1940
LOWEST DAILY MEAN	191	Sep 30	95	Sep 30 1941
INSTANTANEOUS PEAK FLOW	17000	Feb 16	32700*	Aug 30 1940
INSTANTANEOUS PEAK STAGE	11.46	Feb 16	15.82	Aug 30 1940
INSTANTANEOUS LOW FLOW	189*	Sep 8	81	Sep 30 1941
ANNUAL RUNOFF (INCHES)	35.3		26.0	
10 PERCENTILE	1660		1250	
50 PERCENTILE	677		502	
95 PERCENTILE	218		171	

* See REMARKS.

TENNESSEE RIVER BASIN

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, NC
(Hydrologic bench-mark station)

LOCATION.--Lat 35°40'02", long 83°04'22", Haywood County, Hydrologic Unit 06010106, in Great Smoky Mountains National Park, on left bank 20 ft downstream from bridge on State Highway 284, 500 ft upstream from Little Cataloochee Creek, 2 mi north of Cataloochee and 3.7 mi upstream from mouth.

DRAINAGE AREA.--49.2 mi^2.

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 above National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Minimum discharge, for period of record result of freezeup, also occurred Jan. 2, 1940, and Dec. 17, 24, 1943. Minimum discharge for current water year also occurred Aug. 20, 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	565	74	105	505	278	169	134	99	99	47	37	46
2	451	72	100	292	245	221	129	103	95	46	36	41
3	323	71	95	222	229	335	123	97	108	43	36	38
4	249	68	98	242	410	292	118	93	93	42	34	36
5	202	66	91	220	345	251	113	121	87	41	33	35
6	172	90	87	259	288	223	132	99	82	40	35	34
7	152	73	85	245	267	201	124	98	79	40	34	33
8	137	81	127	252	226	191	108	92	77	45	49	36
9	124	100	100	226	213	198	104	104	99	44	82	36
10	116	83	93	210	985	179	109	178	109	57	60	40
11	109	79	91	189	582	167	115	131	88	44	40	44
12	102	75	171	172	411	158	102	122	80	61	36	58
13	97	74	153	156	323	149	98	116	76	56	47	75
14	92	72	139	145	270	145	96	110	73	184	44	49
15	89	124	134	137	239	139	99	103	72	91	37	67
16	85	475	120	129	1460	491	93	98	70	54	35	44
17	137	232	e148	122	866	2000	91	171	67	47	33	38
18	108	176	e122	125	560	845	91	118	64	61	32	36
19	145	150	108	115	476	552	86	107	62	50	30	35
20	111	135	99	139	376	419	85	107	58	64	29	35
21	104	124	96	234	319	338	93	99	57	59	158	33
22	100	166	e85	170	321	285	86	105	59	58	144	100
23	96	199	e115	155	282	249	83	94	60	60	125	54
24	90	167	e134	153	253	224	86	89	54	48	78	42
25	88	155	e129	279	223	203	93	85	52	45	72	39
26	86	144	e72	281	207	187	84	82	51	42	57	38
27	83	133	e76	239	192	174	80	90	50	40	50	36
28	80	127	e64	211	180	162	106	154	50	38	46	35
29	79	117	e81	469	---	156	106	146	49	44	42	35
30	76	110	92	522	---	152	106	114	47	41	49	34
31	75	---	458	353	---	144	---	104	---	37	75	---
MEAN	146	127	118	231	394	310	102	111	72.2	53.8	54.7	43.4
MAX	565	475	458	522	1460	2000	134	178	109	184	158	100
MIN	75	66	64	115	180	139	80	82	47	37	29	33
IN.	3.42	2.88	2.77	5.42	8.34	7.26	2.32	2.59	1.64	1.26	1.28	.98

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	52.4	70.2	108.8	164.3	177.0	201.0	153.8	108.0	81.9	72.0	68.8	52.4
MAX	145.9	159.2	302.0	392.0	393.8	495.5	304.6	282.7	252.4	182.4	222.6	122.8
(WY)	1990	1980	1973	1937	1990	1963	1936	1984	1967	1949	1940	1989
MIN	22.3	22.3	26.0	35.5	49.5	63.2	58.8	46.2	34.7	29.6	26.9	24.9
(WY)	1940	1940	1940	1940	1941	1988	1986	1986	1986	1986	1987	1941

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	145.6		109.0	
HIGHEST ANNUAL MEAN			158.5	1973
LOWEST ANNUAL MEAN			51.5	1986
HIGHEST DAILY MEAN	2000	Mar 17	2690	Mar 16 1973
LOWEST DAILY MEAN	29	Aug 20	12	Jan 2 1940
INSTANTANEOUS PEAK FLOW	3130	Mar 17	5080	Mar 6 1963
INSTANTANEOUS PEAK STAGE	6.72	Mar 17	8.08	Mar 6 1963
INSTANTANEOUS LOW FLOW	28*	Aug 19	9.4*	Jan 2 1940
ANNUAL RUNOFF (INCHES)	40.2		30.1	
10 PERCENTILE	279		205	
50 PERCENTILE	100		79	
95 PERCENTILE	36		28	

* See REMARKS.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: August 1973 to September 1986.
WATER TEMPERATURE: October 1962 to September 1986.

INSTRUMENTATION.--Temperature recorder from October 1962 to September 1986. Water-quality monitor from May 1974 to September 1986.

REMARKS.--Miscellaneous chemical data published for 1945 water year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 43 microsiemens June 13, 1974; minimum, 7 microsiemens Feb. 28, 1983.
WATER TEMPERATURE: Maximum, 23.5°C Aug. 5, 1977; minimum, 0.0°C on several days during winter months of most years.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS-SOLVED (MG/L AS CA)
NOV 27...	1300	134	12	5.8	9.0	0.40	695	11.4	K3	37	1.3
MAR 26...	1000	188	13	6.3	9.0	0.50	702	10.9	K3	K8	0.82
MAY 21...	1245	100	15	6.3	13.5	0.40	695	9.3	1	24	0.95
AUG 27...	1100	52	15	5.8	16.5	1.0	702	9.4	23	130	1.1

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	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)
NOV 27...	0.28	1.2	34	0.2	0.60	6	5	<1.0	0.40	<0.10	7.8
MAR 26...	0.27	1.0	36	0.2	0.50	5	4	1.2	1.4	<0.10	7.6
MAY 21...	0.34	1.1	35	0.2	0.60	5	4	1.1	0.40	<0.10	7.6
AUG 27...	0.28	1.3	38	0.3	0.60	6	5	1.2	0.60	<0.10	8.1

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (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, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)
NOV 27...	23	<0.010	0.160	<0.010	0.040	--	<0.20	<0.010	0.060	0.060	--
MAR 26...	16	<0.010	0.200	<0.010	0.010	0.01	<0.20	<0.010	<0.010	<0.010	--
MAY 21...	15	<0.010	0.200	<0.010	0.060	0.08	0.30	0.020	0.020	0.020	0.06
AUG 27...	25	<0.010	0.100	<0.010	0.010	0.01	0.20	0.010	0.010	<0.010	--

TENNESSEE RIVER BASIN

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)
NOV 27...	20	<1	7	<0.5	<1.0	<1	<3	1	7	<1	<4
MAR 26...	10	<1	6	<0.5	<1.0	<5	<3	<10	26	<10	<4
MAY 21...	20	<1	7	<0.5	<1.0	<1	<3	1	14	<1	<4
AUG 27...	20	<1	7	<0.5	<1.0	<1	<3	1	20	<1	<4

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)
NOV 27...	1	<0.1	<10	<1	<1	<1.0	8	<6	<3	2.1
MAR 26...	1	<0.1	<10	<10	<1	<1.0	6	<6	4	--
MAY 21...	2	<0.1	<10	<1	<1	<1.0	8	<6	4	--
AUG 27...	2	<0.1	<10	<1	<1	<1.0	10	<6	4	--

DATE	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)	URANIUM NATURAL DISSOLVED (UG/L AS U)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 27...	<0.4	1.6	<0.4	1.3	<0.4	0.11	0.03	1	0.36	0
MAR 26...	--	--	--	--	--	--	--	2	1.0	17
MAY 21...	--	--	--	--	--	--	--	3	0.81	6
AUG 27...	--	--	--	--	--	--	--	3	0.42	55

TENNESSEE RIVER BASIN

03463300 SOUTH TOE RIVER NEAR CELO, NC

LOCATION.--Lat 35°49'53", long 82°11'04", Yancey County, Hydrologic Unit 06010108, on right bank on Secondary Road 1168, 800 ft upstream from bridge on Secondary Road 1167, 0.3 mi downstream from Whiteoak Creek, 1.9 mi southeast of Celo, and at mile 20.1.

DRAINAGE AREA.--43.3 mi^2.

PERIOD OF RECORD.--July 1957 to current year.

REVISED RECORDS.--WSP 1910: 1958-59. WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,658 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Maximum discharge, 32,900 ft^3/s, gage height, 17.41 ft, from outside floodmarks, from rating curve extended above 4,500 ft^3/s on basis of slope-area measurement of peak flow. Minimum discharge for current water year also occurred on July 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1020	125	124	340	172	192	162	138	129	39	49	201
2	675	117	119	185	161	254	149	142	117	38	47	157
3	451	114	111	160	157	395	138	129	108	35	48	134
4	353	107	130	193	279	280	132	345	98	34	46	120
5	294	104	105	193	200	239	126	258	92	33	44	110
6	253	122	102	319	178	218	125	193	85	32	59	102
7	222	113	100	235	173	201	120	171	78	31	45	94
8	199	108	156	371	158	189	110	144	73	64	171	87
9	179	107	138	272	156	204	107	171	108	50	1330	88
10	165	99	122	235	580	191	110	552	76	39	258	84
11	153	95	122	204	320	181	155	278	68	41	195	105
12	141	91	280	183	251	166	114	218	64	38	134	145
13	133	89	230	163	220	157	106	187	63	141	115	135
14	125	88	178	153	199	149	103	163	60	801	105	117
15	119	107	159	147	185	145	100	144	64	219	90	97
16	113	632	e144	141	1230	513	95	131	87	117	81	83
17	212	230	e137	134	543	1590	94	154	73	119	74	75
18	379	182	125	133	383	558	91	126	62	212	68	71
19	584	160	120	128	435	403	86	111	57	169	63	68
20	293	148	114	139	332	329	83	114	52	154	59	67
21	232	138	e108	283	285	281	84	117	51	120	56	64
22	203	203	e127	161	416	250	81	128	49	101	65	73
23	182	351	e173	143	358	224	76	112	50	92	86	66
24	168	213	e202	141	294	208	75	100	48	78	104	60
25	156	187	e166	253	254	191	72	95	48	75	1070	58
26	145	172	e124	214	231	177	70	90	46	68	456	56
27	138	161	e96	176	219	165	67	99	47	61	250	54
28	131	154	e91	164	206	152	279	291	46	57	184	54
29	125	141	85	265	---	176	298	282	43	73	150	51
30	121	131	93	247	---	168	164	189	40	59	152	50
31	146	---	382	191	---	190	---	145	---	52	509	---
MEAN	252	160	144	202	306	282	119	178	69.4	105	199	90.9
MAX	1020	632	382	371	1230	1590	298	552	129	801	1330	201
MIN	113	88	85	128	156	145	67	90	40	31	44	50
IN.	6.71	4.11	3.83	5.38	7.37	7.51	3.07	4.74	1.79	2.79	5.29	2.34

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	126.5	156.2	141.5	149.3	180.4	227.8	189.2	159.0	123.1	84.5	86.1	113.5
MAX	325.9	713.8	277.1	268.5	360.1	596.0	361.3	373.2	414.7	198.9	198.8	517.3
(WY)	1971	1978	1984	1979	1966	1979	1983	1976	1972	1967	1990	1979
MIN	19.7	25.9	41.5	62.2	76.6	69.1	59.7	53.1	34.8	23.3	28.5	21.3
(WY)	1964	1982	1966	1966	1963	1988	1986	1986	1988	1986	1987	1958

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	175.2		144.5	
HIGHEST ANNUAL MEAN			227.2	1979
LOWEST ANNUAL MEAN			79.4	1988
HIGHEST DAILY MEAN	1590	Mar 17	9960	Nov 6 1977
LOWEST DAILY MEAN	31	Jul 7	12	Jul 21 1986
INSTANTANEOUS PEAK FLOW	6940	Aug 9	32900*	Nov 6 1977
INSTANTANEOUS PEAK STAGE	7.02	Aug 9	17.41*	Nov 6 1977
INSTANTANEOUS LOW FLOW	29*	Jul 7	11	Jul 22 1986
ANNUAL RUNOFF (INCHES)	54.9		45.3	
10 PERCENTILE	297		264	
50 PERCENTILE	136		101	
95 PERCENTILE	47		31	

* See REMARKS.

TENNESSEE RIVER BASIN

03479000 WATAUGA RIVER NEAR SUGAR GROVE, NC

LOCATION.--Lat 36°14'18", long 81°49'22", Watauga County, Hydrologic Unit 06010103, on right bank 250 ft upstream from bridge on Secondary Road 1121, 300 ft downstream from Cove Creek, 2.3 mi southwest of Sugar Grove, and at mile 64.4.

DRAINAGE AREA.--92.1 mi^2.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,607.84 ft above National Geodetic Vertical Datum of 1929. Tennessee Valley Authority has telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Slight diurnal fluctuation at low flow caused by small mills above station. Maximum discharge, 50,800 ft^3/s, from profile based on floodmarks, from rating curve extended above 4,900 ft^3/s on basis of slope-area measurement of peak flow. Minimum discharge, 6.5 ft^3/s, result of freezeup. Minimum daily, 13 ft^3/s, also occurred Sept. 30. 1954. Minimum discharge for current water year also occurred Sept. 28-30.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of 22.1 ft from floodmarks on barn 0.25 mi above station as witnessed by local resident, discharge, 28,000 ft^3/s, from rating curve extended above 4,900 ft^3/s on basis of slope-area measurement at gage height 29.6 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	937	126	146	713	260	233	187	298	127	92	45	53
2	934	118	140	414	232	257	178	335	120	102	43	50
3	616	115	133	317	215	410	173	443	117	62	44	47
4	430	109	153	297	381	365	165	578	110	55	43	44
5	341	106	145	278	335	313	154	473	101	51	50	43
6	281	120	138	320	288	273	156	353	96	49	205	42
7	238	116	135	296	267	243	156	288	91	47	77	40
8	206	109	205	364	229	220	140	242	89	45	59	39
9	182	107	183	350	209	221	133	226	128	49	115	67
10	167	98	167	324	677	202	134	379	118	44	84	60
11	154	93	167	277	557	186	162	267	94	43	83	62
12	144	91	249	244	388	174	137	222	85	41	64	68
13	135	88	265	215	312	166	128	202	80	55	58	80
14	129	88	228	191	268	159	125	181	77	412	59	67
15	123	94	204	181	239	153	124	165	137	253	54	62
16	117	930	e224	172	969	1300	120	155	118	112	50	51
17	201	421	e310	160	895	3610	119	181	96	82	47	46
18	244	284	e233	158	548	1280	114	146	86	85	53	43
19	681	228	e132	148	625	744	108	131	85	86	46	42
20	359	202	e121	149	490	519	106	131	75	81	43	44
21	268	182	e115	212	392	406	117	139	73	99	43	42
22	223	209	e121	173	458	362	135	151	70	87	62	49
23	193	407	e244	159	459	354	111	132	67	83	152	46
24	177	299	e320	158	412	333	107	118	65	71	85	40
25	165	251	e307	247	342	300	101	112	63	65	251	39
26	154	224	e264	252	297	245	97	110	60	60	148	39
27	146	198	e221	222	276	209	94	113	59	57	86	38
28	139	189	e162	209	257	192	293	145	56	54	70	37
29	133	171	e132	276	---	216	744	241	53	53	62	37
30	130	155	e150	396	---	196	358	175	52	50	59	37
31	132	---	460	309	---	211	---	142	---	48	54	---
MEAN	274	198	199	264	403	453	166	225	88.3	83.0	77.2	48.5
MAX	937	930	460	713	969	3610	744	578	137	412	251	80
MIN	117	88	115	148	209	153	94	110	52	41	43	37
IN.	3.42	2.39	2.49	3.30	4.55	5.68	2.01	2.82	1.07	1.04	.97	.59

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	109.4	152.1	177.7	193.7	267.9	302.2	256.5	183.5	138.9	112.7	117.1	116.7
MAX	379.7	661.7	433.8	428.8	598.6	857.6	688.6	411.4	519.1	461.2	1169	690.6
(WY)	1965	1978	1951	1946	1966	1979	1987	1973	1976	1989	1940	1979
MIN	19.2	34.6	45.6	55.5	67.5	77.0	82.1	67.5	41.4	35.0	25.6	18.1
(WY)	1955	1982	1964	1956	1941	1988	1986	1941	1988	1944	1956	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	205.8		174.9	
HIGHEST ANNUAL MEAN			297.1	1979
LOWEST ANNUAL MEAN			84.7	1988
HIGHEST DAILY MEAN	3610	Mar 17	15900	Aug 13 1940
LOWEST DAILY MEAN	37	Sep 28	13	Sep 19 1954
INSTANTANEOUS PEAK FLOW	4740	Mar 17	50800*	Aug 13 1940
INSTANTANEOUS PEAK STAGE	9.38	Mar 17	29.60	Aug 13 1940
INSTANTANEOUS LOW FLOW	37*	Sep 27	6.5*	Jan 1 1954
ANNUAL RUNOFF (INCHES)	30.3		25.8	
10 PERCENTILE	383		329	
50 PERCENTILE	148		116	
95 PERCENTILE	44		31	

* See REMARKS.

TENNESSEE RIVER BASIN

03500000 LITTLE TENNESSEE RIVER NEAR PRENTISS, NC

LOCATION.--Lat 35°08'59", long 83°22'47", Macon County, Hydrologic Unit 06010202, on left bank 600 ft upstream from Owenby Branch, 0.5 mi upstream from Cartoogechaye Creek, 2 mi north of Prentiss, and at mile 119.5.

DRAINAGE AREA.--140 mi^2.

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 above National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Since Oct. 1, 1954, auxiliary water-stage recorder 0.5 mi downstream from base gage at same datum.

REMARKS.--No estimated daily discharges. Records good.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1898 reached a stage of about 15 ft, from profiles by Tennessee Valley Authority.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2160	301	345	845	596	827	699	413	295	170	172	164
2	2330	293	336	557	568	922	664	400	296	164	177	145
3	1180	287	327	486	566	1320	636	401	324	155	188	136
4	856	279	316	625	1090	1030	613	843	311	149	170	129
5	702	276	314	659	868	894	591	529	284	151	190	123
6	612	335	310	646	719	825	575	441	274	147	200	121
7	547	342	307	595	678	776	571	406	267	140	179	120
8	501	345	638	650	620	788	540	382	259	169	190	118
9	462	408	590	585	602	927	522	409	254	211	179	196
10	437	344	532	534	1730	838	531	922	286	215	181	173
11	419	317	460	496	1400	774	655	607	252	164	177	150
12	400	305	713	469	985	727	539	507	239	153	166	204
13	385	297	802	439	843	692	511	467	233	166	164	241
14	370	291	603	426	768	664	497	431	228	873	197	289
15	357	440	531	412	722	643	504	405	227	714	158	424
16	347	1100	484	402	4770	1270	477	386	222	327	156	254
17	530	565	445	393	3810	4530	460	401	224	252	149	197
18	468	457	423	401	1680	2620	446	374	216	226	146	173
19	519	410	418	385	1570	1510	431	351	209	340	142	164
20	411	383	410	418	1350	1290	427	420	203	284	137	159
21	382	361	389	1090	1200	1150	438	413	202	286	141	152
22	363	458	370	654	1400	1050	430	363	202	252	144	264
23	346	844	353	550	1480	964	423	347	200	231	154	205
24	336	534	351	524	1220	909	407	334	193	216	144	167
25	329	466	349	941	1070	860	396	324	193	229	180	156
26	321	433	339	876	975	830	383	318	184	207	153	151
27	313	409	331	689	913	818	373	356	181	190	140	147
28	309	399	325	613	864	758	487	335	188	184	132	143
29	304	376	317	719	---	750	588	366	181	181	130	143
30	300	357	354	809	---	749	441	315	175	197	163	140
31	310	---	721	657	---	758	---	301	---	179	273	---
MEAN	568	414	436	598	1252	1079	508	428	233	243	167	178
MAX	2330	1100	802	1090	4770	4530	699	922	324	873	273	424
MIN	300	276	307	385	566	643	373	301	175	140	130	118
IN.	4.68	3.30	3.59	4.93	9.32	8.89	4.05	3.53	1.86	2.00	1.37	1.42

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	244.1	295.5	393.3	479.8	568.7	603.2	565.0	433.2	339.4	260.3	237.3	219.6
MAX	1078	814.7	841.0	1008	1252	1199	1014	999.4	694.1	772.5	695.1	671.3
(WY)	1965	1980	1962	1946	1990	1952	1964	1976	1949	1989	1974	1950
MIN	70.5	100.6	153.6	119.7	221.7	243.9	172.0	156.8	109.6	94.8	78.3	80.2
(WY)	1955	1955	1981	1981	1986	1988	1986	1986	1988	1986	1986	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	504.5		386.1	
HIGHEST ANNUAL MEAN			587.8	1949
LOWEST ANNUAL MEAN			173.2	1986
HIGHEST DAILY MEAN	4770	Feb 16	7280	Oct 5 1964
LOWEST DAILY MEAN	118	Sep 8	56	Oct 7 1986
INSTANTANEOUS PEAK FLOW	9320	Feb 16	12200	Oct 4 1964
INSTANTANEOUS PEAK STAGE	14.44	Feb 16	17.30	Oct 4 1964
INSTANTANEOUS LOW FLOW	116	Sep 8	55	Oct 7 1986
ANNUAL RUNOFF (INCHES)	48.9		37.4	
10 PERCENTILE	904		704	
50 PERCENTILE	389		306	
95 PERCENTILE	145		112	

TENNESSEE RIVER BASIN

03500240 CARTOOGECHAYE CREEK NEAR FRANKLIN, NC

LOCATION.--Lat 35°09'31", long 83°23'40", Macon County, Hydrologic Unit 06010202, on downstream side of center pier of bridge on Secondary Road 1152, 0.1 mi downstream from unnamed creek, 1.8 mi south of Franklin, and 1.9 mi upstream from mouth.

DRAINAGE AREA.--57.1 mi^2.

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Minimum discharge for period of record also occurred Oct. 8, 1986. Minimum discharge for current water year also occurred on Sept. 11, 12.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1949 reached a stage of 15.6 ft, from studies by Tennessee Valley Authority, discharge, about 7,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1160	111	153	423	281	278	249	174	130	69	61	77
2	757	110	148	272	258	370	240	182	129	68	62	65
3	427	107	143	227	248	431	232	168	184	65	65	58
4	309	106	140	317	347	359	226	723	153	64	61	54
5	253	105	139	288	293	314	220	340	136	63	74	52
6	222	164	135	297	261	283	222	255	127	62	69	50
7	198	136	135	276	256	260	223	226	121	61	62	48
8	181	149	325	302	233	273	210	207	116	70	61	47
9	168	174	262	267	245	304	205	218	115	74	61	47
10	160	141	226	241	766	274	211	305	128	75	64	50
11	153	129	200	218	491	254	224	241	112	70	62	48
12	146	124	335	204	367	237	201	217	106	71	61	52
13	141	118	330	193	311	227	195	204	102	90	63	84
14	137	119	262	185	280	217	192	191	100	404	60	97
15	133	176	238	179	264	211	198	181	100	229	58	115
16	132	635	209	173	2040	686	187	172	97	117	57	70
17	199	272	191	169	1040	2340	184	189	95	95	55	60
18	165	206	182	178	615	901	181	168	92	89	53	56
19	178	177	184	166	566	577	176	159	89	105	52	53
20	148	163	176	218	463	458	174	186	84	99	51	52
21	140	154	166	394	412	401	182	190	85	100	50	51
22	134	270	157	254	560	365	175	167	85	90	81	117
23	129	379	e150	219	510	339	171	159	82	86	71	71
24	125	248	e148	219	433	318	168	151	79	80	59	59
25	122	210	146	429	378	301	162	146	77	77	69	56
26	120	192	143	379	343	294	159	142	75	71	56	53
27	117	177	138	291	315	280	155	170	74	68	54	51
28	115	184	136	253	293	267	227	156	77	66	52	50
29	114	168	135	459	---	274	212	159	72	69	52	50
30	113	159	163	482	---	274	180	140	71	65	150	48
31	115	---	398	344	---	265	---	133	---	62	207	---
MEAN	216	185	193	275	460	407	198	207	103	92.7	68.2	61.4
MAX	1160	635	398	482	2040	2340	249	723	184	404	207	117
MIN	113	105	135	166	233	211	155	133	71	61	50	47
IN.	4.37	3.62	3.90	5.55	8.38	8.23	3.87	4.18	2.02	1.87	1.38	1.20

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	83.6	106.8	149.9	187.7	221.3	240.3	202.6	159.0	118.5	88.9	80.5	72.4
MAX	295.3	241.4	316.6	336.0	459.6	439.9	374.8	338.7	258.5	194.5	167.4	160.8
(WY)	1965	1980	1962	1974	1990	1980	1964	1976	1989	1989	1967	1989
MIN	33.9	41.5	52.2	55.2	101.8	84.7	72.9	61.2	42.3	33.1	33.1	34.7
(WY)	1979	1979	1966	1981	1986	1988	1986	1986	1988	1986	1986	1986

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	204.3		142.0	
HIGHEST ANNUAL MEAN			204.3	1990
LOWEST ANNUAL MEAN			69.9	1986
HIGHEST DAILY MEAN	2340	Mar 17	2710	Oct 4 1964
LOWEST DAILY MEAN	47	Sep 8	18	Oct 7 1986
INSTANTANEOUS PEAK FLOW	3410	Feb 16	4720	Oct 4 1964
INSTANTANEOUS PEAK STAGE	11.51	Feb 16	12.96	Oct 4 1964
INSTANTANEOUS LOW FLOW	46*	Sep 9	16*	Oct 7 1986
ANNUAL RUNOFF (INCHES)	48.6		33.8	
10 PERCENTILE	358		259	
50 PERCENTILE	166		106	
95 PERCENTILE	53		42	

* See REMARKS.

TENNESSEE RIVER BASIN

03503000 LITTLE TENNESSEE RIVER AT NEEDMORE, NC

LOCATION.--Lat 35°20'11", long 83°31'37", Swain County, Hydrologic Unit 06010202, on left bank on Secondary Road 1113, 0.8 mi downstream from DeHart Creek, 0.8 mi north of Needmore, 2.4 mi downstream from Brush Creek, 6.3 mi downstream from Tellico Creek and at mile 92.9.

DRAINAGE AREA.--436 mi^2.

PERIOD OF RECORD.--October 1943 to December 1981, October 1983 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 above National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Tennessee Valley Authority has telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. Considerable diurnal fluctuation caused by Porters Bend powerplant at Lake Emory 20 mi upstream. Several measurements of water temperatures were made during the year. Minimum discharge, 52 ft^3/s, also occurred Nov. 8, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of October 1898 and Aug. 30, 1940, reached stages of about 13 ft and 11.5 ft respectively, from flood profiles by Tennessee Valley Authority.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8810	891	1060	3260	2070	2360	2070	1240	921	507	486	575
2	8050	851	1020	1950	1880	2530	1960	1330	915	496	477	461
3	4140	837	980	1590	1840	3690	1870	1230	1090	473	530	433
4	2800	822	943	1810	2740	3070	1790	3150	1090	458	487	407
5	2130	809	940	2270	3040	2620	1720	2260	921	451	522	386
6	1860	949	919	2210	2270	2380	1680	1690	869	449	564	380
7	1600	1170	911	2080	2100	2220	1710	1450	835	440	491	368
8	1390	1040	1780	2240	1900	2170	1570	1320	808	435	494	356
9	1370	1320	1940	2050	1800	2530	1510	1310	784	605	498	406
10	1310	1120	1640	1820	4950	2440	1500	2660	853	589	510	512
11	1200	998	1410	1620	4660	2290	1830	2000	795	512	481	517
12	1140	953	1890	1500	2950	2120	1540	1550	734	511	462	439
13	1080	929	2700	1380	2740	1990	1440	1420	717	565	464	645
14	1040	911	1980	1310	2350	1910	1400	1330	701	2630	552	711
15	1010	969	1700	1260	2170	1830	1420	1240	708	2340	487	1030
16	982	3990	1530	1210	10400	4280	1350	1210	689	1040	443	690
17	1320	2110	1370	1170	12500	14800	1300	1280	680	741	427	538
18	1400	1450	1290	1190	5730	10400	1280	1260	667	701	414	473
19	1720	1270	1260	1150	5010	5400	1220	1110	642	845	403	466
20	1250	1200	1240	1190	4110	4280	1190	1190	621	968	402	420
21	1130	1130	1160	3080	3560	3670	1250	1360	605	886	405	425
22	1060	1480	1090	2120	3940	3290	1230	1140	602	808	532	526
23	1020	3040	1050	1700	4690	3000	1200	1090	611	732	522	894
24	982	1880	1010	1570	3630	2790	1180	1040	572	645	436	504
25	956	1570	1020	2670	3130	2620	1130	999	560	676	494	466
26	938	1420	923	3060	2830	2470	1090	973	548	624	534	436
27	913	1320	794	2270	2630	2450	1060	1120	539	570	419	441
28	892	1260	785	1950	2480	2230	1250	1160	558	538	398	431
29	875	1190	782	2470	---	2210	1990	1230	541	543	387	402
30	871	1100	937	3390	---	2210	1340	1050	522	539	422	397
31	872	---	1990	2440	---	2280	---	961	---	509	1070	---
MEAN	1810	1333	1292	1967	3718	3372	1469	1398	723	736	491	504
MAX	8810	3990	2700	3390	12500	14800	2070	3150	1090	2630	1070	1030
MIN	871	809	782	1150	1800	1830	1060	961	522	435	387	356
IN.	4.79	3.41	3.42	5.20	8.88	8.92	3.76	3.70	1.85	1.95	1.30	1.29

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	638.1	788.9	1039	1332	1589	1725	1546	1191	921.2	710.6	633.3	579.1
MAX	2557	2169	2231	2570	3718	3372	2746	2573	2061	2136	1670	1605
(WY)	1965	1980	1962	1946	1990	1990	1964	1976	1949	1989	1967	1950
MIN	191.5	282.2	368.3	348.6	659.6	595.7	553.1	489.1	350.6	237.8	212.5	208.3
(WY)	1955	1955	1966	1981	1986	1988	1986	1986	1988	1986	1986	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	1556		1059	
HIGHEST ANNUAL MEAN			1565	1973
LOWEST ANNUAL MEAN			494.7	1986
HIGHEST DAILY MEAN	14800	Mar 17	17200	Oct 5 1964
LOWEST DAILY MEAN	356	Sep 8	71	Nov 7 1954
INSTANTANEOUS PEAK FLOW	17100	Feb 17	22100	Oct 5 1964
INSTANTANEOUS PEAK STAGE	10.74	Feb 17	12.87	Oct 5 1964
INSTANTANEOUS LOW FLOW	283	Sep 20	52*	Nov 7 1954
ANNUAL RUNOFF (INCHES)	48.5		33.0	
10 PERCENTILE	2780		1940	
50 PERCENTILE	1170		817	
95 PERCENTILE	424		309	

* See REMARKS.

TENNESSEE RIVER BASIN

03504000 NANTAHALA RIVER NEAR RAINBOW SPRINGS, NC

LOCATION.--Lat 35°07'37", long 83°37'09", Macon County, Hydrologic Unit 06010202, on right bank on Nantahala Forest Service Road 437, 300 ft upstream from Roaring Fork, 0.2 mi downstream from Buck Creek, 5 mi downstream from town of Rainbow Springs, and at mile 34.3.

DRAINAGE AREA.--51.9 mi^2.

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Occasional slight diurnal fluctuation at low flow caused by small ponds on tributaries above station. Maximum discharge, 6,300 ft^3/s, from rating curve extended above 3,000 ft^3/s on basis of slope-area measurement of peak flow. Minimum discharge, 30 ft^3/s, occurred several days in October 1987.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1330	130	213	465	378	374	279	174	150	73	101	73
2	915	126	204	326	374	497	266	170	148	71	101	69
3	599	123	194	287	365	504	252	169	255	68	100	66
4	455	121	185	529	504	419	240	441	182	67	107	62
5	379	119	182	429	411	384	229	352	160	65	126	60
6	329	194	177	460	382	359	247	274	150	64	120	59
7	294	155	178	403	386	340	236	246	143	63	100	57
8	263	210	375	460	346	382	214	225	139	85	95	56
9	241	244	281	361	399	450	205	288	132	73	101	66
10	225	182	248	334	1060	396	232	432	131	94	101	88
11	211	165	230	311	679	362	242	311	121	77	91	62
12	200	154	505	307	560	340	207	276	117	89	88	69
13	188	148	401	289	484	321	197	258	112	100	85	89
14	178	152	337	274	438	304	193	237	110	685	97	129
15	172	290	311	267	416	294	200	224	112	352	82	154
16	167	907	275	256	2130	1020	181	208	106	170	79	82
17	323	392	255	249	1210	2010	176	247	103	141	76	69
18	221	e315	242	274	897	1080	172	201	100	170	75	64
19	215	e260	255	239	804	806	164	188	96	196	73	62
20	188	e230	233	360	626	659	162	250	93	187	90	65
21	176	e210	217	519	575	568	171	227	90	171	77	59
22	169	e340	203	349	741	502	160	210	91	153	88	176
23	162	e490	e191	311	643	454	160	193	88	163	89	89
24	157	e340	e209	330	566	417	152	182	84	137	76	72
25	152	e290	e229	610	500	386	146	174	82	130	87	66
26	148	e260	e206	479	454	375	142	169	80	123	73	63
27	144	e250	e185	407	419	346	137	186	83	117	70	59
28	140	e260	170	374	393	323	265	198	88	113	67	57
29	137	e240	167	504	---	324	220	182	80	112	76	56
30	135	223	242	475	---	318	183	164	74	108	110	55
31	139	---	525	407	---	306	---	156	---	103	105	---
MEAN	282	251	252	376	612	504	201	233	117	139	90.5	75.1
MAX	1330	907	525	610	2130	2010	279	441	255	685	126	176
MIN	135	119	167	239	346	294	137	156	74	63	67	55
IN.	6.27	5.39	5.61	8.35	12.29	11.20	4.32	5.17	2.51	3.10	2.01	1.61

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	113.8	151.3	221.1	278.2	327.0	320.4	278.7	216.7	169.3	140.8	120.3	106.0
MAX	414.5	376.3	452.7	568.5	657.4	572.1	493.0	491.4	485.3	334.6	269.9	374.4
(WY)	1965	1978	1983	1974	1957	1979	1979	1976	1989	1989	1969	1950
MIN	42.2	56.6	77.2	84.4	115.2	137.6	118.5	96.8	67.1	59.0	49.5	41.8
(WY)	1955	1955	1959	1981	1941	1988	1986	1986	1986	1986	1986	1986

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	259.2		203.0	
HIGHEST ANNUAL MEAN			280.0	1949
LOWEST ANNUAL MEAN			108.6	1986
HIGHEST DAILY MEAN	2130	Feb 16	3060	Jun 16 1949
LOWEST DAILY MEAN	55	Sep 30	30	Oct 6 1986
INSTANTANEOUS PEAK FLOW	3600	Feb 16	6300*	Jun 16 1949
INSTANTANEOUS PEAK STAGE	6.74	Feb 16	9.70	Jun 16 1949
INSTANTANEOUS LOW FLOW	52	Sep 9	30*	Oct 4 1987
ANNUAL RUNOFF (INCHES)	67.8		53.1	
10 PERCENTILE	481		372	
50 PERCENTILE	198		161	
95 PERCENTILE	66		57	

* See REMARKS.

TENNESSEE RIVER BASIN

03512000 OCONALUFTEE RIVER AT BIRDTOWN, NC

LOCATION.--Lat 35°27'41", long 83°21'13", Swain County, Hydrologic Unit 06010203, in Cherokee Indian Reservation on left bank 200 ft upstream from bridge on Secondary Road 1359, 0.5 mi south of Birdtown, 0.6 mi downstream from Adams Creek, 0.6 mi upstream from Goose Creek, 2.2 mi southwest of Cherokee, and at mile 3.1.

DRAINAGE AREA.--184 mi^2.

PERIOD OF RECORD.--July 1945 to September 1946, July 1948 to current year.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 1,843.30 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1946, nonrecording gage at same site and datum. Tennessee Valley Authority satellite data transmitter at station.

REMARKS.--No estimated daily discharges. Records fair. Maximum gage height, 12.46 ft, from floodmarks. Minimum discharge, 79 ft^3/s, also occurred Nov. 9, 1987. Minimum discharge for current water year also occurred Sept. 8.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of Nov. 19, 1906 and Mar. 27, 1913 reached stages of 18 ft and 14.5 ft, respectively, discharge not determined, from studies by Tennessee Valley Authority.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3090	312	485	1830	1070	838	659	446	521	233	220	171
2	2180	304	464	1000	963	1020	633	478	492	231	214	164
3	1420	301	436	812	908	1730	587	435	586	219	216	160
4	1040	287	410	1020	1740	1190	565	459	508	216	203	155
5	837	283	411	967	1310	1020	540	645	455	211	224	151
6	712	384	396	1270	1090	933	537	520	419	208	223	145
7	627	331	388	1120	1040	865	554	502	400	207	208	143
8	560	400	683	1170	904	868	500	468	383	240	193	167
9	509	536	560	1010	873	998	487	536	441	249	249	166
10	472	417	488	908	5350	968	486	1720	468	221	273	179
11	448	370	458	812	2670	899	568	997	430	215	218	207
12	423	352	868	740	1860	858	487	774	380	329	197	157
13	399	338	826	667	1440	782	459	685	360	415	225	201
14	383	338	673	624	1210	739	448	603	346	2090	230	214
15	369	705	627	597	1100	700	467	543	355	806	218	442
16	363	2370	548	571	5370	2690	437	492	338	438	195	233
17	587	1050	510	539	3260	7950	424	847	324	352	181	186
18	496	791	488	571	2330	3600	419	627	314	326	177	168
19	648	664	488	526	2180	2390	399	530	309	318	171	162
20	469	598	454	628	1710	1840	395	537	291	347	174	164
21	429	552	425	1320	1430	1520	419	499	288	359	229	156
22	411	798	389	806	1490	1310	402	504	290	314	370	512
23	394	1210	375	708	1380	1150	382	507	295	326	328	317
24	376	824	370	695	1180	1030	376	446	271	283	237	224
25	362	723	422	1500	1040	921	428	420	262	266	210	200
26	349	666	398	1280	953	854	384	403	255	254	195	182
27	339	621	376	1010	908	790	370	456	254	245	186	175
28	332	597	353	891	839	730	459	741	261	236	176	165
29	322	558	342	2140	---	714	555	919	244	236	176	164
30	318	513	399	1980	---	705	455	688	241	230	182	158
31	321	---	1910	1330	---	695	---	575	---	221	184	---
MEAN	645	606	530	1001	1700	1397	476	613	359	350	216	200
MAX	3090	2370	1910	2140	5370	7950	659	1720	586	2090	370	512
MIN	318	283	342	526	839	695	370	403	241	207	171	143
IN.	4.04	3.68	3.32	6.28	9.62	8.75	2.89	3.84	2.18	2.19	1.35	1.21

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	260.4	378.5	564.8	684.1	801.5	875.5	716.8	526.7	410.7	383.6	321.8	249.0
MAX	644.7	777.5	1266	1428	1700	1714	1265	1202	1136	937.8	693.7	584.5
(WY)	1990	1958	1962	1974	1990	1963	1964	1984	1989	1989	1971	1989
MIN	94.5	125.0	162.1	169.9	392.4	329.8	277.1	239.0	175.1	168.6	161.5	121.0
(WY)	1955	1988	1966	1981	1978	1988	1986	1986	1988	1952	1987	1954

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	668.8		513.2	
HIGHEST ANNUAL MEAN			704.3	1989
LOWEST ANNUAL MEAN			273.7	1986
HIGHEST DAILY MEAN	7950	Mar 17	8470	Mar 12 1963
LOWEST DAILY MEAN	143	Sep 7	80	Nov 8 1987
INSTANTANEOUS PEAK FLOW	12900	Mar 17	15900	Dec 30 1969
INSTANTANEOUS PEAK STAGE	10.71	Mar 17	12.46*	Dec 30 1969
INSTANTANEOUS LOW FLOW	138*	Sep 7	79*	Nov 8 1987
ANNUAL RUNOFF (INCHES)	49.4		37.9	
10 PERCENTILE	1260		944	
50 PERCENTILE	463		384	
95 PERCENTILE	173		141	

* See REMARKS.

TENNESSEE RIVER BASIN

03513000 TUCKASEGEE RIVER AT BRYSON CITY, NC

LOCATION.--Lat 35°25'40", long 83°26'51", Swain County, Hydrologic Unit 06010203, on left bank 400 ft downstream from bridge on Secondary Road 1364, Everett Street, in Bryson City, 0.6 mi downstream from Deep Creek, and at mile 12.6.

DRAINAGE AREA.--655 mi^2.

PERIOD OF RECORD.--October 1897 to December 1981, October 1983 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 above 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 upstream at datum 2.00 ft higher. Feb. 3, 1914, to May 17, 1920, water-stage recorder at site 200 ft upstream at datum 2.00 ft higher. June 28, 1927, to Sept. 30, 1960, water-stage recorder at present site at datum 2.00 ft higher. Tennessee Valley Authority has telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. 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. 340-342), and two small reservoirs with combined capacity of 250 ft^3/s-day. Maximum discharge, 61,600 ft^3/s, from rating curve extended above 28,000 ft^3/s on basis of slope-area measurement of peak flow. Minimum daily discharge, 31 ft^3/s Sept. 9, 10, 1925, caused by filling reservoir on Oconaluftee River; minimum daily during normal regulation, 186 ft^3/s Oct. 13, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 1840, Mar. 6, 1867, and June 1876 reached stages of 22 ft, 19 ft, and 19 ft, 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7940	1450	1830	4620	3330	3150	3030	1880	1860	1160	1190	946
2	5930	1230	1620	3060	2950	3700	2880	2050	1600	1040	1150	714
3	3750	1230	1550	2350	3050	4800	2800	1760	1970	1100	1140	779
4	3180	1210	1710	3040	4610	3890	2540	2860	1710	1080	1080	794
5	2580	1180	1580	3060	3970	3550	2410	3430	1810	1060	1250	957
6	2370	1490	1530	3530	3330	3420	2150	2670	1700	1070	1130	978
7	2110	1260	1470	3510	3190	3250	2460	2480	1770	1130	1150	1160
8	1950	1310	2270	3640	2930	3260	2280	2210	1630	1220	1150	1060
9	1860	1630	1980	3170	2730	3660	2050	2380	1720	1420	1260	907
10	1770	1480	1780	2840	10300	3500	2240	4420	1620	1370	1390	842
11	1580	1360	1810	2640	6290	3320	2430	3080	1510	1310	1070	940
12	1510	1260	3010	2420	4810	3080	2220	2360	1630	1470	1010	908
13	1460	1040	3190	2300	4060	2800	2060	2290	1560	1580	986	980
14	1400	1140	2670	2110	3610	2810	1880	2040	1550	5030	1170	1080
15	1370	1780	2520	1890	3200	2700	1700	2100	1690	2600	1100	1400
16	1340	5480	2320	1980	11200	7040	1680	2060	1590	1670	1100	851
17	1880	2990	2180	1740	8870	9940	1910	2560	1330	1410	1060	669
18	2030	2290	2100	1980	6770	5150	1810	2200	1240	1240	1050	865
19	2090	1970	2040	1980	6620	5040	1710	1970	1650	1200	976	513
20	2120	1670	1820	2010	5360	5170	1620	2000	1610	1410	965	495
21	1950	1770	1940	3700	4700	4740	1780	1990	1300	1320	1090	874
22	1760	2360	1950	2820	5170	4560	1540	2110	1230	1210	1420	1440
23	1390	4080	1870	2500	5050	4240	1480	2040	1360	1310	1270	988
24	1850	2980	1840	2190	4350	3980	1720	1590	1140	1290	1140	783
25	1850	2710	1760	4380	3900	3770	1900	1570	1080	1300	1060	853
26	1840	2470	1830	4070	3650	3600	1420	1610	1140	1220	948	588
27	1830	2030	1590	3360	3510	3460	1440	1620	1190	1220	840	552
28	1330	1930	1360	2750	3250	3300	1640	2250	1360	1190	1140	504
29	1480	1870	1200	4500	---	3310	2660	2640	1260	1170	1040	675
30	1490	2020	1330	4890	---	3260	1790	2240	1210	1190	1040	597
31	1540	---	3760	3540	---	3260	---	1840	---	1260	1290	---
MEAN	2211	1956	1981	2986	4813	4023	2041	2268	1501	1427	1118	856
MAX	7940	5480	3760	4890	11200	9940	3030	4420	1970	5030	1420	1440
MIN	1330	1040	1200	1740	2730	2700	1420	1570	1080	1040	840	495

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	924.3	1050	1560	1991	2276	2564	2211	1735	1389	1247	1150	944.5
MAX	3654	2899	3704	4819	5847	6504	4843	3744	3199	3378	4251	3589
(WY)	1899	1907	1933	1937	1899	1899	1920	1984	1909	1916	1901	1898
MIN	346.5	378.1	456.9	598.6	735.6	926.4	841.2	602.1	530.9	503.4	220.1	195.1
(WY)	1932	1932	1940	1940	1941	1988	1986	1941	1941	1925	1925	1925

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	2251		1583	
HIGHEST ANNUAL MEAN			2576	1899
LOWEST ANNUAL MEAN			878.8	1986
HIGHEST DAILY MEAN	11200	Feb 16	28000	Mar 4 1917
LOWEST DAILY MEAN	495	Sep 20	31*	Sep 9 1925
INSTANTANEOUS PEAK FLOW	22600	Feb 16	61600*	Aug 30 1940
INSTANTANEOUS PEAK STAGE	11.37	Feb 16	15.96	Aug 30 1940
INSTANTANEOUS LOW FLOW	470	Sep 28	27	Sep 10 1925
ANNUAL RUNOFF (INCHES)	46.7		32.8	
10 PERCENTILE	3910		2840	
50 PERCENTILE	1830		1250	
95 PERCENTILE	897		492	

* See REMARKS.

TENNESSEE RIVER BASIN

03548500 HIWASSEE RIVER ABOVE MURPHY, NC

LOCATION.--Lat 35°04'49", long 84°00'10", Cherokee County, Hydrologic Unit 06020002, on right bank on U.S. Highway 64, 600 ft upstream from Will Scott Creek, 2.0 mi southeast of Murphy, and at mile 99.1.

DRAINAGE AREA.--406 mi^2.

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 above National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to Jan. 30, 1921, nonrecording gage at bridge 2.8 mi downstream at datum 30.40 ft lower. Jan. 30, 1921 to Nov. 8, 1926, nonrecording gage 2.8 mi downstream at datum 28.40 ft lower. Nov. 9, 1926 to Apr. 30, 1940, water-stage recorder 2.8 mi downstream at datum 28.20 ft lower.

REMARKS.--No estimated daily discharges. Records good. Considerable diurnal fluctuation since 1924 caused by Mission powerplant at Andrews Dam 7 mi upstream, normal regulated storage, about 75 ft^3/s-day. Flow regulated since 1942 by Chatuge Lake 22 mi upstream (station 03546500). Maximum discharge before regulation, 23,100 ft^3/s, Mar. 19, 1899, gage height 18.4 ft, from graph based on gage readings, site and datum then in use, from rating curve extended above 5,000 ft^3/s. Minimum daily discharge before regulation, 10 ft^3/s, Dec. 3, 1924, result of freezeup and filling of Lake Andrews.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed is that of Mar. 19, 1899.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5010	844	1580	2220	2360	2380	1200	1040	928	359	1200	558
2	2880	1250	1510	1690	2350	2650	1480	1370	734	334	1200	173
3	2080	1260	1510	1350	2140	2910	1570	1430	757	582	1190	292
4	2080	1260	1410	1930	2430	2670	1510	1430	992	473	705	660
5	1840	1250	1450	1940	2470	2520	1510	1050	810	206	451	680
6	1720	1460	1450	1670	2270	2430	1520	546	1030	584	895	633
7	1720	1410	1340	1200	2210	2000	995	758	1100	181	1020	625
8	1860	1650	1940	1630	2100	2130	615	889	1230	184	1170	481
9	1700	1820	1870	1670	2100	2470	820	1220	1020	261	1350	150
10	1780	1580	1860	1910	4800	2440	948	2050	760	511	1370	337
11	1760	1480	1760	1710	3400	2230	1120	1670	548	401	743	569
12	1710	1430	2460	1250	2760	2180	1130	1350	360	276	211	554
13	1690	1400	2580	1140	2580	2450	989	986	505	280	700	623
14	1690	1400	2320	688	2430	2380	677	1640	765	926	1230	603
15	1690	1750	2270	1200	1970	2330	592	1560	800	618	1200	598
16	1560	3360	2100	1460	11600	5010	714	1570	690	529	1210	200
17	1840	1880	1700	1470	4630	9780	890	1600	321	745	949	191
18	1780	1740	1740	1290	3600	4630	1040	806	350	751	794	392
19	1980	1620	1740	597	3510	3460	852	419	432	746	236	358
20	1800	1580	1930	830	3100	3020	1190	490	503	823	701	701
21	1760	1380	1770	2190	2880	2760	546	669	527	730	1200	665
22	1730	1990	1900	2010	2970	2600	519	1110	614	406	1080	729
23	989	2780	1900	2090	2850	2510	852	1090	424	602	777	254
24	384	2050	1870	1990	2710	2190	478	1200	231	917	1220	186
25	367	1760	1410	3140	2570	1560	806	1230	221	905	1190	277
26	355	1700	672	3100	2500	2130	809	781	425	872	704	265
27	346	1640	637	2630	2440	2280	1100	391	422	851	562	261
28	339	1740	625	2420	2400	2230	699	445	400	618	1190	343
29	332	1580	614	2760	---	2240	601	590	398	208	1240	341
30	326	1570	534	2830	---	2230	513	925	404	712	1050	256
31	328	---	1260	2480	---	1490	---	795	---	1110	860	---
MEAN	1530	1654	1604	1822	3076	2784	943	1068	623	571	955	432
MAX	5010	3360	2580	3140	11600	9780	1570	2050	1230	1110	1370	729
MIN	326	844	534	597	1970	1490	478	391	221	181	211	150

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD*, BY WATER YEAR (WY)

MEAN	470.1	526.4	890.4	1080	1214	1081	1046	942.0	912.8	910.8	859.3	705.0
MAX	1530	1654	2268	2462	3076	2784	2155	2033	1852	1517	1530	1628
(WY)	1990	1990	1968	1974	1990	1990	1953	1953	1989	1989	1967	1943
MIN	98.8	106.3	214.3	223.2	407.6	373.4	218.6	211.7	237.5	227.7	120.5	141.4
(WY)	1953	1954	1948	1948	1954	1988	1986	1988	1953	1953	1953	1953

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD*	
AVERAGE FLOW	1414		884.8	
HIGHEST ANNUAL MEAN			1414	1990
LOWEST ANNUAL MEAN			396.7	1988
HIGHEST DAILY MEAN	11600	Feb 16	11600	Feb 16 1990
LOWEST DAILY MEAN	150	Sep 9	62	Oct 19 1952
INSTANTANEOUS PEAK FLOW	17900	Feb 16	18600	May 28 1973
INSTANTANEOUS PEAK STAGE	13.71	Feb 16	13.88	May 28 1973
INSTANTANEOUS LOW FLOW	139	Jul 8	NOT DETERMINED	
ANNUAL RUNOFF (INCHES)	47.3		29.6	
10 PERCENTILE	2590		1620	
50 PERCENTILE	1230		784	
95 PERCENTILE	271		153	

* Regulated period only (1942-1990). See REMARKS.

TENNESSEE RIVER BASIN

03550000 VALLEY RIVER AT TOMOTLA, NC

LOCATION.--Lat 35°08'20", long 83°58'50", Cherokee County, Hydrologic Unit 06020002, on right bank at site of former bridge on Secondary Road 1373 at Tomotla, 600 ft upstream from bridge on U.S. Highway 19 and 74, 0.2 mi upstream from Roger Creek, 4.7 mi northeast of Murphy, and at mile 6.6.

DRAINAGE AREA.--104 mi^2.

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 above 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 except those for estimated daily discharges, which are fair. Maximum discharge, 18,000 ft^3/s, from flood profile by Tennessee Valley Authority, from rating curve extended above 5,800 ft^3/s on basis of slope-conveyance study. Minimum discharge, 12 ft^3/s, occurred several days in August and September 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of September 1898 reached a stage of 21.2 ft, from floodmark by Tennessee Valley Authority, discharge, about 20,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990, MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2110	149	284	1130	636	452	345	235	233	90	79	65
2	1290	145	269	647	575	547	331	246	223	93	78	61
3	734	143	255	501	577	777	319	225	316	85	101	56
4	512	140	244	748	1140	656	303	219	255	81	80	54
5	410	137	241	745	889	555	290	277	225	78	194	52
6	349	236	236	829	695	491	298	236	209	76	118	51
7	304	205	232	732	630	449	307	228	196	75	96	49
8	270	302	482	839	549	471	274	215	185	73	86	49
9	245	417	416	721	520	640	262	260	192	75	126	54
10	233	317	377	599	1880	670	281	579	191	81	139	83
11	222	256	340	517	1350	595	311	432	171	85	99	74
12	212	230	715	462	913	526	268	343	157	104	90	58
13	203	214	707	415	717	479	258	294	149	195	107	62
14	193	225	527	384	614	443	251	259	144	512	95	108
15	183	658	462	359	559	415	268	237	148	314	84	110
16	179	1790	399	338	4630	1810	243	225	141	172	81	72
17	260	764	357	321	2480	4250	242	241	137	137	76	62
18	217	510	332	362	1440	1720	247	216	130	120	73	58
19	261	414	337	322	1280	1110	231	203	125	115	71	56
20	222	361	316	474	991	840	226	242	119	128	68	60
21	206	321	292	1250	811	692	250	276	117	129	72	57
22	198	597	275	711	808	601	236	225	126	139	76	179
23	186	944	e245	551	752	541	228	214	127	180	80	98
24	178	603	e220	509	673	500	222	203	113	124	71	72
25	171	484	245	1140	600	465	215	193	106	109	66	65
26	165	424	239	1060	541	444	211	186	101	105	64	62
27	160	383	231	746	503	418	204	227	98	97	62	60
28	155	361	227	607	473	392	258	418	95	91	59	58
29	152	325	223	920	---	397	293	448	93	88	59	57
30	149	301	299	1100	---	384	240	313	89	85	76	56
31	152	---	999	788	---	366	---	256	---	81	61	---
MEAN	338	412	356	672	1008	745	264	270	157	126	86.7	68.6
MAX	2110	1790	999	1250	4630	4250	345	579	316	512	194	179
MIN	149	137	220	321	473	366	204	186	89	73	59	49
IN.	3.75	4.42	3.94	7.45	10.10	8.26	2.83	2.99	1.69	1.40	.96	.74

e Estimated

STATISTICS OF MONTHLY FLOW DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	92.3	152.2	277.5	391.5	452.1	449.6	372.3	261.4	181.6	161.9	131.5	96.5
MAX	338.1	684.6	1045	936.4	1022	1071	834.8	755.0	607.2	442.9	563.0	434.3
(WY)	1990	1930	1933	1974	1957	1980	1936	1929	1989	1949	1920	1928
MIN	25.2	38.6	57.4	69.9	92.7	154.9	135.3	88.9	44.8	42.4	24.6	21.3
(WY)	1955	1934	1934	1981	1941	1988	1986	1941	1988	1988	1925	1925

SUMMARY STATISTICS	FOR 1990 WATER YEAR		FOR PERIOD OF RECORD	
AVERAGE FLOW	371.7		251.0	
HIGHEST ANNUAL MEAN			378.9	1922
LOWEST ANNUAL MEAN			111.0	1988
HIGHEST DAILY MEAN	4630	Feb 16	5220	Dec 28 1932
LOWEST DAILY MEAN	49	Sep 7	12	Aug 27 1925
INSTANTANEOUS PEAK FLOW	7420	Feb 16	18000*	Nov 19 1906
INSTANTANEOUS PEAK STAGE	15.87	Feb 16	20.5	Nov 19 1906
INSTANTANEOUS LOW FLOW	47	Sep 8	12*	Aug 27 1925
ANNUAL RUNOFF (INCHES)	48.5		32.8	
10 PERCENTILE	747		499	
50 PERCENTILE	242		170	
95 PERCENTILE	61		46	

* See REMARKS.

Lakes and Reservoirs in Ohio River basin

03460242 WATERVILLE LAKE.--Lat 35°41'41", long 83°03'02', Haywood County, Hydrologic Unit 06010206, at Waterville Dam on Pigeon River, 0.1 mi downstream from Cataloochee Creek, 5.5 mi southeast of Mount Sterling, and at mile 38.0. DRAINAGE AREA, 455 mi^2. PERIOD OF RECORD, October 1961 to current year. Prior to October 1979, published as Lake Walters. Gage, nonrecording gage read once daily. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by single arch, variable radius, concrete dam with fourteen taintor gates 10 ft high by 24 ft 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, top of gates, is 12,800 ft^3/s-day, of which 10,400 ft^3/s-day is controlled storage above elevation 2,175 ft, normal minimum pool. Reservoir is used for power. Prior to Jan. 1, 1971 records furnished by Carolina Power and Light Co.

COOPERATION.--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 ft^3/s-day several days each year, elevation, 2,258.6 ft; minimum observed, 1,030 ft^3/s-day Sept. 16, 1980, elevation, 2,141.5 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents observed, 12,800 ft^3/s-day Oct. 1-6, Feb. 9-11, 15-23, and March 17-22, elevation 2,258.60 ft; minimum observed, 7,350 ft^3/s-day May 19, elevation, 2,222.20 ft.

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 southeast of Topton, 5.5 mi upstream from Whiteoak Creek, and at mile 22.8. DRAINAGE AREA, 91.0 mi^2. 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 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.

REMARKS.--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, top of gates, is 69,200 ft^3/s-day, of which 63,500 ft^3/s-day is controlled storage above 2,758.84 ft, normal minimum pool. Reservoir is used for flood control and power.

COOPERATION.--Gage-height record furnished by Nantahala Power and Light Co.; level storage records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 70,400 ft^3/s-day Apr. 12, 1957, elevation, 2,890.55 ft; minimum, after first filling, 6,700 ft^3/s-day Jan. 28, 1955, elevation, 2,760.11 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 68,400 ft^3/s-day May 21, elevation, 2,889.08 ft; minimum, 28,200 ft^3/s-day Sept. 30, elevation, 2,825.27 ft.

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 northwest of Glenville, 3.0 mi upstream from Shoal Creek, and at mile 9.7. DRAINAGE AREA, 36.7 mi^2. 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 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.

REMARKS.-- Reservoir is formed by earth and rock dam and six 40 ft fuse-plug dams. Side channel spillway equipped with two taintor gates 12 ft high by 25 ft 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, top of gates, is 35,500 ft^3/s-day, of which 33,700 ft^3/s-day is controlled storage above elevation 3,023.25 ft, normal minimum pool. Reservoir is used for flood control and power.

COOPERATION.--Gage-height record furnished by Nantahala Power and Light Co.; level storage records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 35,700 ft^3/s-day Mar. 13, 1950; maximum elevation, 3,100.07 ft, May 4, 1990, minimum, after first filling, 2,200 ft^3/s-day Feb. 5, 1955, Jan. 13, 1956; minimum elevation, 3,025.10 ft Feb. 5, 1955.

EXTREMES FOR CURRENT YEAR: Maximum contents, 35,600 ft^3/s-day May 4, elevation, 3100.07 ft. minimum, 19,000 ft^3/s-day Sept. 30, elevation, 3,074.12 ft.

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 upstream from Twenty Mile Creek, 9.0 mi north of Robbinsville, 9.6 mi upstream from Cheoah Dam, and at mile 61.0. DRAINAGE AREA, 1,571 mi^2. 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.

REMARKS.--Reservoir is formed by gravity nonoverflow type concrete dam. Spillway equipped with four radial gates 35 ft high by 35 ft 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, top of gates, is 727,500 ft^3/s-day, of which 476,900 ft^3/s-day is controlled storage above elevation 1,580.0 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 728,600 ft^3/s-day May 28, 1973, elevation, 1,710.20 ft; minimum, after first filling, 78,300 ft^3/s-day Jan. 29, 1955, elevation, 1,472.0 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 653,400 ft^3/s-day May 30, elevation, 1,695.67 ft; minimum, 307,200 ft^3/s-day Sept. 30, elevation 1,603.10 ft.

Lakes and Reservoirs in the Ohio River basin--Continued

03516500 SANTEETLAH LAKE.--Lat 35°22'38", long 83°52'33", Graham County, Hydrologic Unit 06010204, at Santeetlah Dam on Cheoah River, 1.0 mi downstream from Santeetlah Creek, 5.5 mi northwest of Robbinsville, and at mile 9.3. DRAINAGE AREA, 176 mi^2. PERIOD OF RECORD, December 1927 to current year. Prior to October 1946 month-end contents only, published in WSP 1306. GAGE, water-stage recorder. Datum of gage is 122.92 ft 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.
REMARKS.--Reservoir is formed by concrete gravity and arch dam with concrete spillway controlled by six taintor gates 12 ft high by 25 ft 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, top of gates, is 78,800 ft^3/s-day, of which 66,600 ft^3/s-day is controlled storage above 1,740.08 ft, normal minimum pool. Reservoir is used for power.
COOPERATION.-- Gage-height record furnished by Aluminum Co. of America; level storage records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 81,100 ft^3/s-day Sept. 3, 1928, elevation, 1,817.90 ft; minimum, after first filling, 13,100 ft^3/s-day Feb. 6, 1940, elevation, 1,741.39 ft.
EXTREMES FOR CURRENT YEAR: Maximum contents, 79,200 ft^3/s-day Mar. 17, elevation, 1,817.30 ft; minimum, 54,600 ft^3/s-day Dec. 30, elevation, 1,797.96 ft.

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 upstream from Hyatt Mill Creek, 2.5 mi downstream from Georgia-North Carolina State line, 2.4 mi southeast of Hayesville, and at mile 121.0. DRAINAGE AREA, 189 mi^2. 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.
REMARKS.--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, top of flashboards, is 121,200 ft^3/s-day, of which 61,700 ft^3/s-day is controlled storage above elevation 1,905.0 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.
COOPERATION.--Records furnished by Tennessee Valley Authority. (See sta 03548500)
EXTREMES FOR PERIOD OF RECORD: Maximum contents, 124,200 ft^3/s-day Apr. 20, 1943, elevation, 1,927.80 ft; minimum, after first filling, 9,400 ft^3/s-day Sept. 5, 1947, Jan. 27, 1956; minimum elevation, 1,860.11 ft Sept. 5, 1947.
EXTREMES FOR CURRENT YEAR: Maximum contents, 112,600 ft^3/s-day Apr. 30, elevation, 1,925.51 ft; minimum, 78,400 ft^3/s-day Dec. 25, elevation, 1,913.67 ft.

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 northwest of village of Hiwassee Dam, 3.9 mi upstream from Shoal Creek, and at mile 75.8. DRAINAGE AREA, 968 mi^2. PERIOD OF RECORD, September 1939 to current year. GAGE, water-stage recorder. Datum of gage is 0.63 ft below National Geodetic Vertical Datum of 1929.
REMARKS.--Reservoir is formed by gravity overflow concrete dam with seven taintor gates 23 ft high by 32 ft 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, top of gates, is 218,800 ft^3/s-day of which 154,300 ft^3/s-day is controlled storage above elevation 1,450.0 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.
COOPERATION.--Records furnished by Tennessee Valley Authority.
EXTREMES FOR PERIOD OF RECORD: Maximum contents, 223,400 ft^3/s-day May 28, 1973, elevation, 1,528.02 ft; minimum, after first filling, 35,800 ft^3/s-day Jan. 28, 1948, elevation, 1,413.41 ft.
EXTREMES FOR CURRENT YEAR: Maximum contents, 210,100 ft^3/s-day Oct. 2, elevation, 1,523.84 ft; minimum, 99,200 ft^3/s-day Jan. 20, elevation, 1,475.82 ft.

03555500 APPALACHIA LAKE.--Lat 35°10'04", long 84°17'49", Cherokee County, Hydrologic Unit 06020002, at Appalachia Dam on Hiwassee River, 0.1 mi upstream from North Carolina-Tennessee State line, 1.5 mi northeast of Farner, TN, 9.8 mi downstream from Hiwassee Dam, and at mile 66.0. DRAINAGE AREA, 1,018 mi^2. PERIOD OF RECORD, February 1943 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.
REMARKS.--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, top of gates, is 29,100 ft^3/s-day, of which 4,400 ft^3/s-day is controlled storage above elevation 1,272.00 ft, normal minimum pool. Reservoir is used for navigation, flood control, and power.
COOPERATION.-- Records furnished by Tennessee Valley Authority.
EXTREMES FOR PERIOD OF RECORD: Maximum contents, 30,300 ft^3/s-day June 13, 1952, elevation, 1,281.40 ft; minimum, after first filling, 15,300 ft^3/s-day Apr. 25, 1971, elevation, 1,251.00 ft.
EXTREMES FOR CURRENT YEAR: Maximum contents, 29,400 ft^3/s-day Jan. 1, elevation 1,280.49 ft; minimum, 24,500 ft^3/s-day May 3, elevation, 1,271.38 ft.

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 mi^2. Total capacity is 4,540 ft^3/s-day, of which 2,120 ft^3/s-day is controlled storage. Storage began Mar. 27, 1963, and lake reached spillway elevation of 2,160 ft 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 mi^2. Total capacity is 11,600 ft^3/s-day, crest of spillway, of which 8,900 ft^3/s-day 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 mi^2. Total capacity is 844 ft^3/s-day, of which 823 ft^3/s-day is controlled storage. Dam completed December 1926, and storage began Jan. 11, 1927; water in reservoir first reached maximum pool elevation Mar. 8, 1927. (See sta 03451000)

Lakes and Reservoirs in the Ohio River basin--Continued

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. DRAINAGE AREA, 33.3 mi^2. Total capacity is 1,040 ft^3/s-day, top of flashboards, all of which is usable. Storage began November 1931. (See sta 03456100)

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. DRAINAGE AREA, 63.6 mi^2. Total surface area, about 195 acres. Lake reached spillway elevation in the spring of 1913.

03500466 SEQUOYAH LAKE.--Lat 35°04'02", long 83°13'31", Macon County, Hydrologic Unit 06010202, on Cullasaja River near Highlands, and at mile 18.4. DRAINAGE AREA, 14.4 mi^2. Total capacity is 233 ft^3/s-day, spillway crest, of which approximately 116 ft^3/s-day 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 mi^2 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 mi^2 on Wolf Creek near Tuckasegee, is at lat 35°13'18", long 83°00'00". Total capacity of East Fork Lake is 671 ft^3/s-day, of which 625 ft^3/s-day is controlled storage. Storage began Apr. 18, 1955. Total capacity of Wolf Creek Lake is 5,070 ft^3/s-day, of which 3,850 ft^3/s-day is controlled storage. Storage began Mar. 22, 1955.

03507216 BEAR CREEK LAKE.--Lat 35°14'29", long 83°04'22", Jackson County, Hydrologic Unit 06010203, on Tuckasegee River near Tuckasegee. DRAINAGE AREA, 74.8 mi^2. Total capacity is 17,500 ft^3/s-day, of which 2,290 ft^3/s-day is controlled storage. Storage began Oct. 9, 1953.

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. DRAINAGE AREA, 80.3 mi^2. Total capacity is 3,200 ft^3/s-day, of which 350 ft^3/s-day is controlled storage. Storage began Apr. 26, 1952.

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. DRAINAGE AREA, 1,608 mi^2. Total capacity is 17,700 ft^3/s-day, of which 920 ft^3/s-day is controlled storage. Storage began Dec. 8, 1918.

OHIO RIVER BASIN

Lakes and Reservoirs in Ohio River basin--Continued

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Date	03460242 Waterville Lake			03504500 Nantahala Lake			03507500 Thorpe Reservoir			03524500 Fontana Lake		
	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)
Sept. 30	2,258.60	12,850	-	2,872.03	55,800	-	3,089.25	28,000	-	1,685.54	604,900	-
Oct. 31	2,239.40	9,820	-3,030	2,870.43	54,600	-1,200	3,086.28	26,100	-1,900	1,683.49	595,500	-9,400
Nov. 30	2,253.30	11,980	+2,160	2,864.96	51,000	-3,600	3,088.06	27,200	+1,100	1,678.42	572,800	-22,700
Dec. 31	2,248.60	11,240	-740	2,858.35	46,700	-4,300	3,083.20	24,200	-3,000	1,656.90	483,400	-89,400
CAL YR 1989		-	-310		-	+31,600		-	+13,100		-	+66,400
Jan. 31	2,255.10	12,270	+1,030	2,863.23	49,800	+3,100	3,086.77	26,400	+2,200	1,652.33	465,800	-17,600
Feb. 28	2,253.50	12,020	-250	2,886.29	66,300	+16,500	3,096.06	32,700	+6,300	1,662.50	505,600	+39,800
Mar. 31	2,239.10	9,770	-2,250	2,888.28	67,800	+1,500	3,099.40	35,100	+2,400	1,675.97	562,000	+56,400
Apr. 30	2,239.00	9,760	-10	2,886.15	66,200	-1,600	3,099.58	35,200	+100	1,683.61	596,100	+34,100
May 31	2,230.90	8,550	-1,210	2,887.34	67,100	+900	3,097.57	33,800	-1,400	1,695.29	651,500	+55,400
June 30	2,244.90	10,660	+2,110	2,877.08	59,400	-7,700	3,091.66	29,700	-4,100	1,691.11	631,200	-20,300
July 31	2,255.70	12,370	+1,710	2,863.88	50,200	-9,200	3,086.20	26,000	-3,700	1,673.15	549,800	-81,400
Aug. 31	2,250.90	11,600	-770	2,843.41	37,500	-12,700	3,078.80	21,500	-4,500	1,639.08	417,800	-132,000
Sept. 30	2,252.10	11,790	+190	2,825.27	28,200	-9,300	3,074.12	19,000	-2,500	1,603.10	307,200	-110,600
WTR YR 1990		-	-1,060		-	-27,600		-	-9,000		-	-297,700

Date	03516500 Santeetlah Lake			03546500 Chatuge Lake			03554500 Hiwassee Lake			03555500 Appalachia Lake		
	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)
Sept. 30	1,815.83	77,100	-	1,922.75	103,600	-	1,520.26	198,900	-	1,278.42	28,300	-
Oct. 31	1,807.72	66,200	-10,900	1,921.55	99,900	-3,700	1,504.06	156,000	-42,900	1,278.75	28,400	+100
Nov. 30	1,805.54	63,500	-2,700	1,918.17	90,200	-9,700	1,496.81	138,900	-17,100	1,277.81	27,900	-500
Dec. 31	1,800.05	57,000	-6,500	1,914.70	81,000	-9,200	1,481.50	109,000	-29,900	1,279.35	28,800	+900
CAL YR 1989		-	+3,900		-	-600		-	+16,700		-	+800
Jan. 31	1,806.68	64,900	+7,900	1,916.33	85,200	+4,200	1,482.27	110,300	+1,300	1,276.80	27,400	-1,400
Feb. 28	1,816.66	78,300	+13,400	1,920.63	97,200	+12,000	1,495.00	134,900	+24,600	1,272.11	24,800	-2,600
Mar. 31	1,815.79	77,100	-1,200	1,923.39	105,600	+8,400	1,506.70	162,500	+27,600	1,277.24	27,600	+2,800
Apr. 30	1,815.33	76,400	-700	1,925.47	112,400	+6,800	1,513.02	178,700	+16,200	1,277.23	27,600	0
May 31	1,813.63	74,100	-2,300	1,924.70	109,900	-2,500	1,519.72	197,300	+18,600	1,276.67	27,300	-300
June 30	1,810.90	70,400	-3,700	1,923.93	107,400	-2,500	1,517.13	189,800	-7,500	1,277.05	27,500	+200
July 31	1,812.45	72,500	+2,100	1,923.47	105,900	-1,500	1,515.52	185,400	-4,400	1,277.90	28,000	+500
Aug. 31	1,807.70	66,200	-6,300	1,918.28	90,400	-15,500	1,509.39	169,400	-16,000	1,276.30	27,100	-900
Sept. 30	1,807.00	65,300	-900	1,917.54	88,400	-2,000	1,498.97	143,800	-25,600	1,277.17	27,600	+500
WTR YR 1990		-	-11,800		-	-15,200		-	-55,100		-	-700

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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 other collected from some special reasons are called measurements at miscellaneous sites.

MEASUREMENTS AT MISCELLANEOUS SITES

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table.

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1990, IN ATLANTIC SLOPE BASINS						
ROANOKE RIVER BASIN						
02070500 Mayo River	Dan River	Lat 36°32'05", long 79°59'30", Rockingham County, Hydrologic Unit 03010103, at bridge on Secondary Road 1358, 0.5 mi downstream from confluence of North and South Mayo Rivers, 0.8 mi downstream from Virginia-North Carolina State Line, and 4 mi west of Price.	261	1929-71†, 1981, 1985-89	9- 6-90	190
02077348 Marlowe Creek	Dan River	Lat 36°29'03", long 78°58'47", Person County, Hydrologic Unit 03010104, at bridge on Secondary Road 1322, downstream from Fishing Branch, and 1.2 mi west of Woodsdale.	17.8	1970, 1974, 1976, 1978, 1980-89	12- 5-89 8-20-90	12.5 6.31
02079101 Grassy Creek	Roanoke River	Lat 36°29'22", long 78°37'08", Granville County, Hydrologic Unit 03010102, at bridge on Secondary Road 1436 , 0.7 mi downstream from Little Grassy Creek, and 2.8 mi east-northeast of Cornwall.	61.2	1981-89	3-14-90 8-10-90	32.6 12.7
02079264 Nutbush Creek	Roanoke River	Lat 36°22'10", long 78°24'31", Vance County, Hydrologic Unit 03010102, at bridge on Secondary Road 1317, 0.1 mi upstream from Buggs Island Reservoir, and 3 mi north of Henderson.	6.0	1970, 1974, 1976, 1978-89	3-14-90 8- 9-90	6.61 64.3
02079717 Smith Creek	Roanoke River	Lat 36°32'27", long 78°11'43", Warren County, Hydrologic Unit 03010106, at bridge on U.S. Highway 1, 0.3 mi downstream from Blue Mud Creek, and 2.1 mi west of Paschall.	52.9	1954, 1961-63, 1966, 1976, 1979-89	3-14-90 8- 9-90	45.4 57.4
NEUSE RIVER BASIN						
02087251 Crabtree Creek	Neuse River	Lat 35°50'15", long 78°46'52", Wake County, Hydrologic Unit 03020201, at bridge on Secondary Road 1795, 0.3 mi downstream from Hayleys Branch, and 3.5 mi north of Cary.	52.2	1983-89	3-14-90	25.5
0208732544 Pigeon House Creek	Crabtree Creek	Lat 35°47'37", long 78°38'35", Wake County, Hydrologic Unit 03020201, at Dortch Street, and 1.2 mi north of Post Office Building in Raleigh.	0.59	1984-89	8- 9-90	7.56
0208758450 Dutchman's Branch	Neuse River	Lat 35°41'28", long 78°43'30", Wake County, Hydrologic Unit 03020201, 0.2 mi above mouth and 2.2 mi northwest of McCullers Crossroads.	5.23	1987-89	11-14-89 2-23-90	2.03 14.5
0208772185 Swift Creek	Neuse River	Lat 35°37'46", long 78°32'57", Johnston County, Hydrologic Unit 03020201, at State Highway 42, and 1.4 mi northeast of Drug Store.	86.6	1984-89	11-14-89 2-23-90 8- 8-90	42.2 160 5.90
02091814 Neuse River	Atlantic Ocean	Lat 35°18'40", long 77°18'20", Craven County, Hydrologic Unit 03020202, at bridge on Secondary Road 1470, 1.5 mi upstream from Core Creek, and 2 mi east of Fort Barnwell.	a3900	1970, 1972-73, 1976, 1978, 1980-82, 1985-89	1-25-90 8- 9-90	4,280 1,490

† Operated as a continuous-record gaging station.
a Approximately

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1990

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		CAPE FEAR RIVER BASIN				
02093250 Haw River	Cape Fear River	Lat 36°12'47", long 79°57'24", Guilford County, Hydrologic Unit 03030002, on Secondary Road 2109, 0.2 mi downstream of Rocky Branch, and 3.3 mi northeast of Oak Ridge.	14.1	1971, 1973, 1984, 1986-89	4-11-90 6-13-90	15.6 7.39
02095681 Reedy Fork	Haw River	Lat 36°10'23", long 79°30'38", Alamance County, Hydrologic Unit 03030002, at bridge on State Highway 87, at Ossipee, and 0.5 mi upstream from mouth.	256	1969-70, 1973, 1976-88	9-25-90	73.4
02096879 Haw River	Cape Fear River	Lat 35 53'43", long 79 15'31", Alamance County, Hydrologic Unit 03030002, at bridge on Secondary Road 1005, 0.7 mi upstream from Cane Creek, and 5.8 mi north of Terrells.	1083	1974-75, 1979-86 1989	6-14-90	380
02097360 Bolin Creek	Little Creek	Lat 35°55'40", long 79°02'08", Orange County, Hydrologic Unit 03030002, at bridge on U.S. Highway 15A, 1.0 mi above Booker Creek, and 1.5 mi northeast of Chapel Hill.	10.7	1954, 1960, 1962, 1964, 1965-68, 1974-76, 1978, 1980-89	3-13-90 8- 8-90	6.77 0.93
02097521 Morgan Creek	New Hope River	Lat 35°51'48", long 79°00'35", Chatham County, Hydrologic Unit 03030002, at bridge on Secondary Road 1726, 2 mi upstream from Cub Creek, and 4 mi north of Farrington.	45.6	1970, 1973, 1976, 1978, 1980-89	3-13-90 8- 8-90	33.1 13.9
02099484 Richland Creek	Deep River	Lat 35°56'26", long 79°54'08", Guilford County, Hydrologic Unit 03030003, at bridge on Secondary Road 1147, 0.2 mi upstream from mouth, and 4 mi southwest of Groomtown.	16.2	1971, 1973-76, 1978-89	6-14-90	22.8
02101001 Bear Creek	Deep River	Lat 35°26'26", long 79°35'20", Moore County, Hydrologic Unit 03030003, at bridge on State Highway 705, 0.5 mi north of Robbins, and 1 mi downstream from Cabin Creek.	139	1973-74, 1985-89	10-20-89 4- 9-90 8- 2-90	266 172 1.76
02102634 Upper Little River	Cape Fear River	Lat 35°19'33", long 78°43'26", Harnett County, Hydrologic Unit 03030004, at bridge on Secondary Road 2021, 1.5 mi upstream from mouth, and 2.8 mi west of Erwin.	217	1968, 1974-76, 1979 1985-89	2-22-90 8- 8-90	538 8.57
02103000 Little River	Cape Fear River	Lat 35°11'38", long 78°59'14", Cumberland County, Hydrologic Unit 03030004, at bridge on State Highway 87, at Manchester, and 0.3 mi upstream from Tank Creek.	347	1939-50†, 1978, 1980-89	11-15-89 2-23-90 8- 8-90	317 771 190
02104279 Rockfish Creek	Cape Fear River	Lat 34°58'10", long 79°06'40", Hoke County, Hydrologic Unit 03030004, at bridge on Secondary Road 1432, 0.2 mi downstream from Puppy Creek, and 1.2 mi northeast of Arabia.	a150	1973-74, 1978, 1980-89	11-17-89	300
02104380 Beaver Creek	Little Rockfish Creek	Lat 35°00'09", long 78°58'45", Cumberland County, Hydrologic Unit 03030004, at bridge on Secondary Road 1141 at Cumberland, and 1 mi upstream from mouth.	32.6	1961-65, 1968, 1973-75, 1979-89	11-17-89 2-21-90 8-14-90	59.7 45.2 19.6

† Operated as a continuous-record gaging station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1990

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		CAPE FEAR RIVER BASIN (Continued)				
02104500 Rockfish Creek	Cape Fear River	Lat 34°57'57", long 78°55'00", Cumberland County, Hydrologic Unit 03030004, at bridge on U.S. Highway 301, 0.1 mi downstream from Little Rockfish Creek, and 1.7 mi east of Hope Mills.	292	1974-76, 1979-89	11-20-89 8-14-90	578 295
02105520 Harrisons Creek	Cape Fear River	Lat 34°43'55", long 78°42'59", Bladen County, Hydrologic Unit 03030005, at bridge on Secondary Road 1320, 1.2 mi upstream from mouth, and 1.2 mi south of White Oak.	50.1	1985-89	11-16-89 2-22-90 8-13-90	49.2 64.9 3.00
0210563128 Turnbull Creek	Cape Fear River	Lat 34°33'49", long 78°33'26", Bladen County, Hydrologic Unit 03030005, at bridge on State Highway 41, 3.0 mi upstream from mouth, and 3.0 mi northeast of Elizabethtown.	81.4	1985-89	11-16-89 8-13-90	59.0 30.0
02108500 Rockfish Creek	Northeast Cape Fear River	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 upstream from Doctors Creek, and 2.5 mi west of Wallace.	69.3	1955-80†, 1981-89	11-21-89 2-28-90 8- 9-90	32.6 118 59.4
		PEE DEE RIVER BASIN				
02120521 Third Creek	South Yadkin River	Lat 35°46'03", long 80°37'34", Rowan County, Hydrologic Unit 03040102, at bridge on Secondary Road 1970, and 2.2 mi west of Woodleaf.	96.6	1986-89	4-11-90 6-12-90 8- 8-90	150 79.3 60.0
0212147355 Rich Fork Creek	Abbotts Creek	Lat 35°55'36", long 80°07'31", Davidson County, Hydrologic Unit 03040103, at bridge on Secondary Road 1800, 1.4 mi downstream from High Point sewage disposal plant, and 3.9 mi northwest of Thomasville.	26.6	1970-75, 1981-84, 1986-89	4-23-90 6-13-90	13.7 7.58
02123500 Uwharrie River	Pee Dee River	Lat 35°25'47", long 80°01'05", Montgomery County, Hydrologic Unit 03040103, at State Highway 109, 1 mi upstream from McLeans Creek, and 3 mi south of Eldorado.	342	1938-71†, 1981-89	4- 9-90 8- 2-90	342 18.9
0212388100 Rocky River	Pee Dee River	Lat 35°28'29", long 80°46'48", Mecklenburg County, Hydrologic Unit 03040105, at bridge on Secondary Road 1608, 1.3 mi upstream from West Branch, and 4.2 mi southeast of Davidson.	13.4	1970-89	10-12-89 11-13-89 12-11-89 2- 9-90 3-15-90 6- 1-90[b] 6- 1-90[c] 8-14-90	14.4 9.77 28.2 17.3 17.2 15.7 16.2 10.1
02124374 Irish Buffalo Creek	Rocky River	Lat 35°20'50", long 80°32'52", Cabarrus County, Hydrologic Unit 03040105, at bridge on Secondary Road 1132, 1 mi south of Faggarts Crossroads, and 1 mi upstream from mouth.	45.4	1974-84, 1986-89	6-14-90 8- 1-90	15.3 6.6
02124401 Rocky River	Pee Dee River	Lat 35°19'26", long 80°30'59", Cabarrus County, Hydrologic Unit 03040105, at bridge on U.S. Highway 601, 1 mi upstream from Hamby Branch, and 3 mi southeast of Faggarts Crossroads.	393	1970-71, 1973-89	6-14-90 8- 1-90	121 65.7
02124596 Dutch Buffalo Creek	Rocky River	Lat 35°18'51", long 80°27'52", Cabarrus County, Hydrologic Unit 03040105, at bridge on State Highway 200, and 0.2 mi west of Georgeville.	98.2	1986-89	6-14-90 8- 1-90	16.9 2.81

† Operated as a continuous-record gaging station.
a Approximately
b 1130 Time of measurement
c 1200 Time of measurement

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1990

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		PEE DEE RIVER BASIN (Continued)				
02125126 Long Creek	Rocky River	Lat 35°13'05", long 80°15'28", Stanly County, Hydrologic Unit 03040105, at bridge on Secondary Road 1917, 1 mi upstream from mouth, and 4 mi east of Oakboro.	198	1970-71, 1973-89	6-14-90 8- 1-90	38.4 11.6
02125482 Richardson Creek	Rocky River	Lat 35°04'16", long 80°24'25", Union County, Hydrologic Unit 03040105, at bridge on Secondary Road 1649, 1.2 mi downstream from Watson Creek, and 1.5 mi northwest of Fairfield.	153	1961-62, 1981-84, 1986-89	5-16-90 6-14-90 6-27-90 8- 1-90	17.0 12.6 15.1 8.45
02127318 Brown Creek	Pee Dee River	Lat 35°04'04", long 80°05'54", Anson County, Hydrologic Unit 03040104, at bridge on U.S. Highway 52, 0.9 mi downstream from Goulds Fork, and 4 mi north of Pinkston.	153	1985-89	5-16-90 7- 2-90 8- 2-90	13.3 0.69 0.02
02129341 Hitchcock Creek	Pee Dee River	Lat 34°55'05", long 79°47'50", Richmond County, Hydrologic Unit 03040201, downstream from dam at Cordova, and 1.2 mi upstream from mouth.	134	1970-71, 1974, 1979-84, 1986-89	3-20-90 7- 2-90 8- 1-90	190 23.9 20.5
02129527 Jones Creek	Pee Dee River	Lat 34°54'15", long 79°55'51", Anson County, Hydrologic Unit 03040201, at bridge on State Highway 145, 3.1 mi southwest of Pee Dee, and 2.9 mi downstream from Hale Creek.	92.8	1985-89	10-20-89 3-20-90 7- 2-90 8 -1-90	75.8 125 11.5 5.45
0212955844 Marks Creek	Pee Dee River	Lat 34°51'45", long 79°43'09", Richmond County, Hydrologic Unit 03040201, at bridge on Secondary Road 1812, 1.3 mi downstream from City Lake spillway, and 2.4 mi southwest of Hamlet.	12.9	1970-71, 1979-84, 1986-89	9-14-89 3-20-90 8- 1-90	1.87 1.88 0.56
02132269 Leith Creek	Little Pee Dee River	Lat 34°44'37", long 79°25'13", Scotland County, Hydrologic Unit 03040204 at bridge on Secondary Road 1609, 4 mi west of Maxton, and 5.4 mi upstream from mouth.	21.8	1973-75, 1979-89	10-19-89 4-12-90 6-28-90 8- 2-90	19.0 15.5 0.00 0.00
02134623 Lumber River	Little Pee Dee River	Lat 34°18'50", long 79°02'19", Columbus County, Hydrologic Unit 03040203, at bridge on State Highway 904 at Fairbluff, and 1.4 mi downstream from Poster Swamp.	1364	1959, 1962, 1968, 1974-75, 1980, 1984-89	11-16-89 8-13-90	1,060 143
02137513 Catawba River	Santee River	Lat 35 38'23", long 82 07'38", McDowell County, Hydrologic Unit 03050101, at bridge on Interstate 40, 0.3 mi downstream from Brevard Creek, and 3.2 mi east of Old Fort.	57.9	1970-75, 1981-82, 1984-88	3-13-90 6- 5-90 7-23-90	154 96.9 82.4
		SANTEE RIVER BASIN				
0213875850 High Shoals Creek	Catawba River	Lat 35°35'57", long 81°54'19", McDowell County, Hydrologic Unit 03050101, on left bank 0.5 mi above mouth and 1.9 mi west of Dysartsville.	2.38	1986-89†	11-30-89 5- 3-90 6- 5-90 7-23-90	3.89 5.77 4.75 3.66
02140304 Wilson Creek	Johns River	Lat 36°05'49", long 81°48'28", Avery County, Hydrologic Unit 03050101, at bridge on U.S. Highway 221, 0.8 mi upstream from Linn Core Branch, and 2.7 mi northwest of Gragg.	0.72	1964, 1969-70, 1978-81, 1983-89	4-13-90 6- 7-90 7-19-90	0.86 0.56 4.65
02141245 Lower Creek	Catawba River	Lat 35°49'31", long 81°38'10", Burke County, Hydrologic Unit 03050102, at bridge on Secondary Road 1501, 0.8 mi downstream from Husband Creek, and 7 mi northeast of Morganton.	89.5	1949-50,[2] 1964-69,[2] 1972-73, 1975-84, 1986-89	12- 7-89 6-20-90 7-23-90 8-10-90	75.6 75.4 102 72.0
0214272204 Dutchman's Creek	Catawba River	Lat 35°20'10", long 81°00'50", Gaston County, Hydrologic Unit 03050102, at bridge on Secondary Road 1918, and 0.7 mi west of Mountain Island.	116	1986-89	11-21-89 6-22-90 7-24-90 9- 7-90	97.5 71.2 54.8 29.9

[2] Baseflow.
† Operated as a continuous-record gaging station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1990

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, Hydrologic Unit 03050102, at bridge on Secondary Road 1008 at Lincolnton, and 0.2 mi upstream from mouth.	91.2	1947, 1949-57, 1962-64, 1970-72, 1975, 1978-89	3-15-90 6-24-90 9- 7-90	119 61.5 43.5
02145640 Crowders Creek	Catawba River	Lat 35°08'15", long 81°08'15", York County, South Carolina, Hydrologic Unit 03050101, at bridge on Ridge Road, 3.4 mi upstream from Beaver Dam Creek, and 3.2 mi east-southeast of Bowling Green, South Carolina.	89	1970-77, 1979-89	11-13-89 4- 3-90 7-18-90	42.1 111 48.7
02146381 Sugar Creek	Catawba River	Lat 35°05'20", long 80°54'00", Mecklenburg County, Hydrologic Unit 03050103, at bridge on U.S. Highway 51, 0.5 mi upstream from McCullough Branch, and 0.8 mi west of Pineville.	65.3	1969-74, 1979-89	10-12-89 11-13-89 5-11-90 6-15-90 8-10-90	46.3 32.2 65.9 43.3 32.1
02146530 Little Sugar Creek	Catawba River	Lat 35°05'06", long 80°52'58", Mecklenburg County, Hydrologic Unit 03050103, at bridge on State Highway 51, .5 mi east of intersection of State Highway 51 and U.S Highway 521 at Pineville.	49.2	1966-69	3-14-89 5-25-89 6-27-89 8- 9-89 9-13-89 10-12-89 11-13-89 5-11-90 6-15-90 8-10-90	45.1 39.1 32.7 26.3 50.5 35.2 33.3 52.2 33.3 29.6
02146800 Sugar Creek	Catawba River	Lat 35°00'21", long 80°54'09", York County, Hydrologic Unit 03050103, at bridge on State Highway 160, 0.7 mi downstream from Clems Branch, and 2.6 mi east of Fort Mill, South Carolina.	262	1969, 1974-78†, 1982-89	11-13-89 3- 1-90 4-26-90 6-15-90	172 323 205 165
02147126 Waxhaw Creek	Catawba River	Lat 34°50'12", long 80°47'31", Union County, Hydrologic Unit 03050103, at bridge on Secondary Road 1103, 6 mi upstream from mouth, and 6.5 mi south of Waxhaw.	35.0	1957, 1961-62, 1974-77, 1981-89	10-12-89 4-26-90 7-10-90 10- 2-90	12.9 11.0 1.90 1.75
02152596 First Broad River	Broad River	Lat 35°13'03", long 81°36'28", Cleveland County, Hydrologic Unit 03050105, at bridge on Secondary Road 1140, 3 mi upstream from mouth, and 4.8 mi northwest of Earl.	296	1968-77, 1980-89	4- 9-90 7-18-90	520 249
02153456 Buffalo Creek	Broad River	Lat 35°10'20", long 81°31'02", Cleveland County, Hydrologic Unit 03050105, at bridge on State Highway 198, 0.1 mi upstream from North Carolina-South Carolina State Line, and 4 mi west of Grover.	161	1968-77, 1979-89	4- 9-90 7-18-90	228 43.7
		SAVANNAH RIVER BASIN				
02184242 Horsepasture River	Toxaway River	Lat 35°05'33", long 82°58'04", Transylvania County, Hydrologic Unit 03060101, at bridge on State Highway 281, and 4 mi southwest of Lake Toxaway.	24.1	1985-89	11-28-89 5- 3-90 8- 7-90	99.5 45.0 21.9

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1990, IN OHIO RIVER BASIN

		KANAWA RIVER BASIN				
03160271 South Fork New River	New River	Lat 36°13'14", long 81°38'25", Watauga County, Hydrologic Unit 05050001, at bridge on U.S. Highway 421, and 2 mi east of Boone.	34.8	1925, 1955-56, 1960, 1962, 1974-89	4-13-90 5- 2-90 6- 7-90 7-20-90	67.4 69.0 53.5 62.5
03161361 South Fork New River	New River	Lat 36°28'26", long 81°20'13", Ashe County, Hydrologic Unit 05050001, downstream from Cranberry Creek, 1.2 mi downstream from Nathans Creek, and 2 mi southwest of Scottville.	300	1974-75, 1977, 1981-83, 1986-89	8-21-90 9-27-90	276 236

† Operated as a continuous-record gaging station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1990

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		KANAWHA RIVER BASIN (Continued)				
03162500 North Fork New River	New River	Lat 36°30'14", long 81°23'25", Ashe County, Hydrologic Unit 05050001, 0.2 mi downstream from bridge on State Highway 16 at Crumpler, and 6 mi upstream from South Fork.	277	1930-58†, 1977, 1981-89	8-21-90 9-27-90	150 184
03162850 New River	Kanawha River	Lat36°33'08", long 81°11'00", Alleghany County, Hydrologic Unit 05050001, at bridge on Secondary Road 1345, 0.8 mi downstream from Rock Creek, and 1.3 mi north-northeast of Amelia.	823	1968-69, 1971-75, 1979-84, 1985, 1987-89	8-20-90	613
		TENNESSEE RIVER BASIN				
03457124 Pigeon River	French Broad River	Lat 35°32'05", long 82°54'41", Haywood County, Hydrologic Unit 06010106, at bridge on Secondary Road 1818 at Clyde, and 0.2 mi downstream from Chambers Branch.	162	1969-78, 1980-89	11-21-89 8-22-90 8-29-90	305 269 110
03457138 Pigeon River	French Broad River	Lat 35°32'56", long 82°56'23", Haywood County, Hydrologic Unit 06010106, at bridge on road connecting Secondary Roads 1513 and 1519, 0.5 mi upstream from Richlands Creek, 2 mi east of Dam, and at mile 55.5.	169	1964-65, 1968-84, 1986-89	3-23-90 4-26-90 8-21-90	823 268 114
03458121 Richland Creek	Pigeon River	Lat 35°30'30", long 82°58'19", Haywood County, Hydrologic Unit 06010106, at bridge on Secondary Road 1184, 0.8 mi upstream of Raccoon Creek, and 1.5 mi northeast of Waynesville.	48.0	1981-89	11-21-89 8-21-90 8-28-90	121 31.0 29.5
03458421 Richland Creek	Pigeon River	Lat 35°32'51", long 82°56'44", Haywood County, Hydrologic Unit 06010106, at bridge on Secondary Road 1519, 0.2 mi upstream from mouth, and 2.2 mi northwest of Clyde.	68.4	1964-65, 1968-73, 1975-76, 1979-83, 1986-89	11-21-89 5- 9-90 8-20-90	156 150 36.3
03458441 Pigeon River	French Broad River	Lat 35°33'41", long 82°57'14", Haywood County, Hydrologic Unit 06010106, at bridge on State Highway 209, 0.5 mi downstream from Yates Cover, and 3 mi northwest of Clyde.	238	1968-84, 1986-89	3-23-90 4-26-90 8-21-90	1,250 348 138
03458620 Crabtree Creek	Pigeon River	Lat 35°36'00", long 82°56'56", Haywood County, Hydrologic Unit 06010106, 0.2 mi upstream from mouth, and 0.6 mi west of Crabtree.	25.8	1944,[2] 1953-54,[2] 1962-66,[2] 1968-69,[2] 1976, 1978, 1981-84, 1986-89	12- 6-89 5- 9-90 8-20-90	18.2 22.7 8.50
03458638 Pigeon River	French Broad River	Lat 35°36'52", long 82°58'01", Haywood County, Hydrologic Unit 06010106, at bridge on Secondary Road 1363, and 0.1 mi downstream of Dotson Branch, 1.8 mi northwest of Crabtree.	278	1964-65, 1968-78, 1980-84, 1986-89	12- 6-89 5- 9-90 8-20-90	432 777 170
03460766 Pigeon River	French Broad River	Lat 35°46'32", long 83°06'01", Haywood County, Hydrologic Unit 06010106, at Carolina Power and Light power plant, downstream from Big Creek, and at Waterville.	536	1968-71, 1973-78, 1980-89	12-11-89 4-27-90 8-28-90	1,480 1,140 1,260
03461976 North Toe River	Nolichucky River	Lat 35°58'51", long 82°00'59", Avery County, Hydrologic Unit 06010108, at bridge on U.S. Highway 19E, 0.1 mi downstream from Jones Creek, 0.7 mi north of Ingalls, and at mile 50.9.	74.1	1969-71, 1973-74, 1976-89	4- 5-90 6-14-90 7-17-90	200 110 97.5

[2] Baseflow.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1990

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		TENNESSEE RIVER BASIN (Continued)				
03463021 North Toe River	Nolichucky River	Lat 35°55'46", long 82°06'57", Mitchell County, Hydrologic Unit 06010108, at bridge on Secondary Road 1162 at Penland, 0.4 mi downstream from Bear Creek, and at mile 27.6	145	1969-70, 1972-75, 1978, 1982-89	4- 5-90 6-14-90 7-17-90	380 214 191
03463162 South Toe River	Cane River	Lat 35°43'08", long 82°14'55", Yancey County, Hydrologic Unit 06010108, 3 mi southeast of Mt. Mitchell, and 4.7 mi southwest of Busick.	1.8	1985-89	4-13-90 6- 6-90 7-19-90	3.12 4.46 19.2
03464000 Cane River	Nolichucky River	Lat 36°00'52", long 82°19'40", Yancey County, Hydrologic Unit 06010108, 1.3 mi upstream from North Toe River, and 1.5 mi east of Sioux.	157	1933-71†, 1974-78, 1980-89	4- 6-90 6- 6-90[b] 6- 6-90[c] 8- 6-90	311 246 254 157
03464500 Nolichucky River	French Broad River	Lat 36°04'28", long 82°20'42", Mitchell County, Hydrologic Unit 06010108, at Poplar, and 0.7 mi upstream from Hollow Poplar Creek.	608	1922-45†, 1962-63, 1968-72, 1974-78, 1980-89	6-26-90 9-25-90	495 380
03478819 Watauga River	South Fork Holston River	Lat 36°11'39", long 81°44'45", Watauga County, Hydrologic Unit 06010103, at bridge on State Highway 105, 300 ft upstream from Laurel Fork, and 1.4 mi north of Shulls Mills.	26.6	1971-73, 1975, 1986-89	4-13-90 6- 7-90 7-20-90	44.6 33.8 39.5
03502000 Little Tennessee River	Tennessee River	Lat 35°14'01", long 83°23'35", Macon County, Hydrologic Unit 06010202, 0.2 mi upstream from State Highway 28 at Iotla, and 0.2 mi upstream from Iotla Creek.	323	1929-45†, 1972-79, 1982-89	11-30-89 5- 8-90 8-29-90	877 1,210 279
03515633 Cheoah River	Little Tennessee River	Lat 35°20'04", long 83°48'21", Graham County, Hydrologic Unit 06010204, 0.1 mi upstream from Long Creek, and 0.9 mi north of Robbinsville.	55.3	1968-71, 1973-89	11-30-89 5- 1-90 8-17-90	113 98.6 28.2

† Operated as a continuous-record gaging station.
b 1000 Time of measurement
c 1005 Time of measurement

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Water-quality partial-record stations are particular sites where chemical-quality, biological and/or sediment data are collected systematically over a period of years for use in hydrologic analyses. These data are collected usually less than quarterly. Samples collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin are referred to as miscellaneous sites.

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT
		0208524090	MOUNTAIN CREEK AT SR 1617 NR BAHAMA, NC (LAT 36 08 58N LONG 078 53 49W)									
NOV 1989												
06...	1220	3.2	106	7.0	12.0	23	754	9.9	9.3	3.4	6.4	25
JAN 1990												
24...	1330	5.3	72	6.5	9.0	47	755	--	7.7	2.9	6.2	--
MAR												
14...	1120	5.1	98	7.2	17.0	18	754	10.2	7.7	2.8	5.8	28
29...	1315	--	81	6.4	10.0	55	759	11.1	6.2	2.2	4.7	28
MAY												
09...	1330	5.7	91	6.7	17.0	40	755	9.1	7.0	2.5	4.6	25
JUN												
28...	1310	0.72	105	7.6	23.0	17	754	8.4	9.8	3.0	5.7	24
SEP												
26...	1230	0.00	148	7.6	16.0	20	748	9.0	13	4.2	6.6	22
		0208524170	LITTLE RIVER TRIB NR DURHAM, NC (LAT 36 06 45N LONG 078 53 00W)									
NOV 1989												
06...	1010	0.12	75	6.2	12.0	50	754	8.8	4.7	2.2	5.7	34
JAN 1990												
24...	1145	0.56	--	7.8	9.5	60	752	--	4.2	2.0	6.5	41
MAR												
14...	1230	0.51	72	7.4	20.5	35	754	7.1	4.4	1.9	5.9	39
29...	1145	37	75	6.2	--	65	--	--	4.9	2.3	4.0	26
MAY												
09...	1035	0.40	65	6.4	18.5	130	755	7.5	4.0	1.7	4.4	34
JUN												
28...	0950	0.01	92	7.0	20.0	17	755	4.8	6.1	2.5	7.1	36
		0208527100	ENO RIVER TRIB AT SR 1004 NR FAIRNTOSH, NC (LAT 36 05 17N LONG 078 50 42W)									
NOV 1989												
06...	0915	0.54	43	6.4	10.0	60	758	8.6	3.0	1.3	3.2	33
JAN 1990												
23...	1130	0.59	44	7.6	8.5	55	758	--	2.7	1.1	3.2	37
MAR												
14...	0900	0.37	52	6.6	14.0	70	757	9.2	3.8	1.6	3.7	32
29...	1030	18	33	6.5	--	65	--	--	2.2	0.81	2.1	31
MAY												
09...	0930	0.19	50	6.8	15.0	110	758	8.9	3.8	1.4	2.7	27

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

MISCELLANEOUS STATION ANALYSES--Continued

DATE	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	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)	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 TOTAL (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
		0208524090		MOUNTAIN CREEK AT SR 1617 NR BAHAMA, NC (LAT 36 08 58N LONG 078 53 49W)								
NOV 1989												
06...	0.5	2.8	7.0	9.4	0.10	13	54	--	0.500	0.150	0.19	0.25
JAN 1990												
24...	--	1.5	7.0	8.0	<0.10	12	75	--	0.800	0.020	0.03	--
MAR												
14...	0.5	1.3	<1.0	7.8	<0.10	11	68	--	0.600	0.040	0.05	0.26
29...	0.4	2.2	6.2	5.9	<0.10	8.9	64	--	0.600	0.120	--	1.1
MAY												
09...	0.4	1.3	4.7	5.7	<0.10	14	72	--	0.600	0.070	0.09	--
JUN												
28...	0.4	1.6	3.4	7.0	0.20	15	62	--	0.600	<0.010	--	--
SEP												
26...	0.4	3.0	4.3	8.3	0.10	14	91	<0.010	<0.010	<0.100	<0.010	--
		0208524170		LITTLE RIVER TRIB NR DURHAM, NC (LAT 36 06 45N LONG 078 53 00W)								
NOV 1989												
06...	0.5	2.6	6.0	9.2	0.10	8.0	62	--	0.100	0.010	0.01	0.69
JAN 1990												
24...	0.7	1.5	7.0	9.9	<0.10	7.9	72	--	<0.100	0.020	0.03	0.38
MAR												
14...	0.6	1.3	4.7	6.6	<0.10	8.3	64	--	0.100	0.040	0.05	0.56
29...	0.4	2.6	16	4.7	0.20	5.5	72	--	0.200	0.350	--	0.85
MAY												
09...	0.5	1.0	4.6	4.8	<0.10	11	65	--	0.100	0.040	0.05	1.2
JUN												
28...	0.6	1.5	4.3	9.2	0.30	17	61	--	0.700	0.010	0.01	--
	0208527100			ENO RIVER TRIB AT SR 1004 NR FAIRNTOSH, NC (LAT 36 05 17N LONG 078 50 42W)								
NOV 1989												
06...	0.4	0.80	4.0	6.1	<0.10	11	66	--	<0.100	0.010	0.01	0.49
JAN 1990												
23...	0.4	0.70	5.0	5.0	<0.10	8.1	38	--	0.100	0.050	0.06	0.35
MAR												
14...	0.4	1.0	<1.0	<0.50	<0.10	8.8	44	--	<0.100	0.040	0.05	0.46
29...	0.3	1.1	4.6	3.0	0.20	5.3	44	--	0.100	0.060	0.08	0.84
MAY												
09...	0.3	0.80	2.3	3.8	<0.10	9.7	49	--	<0.100	0.160	0.21	0.94

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

MISCELLANEOUS STATION ANALYSES--Continued

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHATE, TOTAL (MG/L AS PO4)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)
0208524090 MOUNTAIN CREEK AT SR 1617 NR BAHAMA, NC (LAT 36 08 58N LONG 078 53 49W)												
NOV 1989												
06...	0.40	0.90	4.0	0.020	0.03	0.010	<10	<1	--	<1	--	<1
JAN 1990												
24...	<0.20	--	--	0.010	0.06	0.020	90	<1	--	<1	--	<1
MAR												
14...	0.30	0.90	4.0	0.020	0.06	0.020	140	<1	--	<1	--	<1
29...	1.2	--	--	0.171	--	0.041	4600	<1	--	<1	--	3
MAY												
09...	<0.20	--	--	0.040	0.09	0.030	200	<1	--	<1	--	1
JUN												
28...	0.20	0.80	3.5	0.020	0.03	0.010	110	1	5	<1	<1	<1
SEP												
26...	0.40	--	--	<0.010	0.03	0.010	130	<1	--	<1	--	<1
0208524170 LITTLE RIVER TRIB NR DURHAM, NC (LAT 36 06 45N LONG 078 53 00W)												
NOV 1989												
06...	0.70	0.80	3.5	0.040	0.12	0.040	220	<1	--	<1	--	<1
JAN 1990												
24...	0.40	--	--	0.040	0.09	0.030	320	<1	--	<1	--	<1
MAR												
14...	0.60	0.70	3.1	0.030	0.06	0.020	350	<1	--	2	--	<1
29...	1.2	--	--	0.24-	--	0.171	2600	<1	--	<1	--	2
MAY												
09...	1.2	1.3	5.8	0.050	0.09	0.030	340	<1	--	<1	--	<1
JUN												
28...	<0.20	--	--	0.020	0.03	0.010	50	1	3	<1	<1	<1
0208527100 ENO RIVER TRIB AT SR 1004 NR FAIRNTOSH, NC (LAT 36 05 17N LONG 078 50 42W)												
NOV 1989												
06...	0.50	--	--	0.030	0.12	0.040	380	<1	--	<1	--	<1
JAN 1990												
23...	0.40	0.50	2.2	<0.010	0.06	0.020	--	--	--	--	--	--
MAR												
14...	0.50	--	--	0.020	0.06	0.020	520	<1	--	2	--	<1
29...	0.90	--	--	0.060	0.06	0.021	2400	<1	--	2	--	4
MAY												
09...	1.1	--	--	0.030	0.06	0.020	330	<1	--	<1	--	2

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

MISCELLANEOUS STATION ANALYSES--Continued

DATE	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)
0208524090 MOUNTAIN CREEK AT SR 1617 NR BAHAMA, NC (LAT 36 08 58N LONG 078 53 49W)												
NOV 1989												
06...	--	1	<1	--	700	--	1	--	140	--	<0.10	--
JAN 1990												
24...	--	<1	1	--	790	--	1	--	200	--	<0.10	--
MAR												
14...	--	1	4	--	1200	--	2	--	240	--	<0.10	--
29...	--	--	5	--	7100	--	5	--	900	--	<0.10	--
MAY												
09...	--	<1	3	--	1700	--	2	--	280	--	<0.10	--
JUN												
28...	20	1	1	7	190	17000	1	20	40	1000	<0.10	0.02
SEP												
26...	--	<1	3	--	400	--	<1	--	250	--	<0.10	--
0208524170 LITTLE RIVER TRIB NR DURHAM, NC (LAT 36 06 45N LONG 078 53 00W)												
NOV 1989												
06...	--	1	1	--	1600	--	<1	--	80	--	<0.10	--
JAN 1990												
24...	--	1	1	--	1500	--	1	--	60	--	<0.10	--
MAR												
14...	--	<1	1	--	2400	--	3	--	100	--	<0.10	--
29...	--	1	5	--	3300	--	3	--	320	--	0.10	--
MAY												
09...	--	1	2	--	3100	--	2	--	90	--	<0.10	--
JUN												
28...	3	<1	1	5	680	8000	<1	<10	100	240	<0.10	0.02
0208527100 ENO RIVER TRIB AT SR 1004 NR FAIRNTOSH, NC (LAT 36 05 17N LONG 078 50 42W)												
NOV 1989												
06...	--	2	1	--	1700	--	2	--	120	--	<0.10	--
JAN 1990												
23...	--	--	5	--	960	--	3	--	120	--	<0.10	--
MAR												
14...	--	1	2	--	2900	--	3	--	270	--	<0.10	--
29...	--	2	2	--	3800	--	3	--	380	--	<0.10	--
MAY												
09...	--	1	2	--	3100	--	2	--	330	--	0.10	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

MISCELLANEOUS STATION ANALYSES--Continued

DATE	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	ALDRIN, TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)
0208524090 MOUNTAIN CREEK AT SR 1617 NR BAHAMA, NC (LAT 36 08 58N LONG 078 53 49W)												
NOV 1989												
06...	<1	<1	<1	<10	--	3.6	--	--	--	--	--	--
JAN 1990												
24...	<1	<1	<1	<10	--	3.5	--	--	--	--	--	--
MAR												
14...	1	<1	<1	<10	--	2.9	--	--	--	--	--	--
29...	2	<1	<1	20	--	12	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01
MAY												
09...	1	<1	--	<10	--	5.1	--	--	--	--	--	--
JUN												
28...	1	<1	<1	<10	20	3.7	--	--	--	--	--	--
SEP												
26...	2	<1	<1	<10	--	4.9	--	--	--	--	--	--
0208524170 LITTLE RIVER TRIB NR DURHAM, NC (LAT 36 06 45N LONG 078 53 00W)												
NOV 1989												
06...	1	<1	<1	<10	--	7.4	--	--	--	--	--	--
JAN 1990												
24...	<1	<1	<1	<10	--	8.3	--	--	--	--	--	--
MAR												
14...	1	<1	<1	<10	--	7.6	--	--	--	--	--	--
29...	3	<1	<1	20	--	--	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01
MAY												
09...	2	<1	--	<10	--	11	--	--	--	--	--	--
JUN												
28...	2	<1	<1	<10	20	4.7	--	--	--	--	--	--
0208527100 ENO RIVER TRIB AT SR 1004 NR FAIRNTOSH, NC (LAT 36 05 17N LONG 078 50 42W)												
NOV 1989												
06...	3	<1	<1	<10	--	7.2	--	--	--	--	--	--
JAN 1990												
23...	<1	<1	<1	<10	--	5.4	--	--	--	--	--	--
MAR												
14...	2	<1	<1	<10	--	8.3	--	--	--	--	--	--
29...	3	<1	<1	10	--	--	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01
MAY												
09...	2	<1	--	<10	--	11	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

MISCELLANEOUS STATION ANALYSES--Continued

DATE	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	PCB, TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)
0208524090 MOUNTAIN CREEK AT SR 1617 NR BAHAMA, NC (LAT 36 08 58N LONG 078 53 49W)											
NOV 1989											
06...	--	--	--	--	--	--	--	--	--	--	--
JAN 1990											
24...	--	--	--	--	--	--	--	--	--	--	--
MAR											
14...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.010	<0.010	<0.010	<0.01	<0.1	<0.10	<0.010	<0.010	<0.010	<0.01	<0.01
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
JUN											
28...	--	--	--	--	--	--	--	--	--	--	--
SEP											
26...	--	--	--	--	--	--	--	--	--	--	--
0208524170 LITTLE RIVER TRIB NR DURHAM, NC (LAT 36 06 45N LONG 078 53 00W)											
NOV 1989											
06...	--	--	--	--	--	--	--	--	--	--	--
JAN 1990											
24...	--	--	--	--	--	--	--	--	--	--	--
MAR											
14...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.010	<0.010	<0.010	<0.01	<0.1	<0.10	<0.010	<0.010	<0.010	<0.01	<0.01
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
JUN											
28...	--	--	--	--	--	--	--	--	--	--	--
0208527100 ENO RIVER TRIB AT SR 1004 NR FAIRNTOSH, NC (LAT 36 05 17N LONG 078 50 42W)											
NOV 1989											
06...	--	--	--	--	--	--	--	--	--	--	--
JAN 1990											
23...	--	--	--	--	--	--	--	--	--	--	--
MAR											
14...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.010	<0.010	<0.010	<0.01	<0.1	<0.10	<0.010	<0.010	<0.010	<0.01	<0.01
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

MISCELLANEOUS STATION ANALYSES--Continued

DATE	METHYL PARA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	BENZENE TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)
0208524090 MOUNTAIN CREEK AT SR 1617 NR BAHAMA, NC (LAT 36 08 58N LONG 078 53 49W)											
NOV 1989											
06...	--	--	--	--	--	--	--	--	--	--	--
JAN 1990											
24...	--	--	--	--	--	--	--	--	--	--	--
MAR											
14...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
JUN											
28...	--	--	--	--	--	--	--	<0.20	<0.20	<0.20	<0.20
SEP											
26...	--	--	--	--	--	--	--	--	--	--	--
0208524170 LITTLE RIVER TRIB NR DURHAM, NC (LAT 36 06 45N LONG 078 53 00W)											
NOV 1989											
06...	--	--	--	--	--	--	--	--	--	--	--
JAN 1990											
24...	--	--	--	--	--	--	--	--	--	--	--
MAR											
14...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
JUN											
28...	--	--	--	--	--	--	--	<0.20	<0.20	<0.20	<0.20
0208527100 ENO RIVER TRIB AT SR 1004 NR FAIRNTOSH, NC (LAT 36 05 17N LONG 078 50 42W)											
NOV 1989											
06...	--	--	--	--	--	--	--	--	--	--	--
JAN 1990											
23...	--	--	--	--	--	--	--	--	--	--	--
MAR											
14...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	<0.20	<0.20	<0.20	<0.20
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

MISCELLANEOUS STATION ANALYSES--Continued

DATE	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	STYRENE TOTAL (UG/L)
0208524090 MOUNTAIN CREEK AT SR 1617 NR BAHAMA, NC (LAT 36 08 58N LONG 078 53 49W)											
NOV 1989											
06...	--	--	--	--	--	--	--	--	--	--	--
JAN 1990											
24...	--	--	--	--	--	--	--	--	--	--	--
MAR											
14...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
JUN											
28...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	<0.2
SEP											
26...	--	--	--	--	--	--	--	--	--	--	--
0208524170 LITTLE RIVER TRIB NR DURHAM, NC (LAT 36 06 45N LONG 078 53 00W)											
NOV 1989											
06...	--	--	--	--	--	--	--	--	--	--	--
JAN 1990											
24...	--	--	--	--	--	--	--	--	--	--	--
MAR											
14...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
JUN											
28...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	<0.2
0208527100 ENO RIVER TRIB AT SR 1004 NR FAIRNTOSH, NC (LAT 36 05 17N LONG 078 50 42W)											
NOV 1989											
06...	--	--	--	--	--	--	--	--	--	--	--
JAN 1990											
23...	--	--	--	--	--	--	--	--	--	--	--
MAR											
14...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

MISCELLANEOUS STATION ANALYSES--Continued

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)
0208524090 MOUNTAIN CREEK AT SR 1617 NR BAHAMA, NC (LAT 36 08 58N LONG 078 53 49W)											
NOV 1989											
06...	--	--	--	--	--	--	--	--	--	--	--
JAN 1990											
24...	--	--	--	--	--	--	--	--	--	--	--
MAR											
14...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
JUN											
28...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
SEP											
26...	--	--	--	--	--	--	--	--	--	--	--
0208524170 LITTLE RIVER TRIB NR DURHAM, NC (LAT 36 06 45N LONG 078 53 00W)											
NOV 1989											
06...	--	--	--	--	--	--	--	--	--	--	--
JAN 1990											
24...	--	--	--	--	--	--	--	--	--	--	--
MAR											
14...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
JUN											
28...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
0208527100 ENO RIVER TRIB AT SR 1004 NR FAIRNTOSH, NC (LAT 36 05 17N LONG 078 50 42W)											
NOV 1989											
06...	--	--	--	--	--	--	--	--	--	--	--
JAN 1990											
23...	--	--	--	--	--	--	--	--	--	--	--
MAR											
14...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	<0.20
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

MISCELLANEOUS STATION ANALYSES--Continued

DATE	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	1,2-TRANSDI CHLORO-ETHENE TOTAL (UG/L)	2-CHLORO-ETHYL-VINYL-ETHER TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
0208524090 MOUNTAIN CREEK AT SR 1617 NR BAHAMA, NC (LAT 36 08 58N LONG 078 53 49W)											
NOV 1989											
06...	--	--	--	--	--	--	--	--	--	4	0.03
JAN 1990											
24...	--	--	--	--	--	--	--	--	--	3	0.04
MAR											
14...	--	--	--	--	--	--	--	--	--	11	0.15
29...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	188	--
MAY											
09...	--	--	--	--	--	--	--	--	--	8	0.12
JUN											
28...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	1	0.00
SEP											
26...	--	--	--	--	--	--	--	--	--	--	--
0208524170 LITTLE RIVER TRIB NR DURHAM, NC (LAT 36 06 45N LONG 078 53 00W)											
NOV 1989											
06...	--	--	--	--	--	--	--	--	--	9	0.00
JAN 1990											
24...	--	--	--	--	--	--	--	--	--	11	0.02
MAR											
14...	--	--	--	--	--	--	--	--	--	13	0.02
29...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	92	9.2
MAY											
09...	--	--	--	--	--	--	--	--	--	12	0.01
JUN											
28...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	6	0.00
0208527100 ENO RIVER TRIB AT SR 1004 NR FAIRNTOSH, NC (LAT 36 05 17N LONG 078 50 42W)											
NOV 1989											
06...	--	--	--	--	--	--	--	--	--	11	0.02
JAN 1990											
23...	--	--	--	--	--	--	--	--	--	44	0.07
MAR											
14...	--	--	--	--	--	--	--	--	--	9	0.01
29...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	142	6.9
MAY											
09...	--	--	--	--	--	--	--	--	--	8	0.00

BEAUFORT COUNTY

351932076480001. Local number, NC-13.
LOCATION.--Lat 35°19'32", long 76°48'00", Hydrologic Unit 03020104, 1.5 mi north of Aurora, east of intersection of N.C. Highway 306 and Secondary Road 1942. Owner: Texasgulf Chemicals Company.
AQUIFER.--Castle Hayne aquifer of Oligocene and Eocene age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 168 ft, diameter 4 in, cased to 156 ft, open hole to 168 ft; measured depth 165.5 ft, September 1981.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 10 ft above National Geodetic Vertical Datum of 1929 (from topographic map). Measuring point: Top of casing, 0.36 ft below land-surface datum (since February 16, 1984).
REMARKS.--Since 1965 water levels affected by nearby pumping associated with mining operations. Well is part of local-effects network.
PERIOD OF RECORD.--June 1964 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.38 ft below land-surface datum, April 9, 1965; lowest recorded, 95.51 ft below land-surface datum, September 8, 1990.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	76.33	73.02	71.50	75.48	76.38	76.81	77.36	81.41	83.11	89.49	89.87	95.41
10	76.48	72.86	72.20	75.53	76.45	77.08	78.55	80.76	80.72	90.11	94.45	95.30
15	75.79	73.23	73.38	75.58	76.02	74.78	78.68	81.72	82.96	91.08	93.43	93.93
20	75.30	72.48	73.36	75.40	75.90	76.45	78.91	82.04	83.74	90.64	93.62	92.69
25	75.21	71.81	74.13	76.47	76.92	75.68	79.62	82.66	83.92	89.49	93.18	92.87
EOM	74.07	71.89	75.32	76.61	77.26	76.66	79.55	83.15	84.01	92.80	95.13	92.58

WTR YR 1990 MEAN 80.93 HIGH 71.50 DEC 5 LOW 95.49 SEP 8

BEAUFORT COUNTY

352615077083401. Local number, NC-137; DEHNR Creeping Swamp Research Station well O21q1.
LOCATION.--Lat 35°26'15", long 77°08'38", Hydrologic Unit 03020202, 3 mi north of Wilmar, 1 mi west of U.S. Highway 17 on N.C. Highway 102. Owner: DEHNR (North Carolina Department of Enviroment, Health, and Natural Resources).
AQUIFER.--Castle Hayne aquifer of Oligocene and Eocene age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 143 ft, diameter 4 in, cased to 72 ft, open hole to 143 ft; measured depth 141.6 ft, September 1981.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 56.84 ft above National Geodetic Vertical Datum of 1929 (levels by DEHNR). Measuring point: Top of collar on casing, 0.8 ft above land-surface datum.
REMARKS.--Well is part of areal-effects network.
PERIOD OF RECORD.--January 1972 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 19.90 ft below land-surface datum, February 3, 1972; lowest recorded, 26.34 ft below land-surface datum, December 5, 6, 7, 13, and 14, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	23.17	22.67	22.55	21.68	21.29	21.40	21.25	21.41	21.78	23.04	24.90	24.46
10	23.01	22.62	22.37	21.47	21.23	21.37	21.25	21.48	21.80	23.33	25.00	24.44
15	22.81	22.63	22.30	21.47	21.37	21.39	21.15	21.65	21.95	23.65	25.07	24.47
20	22.65	22.64	22.16	21.33	21.41	21.33	21.29	21.74	22.14	23.90	25.01	24.68
25	22.68	22.68	21.99	21.27	21.49	21.42	21.31	21.81	22.44	24.22	24.77	24.91
EOM	22.57	22.63	21.79	21.26	21.46	21.26	21.34	21.80	22.72	24.55	24.53	---

WTR YR 1990 MEAN 22.51 HIGH 21.12 APR 11 LOW 25.16 AUG 14

GROUND-WATER LEVELS

BEAUFORT COUNTY

352037076514101. Local Number, NC-145; DEHNR Bonnerton Research Station well P18v5.
LOCATION.--Lat 35°20'37", long 76°51'41", Hydrologic Unit 03020104, 1 mi south of Bonnerton on Secondary Road 1936. Owner: DEHNR (North Carolina Department of Environment, Health, and Natural Resources).
AQUIFER.--Castle Hayne aquifer of Oligocene and Eocene age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 280 ft, diameter 4 in, cased to 169 ft, open hole to 280 ft; measured depth 278 ft, September 1981.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 36.41 ft above National Geodetic Vertical Datum of 1929 (levels by DEHNR) - revised from 36.64 ft above NGVD, October 1987. Measuring point: Top of instrument shelf, 2.70 ft above land-surface datum - revised from 2.47 ft above land-surface datum, October 1987.
REMARKS.--Water-level measurements made by DEHNR personnel beginning June 2, 1980, and are available in the files of the Groundwater Section, DEHNR. U.S. Geological Survey continuous record began July 1, 1984. Water level is affected by nearby pumping associated with mining operations. Well is part of local-effects network.
PERIOD OF RECORD.--July 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 74.67 ft below land-surface datum, April 18, 1987; lowest recorded, 100.32 ft below land-surface datum, October 9, 1989.
REVISIONS.--Water-level mean values and extremes for period of record published in U.S.G.S. annual reports, Water Resources Data-North Carolina NC-85-1, NC-86-1, and NC-87-1, should be adjusted by -0.23 ft.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 5	100.04	Jan. 23	95.36	Apr. 25	94.44	Jun. 6	93.89	Jul. 19	92.92	Aug. 29	89.12
Nov. 28	96.36	Mar. 6	95.44								

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	100.04	96.85	---	---	---	---	---	---	---	94.55	---	89.74
10	100.25	---	---	---	---	---	---	---	92.48	92.10	---	90.24
15	99.09	---	---	---	---	---	---	---	94.15	93.61	---	90.19
20	98.53	---	---	---	---	---	---	---	94.14	---	---	91.03
25	98.58	---	---	---	---	---	---	---	94.02	---	---	91.27
EOM	97.42	---	---	---	---	---	---	---	94.00	---	89.46	91.09

WTR YR 1990 MEAN 94.23 HIGH 88.24 SEP 2 LOW 100.25 OCT 9

CARTERET COUNTY

344323076451301. Local number, NC-139; DEHNR Camp Glenn Research Station well X17j5.
LOCATION.--Lat 34°43'23", long 76°45'13", Hydrologic Unit 03020106, on west edge of Morehead City, south of U.S. Highway 70 at DEHNR Marine Fisheries Facility on north shore of Bogue Sound. Owner: DEHNR (North Carolina Department of Environment, Health, and Natural Resources).
AQUIFER.--Castle Hayne aquifer of Oligocene and Eocene age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 238 ft, diameter 4 in, cased to 180 ft, open hole to 191 ft, hole collapsed from 191 to 238 ft.
INSTRUMENTATION.--Digital recorder --30-minute punch.
DATUM.--Land-surface datum is 8.72 ft above National Geodetic Vertical Datum of 1929 (levels by DEHNR). Measuring point: Top of collar on casing, 1.73 ft above land-surface datum.
REMARKS.--Well is part of areal-effects network.
PERIOD OF RECORD.--January 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 4.23 ft below land-surface datum, December 7, 1976; lowest recorded, 13.20 ft below land-surface datum, August 21, 1990.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.66	9.11	8.94	9.78	8.62	8.48	7.80	8.61	9.67	12.00	12.23	11.95
10	9.49	8.76	8.71	9.29	8.41	8.39	8.23	8.48	10.24	12.44	11.77	11.83
15	9.77	8.80	8.97	9.71	8.49	8.23	8.19	8.95	10.30	12.26	12.12	11.61
20	9.67	8.84	9.47	9.30	8.56	8.13	8.52	9.28	10.69	12.32	12.25	11.32
25	9.56	8.94	9.23	8.83	8.71	8.16	8.75	9.08	11.52	12.23	11.79	11.40
EOM	8.96	8.84	10.05	8.93	8.67	8.06	8.65	9.08	11.92	11.98	12.02	11.40

WTR YR 1990 MEAN 9.83 HIGH 7.71 APR 3 LOW 12.59 JUL 12

CRAVEN COUNTY

351049077175501. Local number, NC-44.
LOCATION.--Lat 35°10'49", long 77°17'55", Hydrologic Unit 03020202, 1.4 mi southeast of Cove City on Secondary Road 1005. Owner: City of New Bern.
AQUIFER.--Black Creek and upper Cape Fear aquifers of Late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 854 ft, diameter 2 in, cased to 705 ft and from 715 to 781 ft and 786 to 828 ft, screened intervals from 705 to 715 ft, 781 to 786 ft, and 828 to 833 ft.
INSTRUMENTATION.--Beginning July 1988, measured every eight weeks with chalked tape by USGS personnel.
DATUM.--Land-surface datum is 36.73 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 2.06 ft above land-surface datum.
REMARKS.--Water levels affected by pumping at nearby City of New Bern well field. Well is part of local-effects network.
PERIOD OF RECORD.--March 1965 to current year. Continous record from March 1965 to June 1988.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 6.01 ft below land-surface datum, August 25 and 26, 1965; lowest recorded, 126.24 ft below land-surface datum, August 29, 1990.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 2	123.54	Jan. 22	121.32	Apr. 24	119.03	Jun. 6	121.90	Jul. 17	125.52	Aug. 29	126.24
Nov. 27	119.86	Mar. 5	119.84								

GROUND-WATER LEVELS

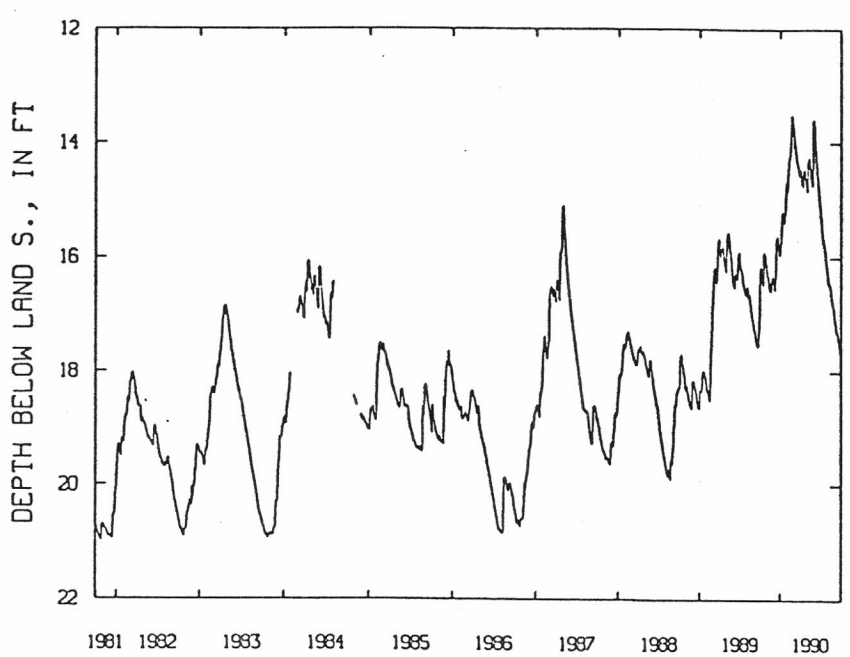
DAVIE COUNTY

355359080331701. Local number, NC-142.
LOCATION.--Lat 35°53'59", long 80°33'17", Hydrologic Unit 03040102, 0.5 mi northeast of Mocksville on U.S. Highway 158 at B. C. Brocks Community Center. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined weathered granite of Paleozoic age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 30.8 ft, diameter 6 in, cased to 30.8 ft, open end, backfilled with gravel from 20 to 30.8 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 835 ft above National Geodetic Vertical Datum of 1929 (from topographic map). Measuring point: Top of casing, 1.0 ft above land-surface datum.
REMARKS.--In October 1982, well replaced nearby NC-110. Well is part of terrane-effects network.
PERIOD OF RECORD.--October 1981 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 13.46 ft below land-surface datum, February 23, 1990; lowest recorded, 20.98 ft below land-surface datum, October 24, 25, and 26, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.79	16.21	16.41	15.90	14.81	13.77	14.47	14.78	13.65	15.16	16.28	17.04
2	16.35	16.22	16.37	15.87	14.79	13.75	14.45	14.83	13.70	15.24	16.32	17.06
3	16.27	16.25	16.43	15.78	14.83	13.73	14.50	14.74	13.68	15.29	16.34	17.09
4	16.21	16.30	16.41	15.72	14.61	13.84	14.52	14.51	13.75	15.32	16.37	17.14
5	16.17	16.33	16.42	15.71	14.59	13.90	14.59	14.32	13.90	15.35	16.41	17.14
6	16.16	16.32	16.46	15.63	14.48	13.93	14.61	14.36	13.97	15.41	16.43	17.15
7	16.18	16.34	16.56	15.57	14.43	14.07	14.67	14.38	14.02	15.49	16.45	17.17
8	16.20	16.32	16.48	15.39	14.45	14.04	14.72	14.39	14.09	15.54	16.46	17.23
9	16.26	16.35	16.41	15.31	14.37	14.00	14.72	14.31	14.14	15.56	16.45	17.27
10	16.28	16.42	16.37	15.27	14.27	14.07	14.59	14.25	14.18	15.60	16.45	17.28
11	16.31	16.46	16.29	15.19	14.24	14.11	14.59	14.34	14.26	15.64	16.48	17.30
12	16.35	16.51	16.12	15.24	14.27	14.16	14.72	14.36	14.34	15.69	16.50	17.31
13	16.38	16.54	15.89	15.33	14.22	14.18	14.76	14.32	14.38	15.72	16.48	17.33
14	16.40	16.54	15.79	15.30	14.23	14.21	14.69	14.39	14.38	15.68	16.49	17.30
15	16.43	16.50	15.67	15.28	14.23	14.28	14.55	14.43	14.44	15.71	16.55	17.31
16	16.47	16.48	15.72	15.31	14.15	14.29	14.49	14.43	14.54	15.77	16.58	17.35
17	16.48	16.57	15.68	15.30	14.06	14.27	14.46	14.45	14.58	15.78	16.62	17.40
18	16.45	16.57	15.66	15.30	13.99	14.35	14.59	14.56	14.57	15.80	16.64	17.43
19	16.13	16.58	15.63	15.39	13.81	14.33	14.59	14.61	14.61	15.82	16.67	17.43
20	15.97	16.44	15.68	15.34	13.85	14.38	14.53	14.60	14.70	15.84	16.71	17.45
21	15.91	16.51	15.68	15.23	13.83	14.40	14.45	14.62	14.75	15.86	16.75	17.48
22	15.93	16.53	15.79	15.25	13.64	14.40	14.50	14.65	14.78	15.89	16.76	17.47
23	15.96	16.48	15.77	15.25	13.51	14.41	14.54	14.68	14.80	15.92	16.77	17.51
24	15.96	16.47	15.77	15.21	13.60	14.46	14.58	14.71	14.88	15.99	16.81	17.57
25	15.97	16.39	15.75	15.02	13.76	14.49	14.63	14.74	14.95	16.05	16.85	17.58
26	16.00	16.34	15.80	14.94	13.75	14.51	14.64	14.70	14.97	16.08	16.85	17.59
27	16.05	16.37	15.86	14.90	13.65	14.55	14.68	14.66	15.01	16.10	16.86	17.64
28	16.07	16.33	15.92	14.81	13.67	14.57	14.70	14.21	15.07	16.13	16.88	17.67
29	16.10	16.41	15.94	14.68	---	14.56	14.72	13.72	15.11	16.16	16.91	17.70
30	16.11	16.39	15.95	14.80	---	14.53	14.73	13.59	15.14	16.19	16.95	17.71
31	16.13	---	15.82	14.84	---	14.49	---	13.59	---	16.22	17.00	---

WTR YR 1990 MEAN 15.47 HIGH 13.51 LOW 17.71



355359080331701 DV-25 (NC-142) MOCKSVILLE
MEAN DAILY DEPTH BELOW LAND S. (FT)

DUPLIN COUNTY

345825077592101. Local number, DU-107.
LOCATION.--Lat 34°58'25", long 77°59'21", Hydrologic Unit 03030007, 50 ft northwest of Grove Creek on Secondary Road 1376 near Kenansville. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined sand and clay of the surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 3 in., depth 7.27 ft, cased to 4.27 ft, screened from 4.27 ft to 7.27 ft.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Measuring point: Top of casing, 85.93 ft above National Geodetic Vertical Datum of 1929, 3.68 ft above land surface.
REMARKS.--Well is part of a study of stream restoration techniques at Grove Creek.
PERIOD OF RECORD.--October 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 82.30 ft above NGVD, June 8, 1983; lowest, 78.21 above NGVD, July 10,1985.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	80.42	---	79.87	80.26	80.30	80.07	80.35	80.14	79.64	78.61	78.72	79.50
10	79.98	---	81.20	80.56	80.00	79.95	79.98	79.83	79.27	78.80	80.84	79.31
15	---	---	80.41	80.08	79.85	79.82	79.97	79.88	79.06	79.07	79.52	79.20
20	---	---	80.33	79.97	80.37	80.13	79.77	79.46	79.01	79.41	79.86	---
25	---	---	80.18	79.90	80.60	79.85	79.57	80.17	78.86	79.05	80.71	---
EOM	---	---	80.38	79.99	80.19	80.94	79.45	80.45	78.74	78.86	80.26	---

WTR YR 1990 MEAN 79.85 MAX 81.28 MIN 78.60

DUPLIN COUNTY

345818077592501. Local number, DU-109.
LOCATION.--Lat 34°58'18", long 77°59'25", Hydrologic Unit 03030007, 300 ft northwest of Grove Creek on Secondary Road 1376 near Kenansville. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined sand and clay of the surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 3 in., depth 5.79 ft, cased to 3.79 ft, screened from 3.79 ft to 5.79 ft.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Measuring point: Top of casing, 84.45 ft above National Geodetic Vertical Datum of 1929, 1.40 ft above land surface.
REMARKS.--Well is part of a study of stream restoration techniques at Grove Creek.
PERIOD OF RECORD.--October 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 82.07 ft above NGVD, June 8, 1983; lowest, 80.12 ft above NGVD, July 10, 11, 1985.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	81.64	81.43	81.36	81.49	81.51	81.51	81.62	81.52	81.50	80.81	80.67	81.34
10	81.50	81.40	81.69	81.57	81.50	81.47	81.55	81.47	81.40	80.98	81.51	81.26
15	81.43	81.37	81.50	81.48	81.47	81.45	81.53	81.49	81.29	81.08	81.24	81.21
20	81.37	81.38	81.49	81.46	81.50	81.49	81.47	81.41	81.25	81.23	81.30	81.14
25	81.34	81.44	81.47	81.44	81.60	81.47	81.42	81.55	81.14	81.06	81.67	81.13
EOM	81.32	81.41	81.48	81.48	81.55	81.57	81.40	81.63	81.00	80.85	81.48	81.13

WTR YR 1990 MEAN 81.38 MAX 81.77 MIN 80.64

DUPLIN COUNTY

345815077573301. Local number, DU-111.
LOCATION.--Lat 34°58'15", long 77°57'33", Hydrologic Unit 03030007, 50 ft southwest of Grove Creek on State Highway 11 at Kenansville. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined sand and clay of the surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 3 in., depth 5.84 ft, cased to 3.84 ft, screened from 3.84 ft to 5.84 ft.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Measuring point: Top of casing, 70.97 ft above National Geodetic Vertical Datum of 1929, 4.40 ft above land surface.
REMARKS.--Well is part of a study of stream restoration techniques at Grove Creek.
PERIOD OF RECORD.--October 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 68.42 ft above NGVD Feb. 14, 15, 1983; lowest, 63.95 ft above NGVD, July 6, 1990.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	67.03	66.69	66.39	66.76	66.60	66.64	66.93	66.59	66.23	64.02	64.38	66.18
10	66.44	66.42	67.63	67.07	66.44	66.44	66.47	66.22	65.73	64.25	66.87	65.96
15	66.19	66.33	66.95	66.62	66.34	66.33	66.45	66.37	65.20	64.79	66.15	65.88
20	66.36	66.42	66.74	66.52	66.73	66.60	66.26	65.98	65.05	65.95	66.22	65.70
25	66.17	66.77	66.70	66.44	67.15	66.30	66.10	66.69	64.50	65.37	67.69	65.71
EOM	66.18	66.49	66.83	66.53	66.64	67.24	66.05	67.20	64.24	64.73	66.68	65.62

WTR YR 1990 MEAN 66.22 MAX 67.79 MIN 63.98

GROUND-WATER LEVELS

DUPLIN COUNTY

345810077573401. Local number, DU-113.
LOCATION.--Lat 34°58'10", long 77°57'34", Hydrologic Unit 03030007, 300 ft southwest of Grove Creek on State Highway 11 at Kenansville. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined sand and clay of the surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 3 in., depth 8.42 ft, cased to 5.42 ft, screened from 5.42 ft to 8.42 ft.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Measuring point: Top of casing, 70.32 ft above National Geodetic Vertical Datum of 1929, 3.29 ft above land surface.
REMARKS.--Well is part of a study of stream restoration techniques at Grove Creek.
PERIOD OF RECORD.--October 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 69.11 ft above NGVD, Mar. 19, 1983; lowest, 63.90 ft above NGVD, July 5, 1985.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	67.33	67.13	66.79	67.19	67.02	67.04	67.34	67.02	66.64	64.19	---	---
10	66.97	66.87	67.93	67.38	66.93	66.91	66.97	66.81	66.06	64.46	---	---
15	66.75	66.79	67.38	67.08	66.85	66.84	66.96	66.83	65.59	64.84	---	---
20	66.89	66.84	67.14	66.97	67.14	67.07	66.80	66.55	65.34	66.17	---	65.85
25	66.71	67.14	67.10	66.90	67.50	66.82	66.65	67.06	64.81	65.54	---	65.73
EOM	66.71	66.90	67.17	66.99	67.11	67.57	66.61	67.42	64.51	64.95	---	65.59

WTR YR 1990 MEAN 66.63 MAX 67.98 MIN 64.14

DUPLIN COUNTY

345826077571401. Local number, DU-116.
LOCATION.--Lat 34°58'26", long 77°57'14", Hydrologic Unit 03030007, 150 ft northwest of Buckskin Creek on State Highway 11 at Kenansville. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined sand and clay of the surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 3 in., depth 5.30 ft, cased to 3.30 ft, screened from 3.30 ft to 5.30 ft.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Measuring point: Top of casing, 74.29 ft above National Geodetic Vertical Datum of 1929, 1.70 ft above land surface.
REMARKS.--Well is part of a study of stream restoration techniques at Grove Creek.
PERIOD OF RECORD.--October 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 72.67 ft above NGVD, June 8, 1983; lowest, 68.04 ft above NGVD, July 5, 14, 1985.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	71.46	71.42	70.84	71.54	71.49	71.42	71.52	71.31	70.88	68.75	68.73	70.76
10	71.29	71.21	72.00	71.66	71.38	71.32	71.21	71.01	70.37	68.66	71.31	70.46
15	70.81	70.79	71.57	71.44	71.26	70.94	71.05	71.19	70.05	69.39	71.31	70.28
20	71.28	70.76	71.63	71.39	71.53	71.36	70.76	70.55	69.88	70.13	71.44	70.02
25	70.65	71.41	71.50	71.33	71.65	70.86	70.53	71.41	69.43	69.68	---	69.91
EOM	70.69	71.22	71.65	71.41	71.45	71.73	70.59	71.56	69.06	69.15	71.45	69.73

WTR YR 1990 MEAN 70.86 MAX 72.06 MIN 68.66

DUPLIN COUNTY

350135078004101. Local number, DU-122.
LOCATION.--Lat 35°01'35", long 78°00'41", Hydrologic Unit 03030007, 65 ft south of Nahunga Creek on Secondary Road 1301 near Warsaw. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined sand and clay of the surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 3 in., depth 6.00 ft, cased to 2.00 ft, screened from 2.00 ft to 6.00 ft.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Measuring point: Top of casing, 95.98 ft above National Geodetic Vertical Datum of 1929, 4.55 ft above land surface.
REMARKS.--Well is part of a study of stream restoration techniques at Grove Creek.
PERIOD OF RECORD.--May 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 94.24 ft above NGVD, June 8, 1983; lowest, 87.61 ft above NGVD, July 24, 1985.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	91.89	91.28	91.11	91.26	91.25	91.26	91.27	91.01	90.52	88.10	89.08	90.38
10	91.18	91.11	93.05	91.74	91.27	91.24	91.14	90.79	90.09	88.62	91.07	89.98
15	91.02	91.08	91.47	91.26	91.25	91.19	91.18	90.80	89.65	90.48	90.38	89.72
20	91.16	91.10	91.31	91.25	91.27	91.24	91.03	90.45	89.47	90.72	90.64	89.36
25	90.99	91.22	91.29	91.24	91.26	91.15	90.82	90.90	88.99	90.30	91.10	89.21
EOM	91.11	91.13	91.35	91.24	91.21	91.59	90.97	91.09	88.52	89.82	91.09	88.90

WTR YR 1990 MEAN 90.79 MAX 93.21 MIN 88.04

GROUND-WATER LEVELS

DUPLIN COUNTY

350133078004001. Local number, DU-124.
LOCATION.--Lat 35°01'33", long 78°00'40", Hydrologic Unit 03030007, 300 ft south of Nahunga Creek on Secondary Road 1301 near Warsaw. Owner: U.S.. Geological Survey.
AQUIFER.--Unconfined sand and clay of the surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 3 in., depth 5.38 ft, cased to 3.38 ft, screened from 3.38 ft to 5.38 ft.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Measuring point: Top of casing, 99.84 ft above National Geodetic Vertical Datum of 1929, 1.71 ft above land surface.
REMARKS.--Well is part of a study of stream restoration techniques at Grove Creek.
PERIOD OF RECORD.--October 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 98.64 ft above NGVD, Feb. 6, 7, 10, 11, 12, 14, 15, 1983; lowest, 95.24 ft above NGVD, July 15, 1985.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	97.55	97.42	97.34	97.60	97.62	97.70	97.88	97.78	97.69	96.11	96.61	97.62
10	97.43	97.42	98.34	97.67	97.62	97.71	97.79	97.71	97.54	96.88	97.66	97.52
15	97.39	97.37	97.54	97.56	97.59	97.72	97.83	97.72	97.38	97.54	97.72	97.52
20	97.44	97.46	97.57	97.59	97.69	97.78	97.75	97.64	97.40	97.72	97.71	97.32
25	97.34	97.55	97.55	97.59	97.82	97.74	97.72	97.79	96.94	97.56	97.80	97.37
EOM	97.39	97.38	97.63	97.61	97.64	97.90	97.71	97.83	96.62	97.35	97.75	97.27

WTR YR 1990 MEAN 97.54 MAX 98.34 MIN 95.97

HAYWOOD COUNTY

352315082484401. Local number, NC-40.
LOCATION.--Lat 35°23'15", long 82°48'44", Hydrologic Unit 06010106, 2 mi south of Cruso on U.S. Highway 276 at Camp Hope. Owner: Champion International Corporation.
AQUIFER.--Unconfined saprolite derived from muscovite-biotite gneiss of Precambrian age.
WELL CHARACTERISTICS.--Dug observation well, depth 18.5 ft, diameter 12 in, cased to 18.5 ft, open end, backfilled with gravel from 4 to 18.5 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 3,148.26 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.00 ft above land-surface datum.
REMARKS.--Well is part of climatic-effects network.
PERIOD OF RECORD.--December 1955 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.24 ft below land-surface datum, March 12, 1977; lowest recorded, 6.90 ft below land-surface datum, October 7, 8, and 9, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.07	3.94	4.62	4.40	4.48	3.00	3.29	4.33	4.57	4.94	5.51	5.54
2	3.23	3.98	4.63	4.52	4.50	2.95	3.35	4.40	4.60	5.00	5.51	5.62
3	3.50	4.02	4.65	4.60	4.52	2.80	3.40	4.46	4.62	5.05	5.52	5.72
4	3.61	4.06	4.66	4.58	4.32	2.89	3.44	3.34	4.65	5.06	5.53	5.78
5	3.64	4.11	4.67	4.51	4.33	2.97	3.49	3.60	4.68	5.07	5.55	5.82
6	3.62	4.09	4.69	4.35	4.40	3.05	3.53	3.84	4.71	5.09	5.56	5.85
7	3.58	4.09	4.71	4.37	4.44	3.12	3.57	4.03	4.73	5.12	5.57	5.89
8	3.50	4.13	4.45	4.34	4.47	3.17	3.62	4.19	4.72	5.08	5.58	5.91
9	3.44	4.16	4.38	4.36	4.49	3.17	3.66	4.19	4.72	5.14	5.58	5.93
10	3.37	4.20	4.48	4.44	4.00	3.22	3.70	3.72	4.74	5.19	5.53	5.94
11	3.33	4.25	4.53	4.49	4.07	3.28	3.72	3.82	4.73	5.21	5.57	5.92
12	3.31	4.29	4.35	4.53	4.19	3.33	3.78	3.89	4.75	5.23	5.60	5.83
13	3.30	4.33	4.27	4.58	4.26	3.38	3.83	3.94	4.78	5.22	5.62	5.81
14	3.29	4.36	4.39	4.60	4.30	3.44	3.86	3.94	4.85	4.72	5.64	5.81
15	3.31	4.36	4.47	4.61	4.32	3.49	3.89	3.94	4.94	4.81	5.67	5.83
16	3.33	3.97	4.52	4.63	3.15	3.13	3.94	4.08	4.98	4.99	5.69	5.84
17	3.29	4.16	4.57	4.63	3.36	2.35	3.99	4.22	5.00	4.98	5.71	5.88
18	3.17	4.27	4.60	4.64	3.57	2.82	4.03	4.29	5.01	4.74	5.72	5.91
19	3.06	4.34	4.63	4.64	3.54	2.96	4.06	4.37	4.95	4.72	5.74	5.94
20	3.24	4.39	4.65	4.64	3.54	3.01	4.09	4.42	4.87	4.90	5.76	5.97
21	3.34	4.44	4.66	4.52	3.52	3.05	4.13	4.42	4.84	5.00	5.78	6.00
22	3.44	4.44	4.68	4.53	3.05	3.08	4.16	4.44	4.87	5.11	5.77	6.01
23	3.51	4.23	4.70	4.55	2.94	3.06	4.20	4.45	4.90	5.19	5.76	6.02
24	3.57	4.35	4.71	4.56	2.99	3.08	4.26	4.46	4.90	5.26	5.78	6.04
25	3.63	4.42	4.71	4.42	3.00	3.10	4.29	4.47	4.95	5.32	5.25	6.05
26	3.69	4.47	4.71	4.33	3.01	3.12	4.32	4.51	4.96	5.37	5.35	6.06
27	3.74	4.51	4.73	4.41	3.01	3.13	4.37	4.53	4.91	5.40	5.48	6.07
28	3.79	4.54	4.74	4.46	3.00	3.17	4.29	4.50	4.86	5.43	5.64	6.09
29	3.83	4.57	4.75	4.45	---	3.20	4.07	4.42	4.88	5.46	5.73	6.10
30	3.87	4.60	4.77	4.37	---	3.23	4.23	4.48	4.91	5.48	5.77	6.10
31	3.90	---	4.60	4.43	---	3.25	---	4.54	---	5.49	5.58	---

WTR YR 1990 MEAN 4.44 HIGH 2.35 LOW 6.10

GROUND-WATER LEVELS

HERTFORD COUNTY

362845077005501. Local number, NC-55.
LOCATION.--Lat 36°28'45", long 77°00'55", Hydrologic Unit 03010203, 1.7 mi southwest of Como, south of Secondary Road 1306 on Secondary Road 1307. Owner: Charles Deloatch.
AQUIFER.--Lower Cape Fear aquifer of Late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation well, depth 340 ft, diameter 2 in, screen depth unknown.
INSTRUMENTATION.--Measured every eight weeks with chalked tape by USGS personnel.
DATUM.--Land-surface datum is 28.40 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 2.79 ft above land-surface datum (since December 1975).
REMARKS.--USGS continuous record from December 1965 to December 1968. Well is part of areal-effects network.
PERIOD OF RECORD.--December 1965 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest recorded water level, 48.36 ft below land-surface datum, May 30 and 31, 1966; lowest recored, 106.24 ft below land-surface datum, August 14,1990.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 3	104.66	Jan. 30	104.90	Mar. 28	105.45	May 16	105.64	Jun. 27	105.92	Aug. 14	106.24
Dec. 7	104.79										

LENOIR COUNTY

351600077381001. Local number, NC-128.
LOCATION.--Lat 35°15'59", long 77°37'52", Hydrologic Unit 03020202, on west edge of Kinston at intersection of U.S. Highways 70 and 258 Bypass and U.S. Highways 70 and 258 Business. Owner: City of Kinston.
AQUIFER.--Black Creek aquifer of Late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation well, depth 300 ft, diameter 10 in, cased to 160 ft, screened intervals unknown.
INSTRUMENTATION.--Digitial recorder --30-minute punch.
DATUM.--Land-surface datum is 33.5 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 2.10 ft above land-surface datum.
REMARKS.--Well is part of local-effects network.
PERIOD OF RECORD.--September 1968 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 34.83 ft below land-surface datum, December 30, 1968; lowest recorded, 91.16 ft below land-surface datum, July 19, 1990.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	88.88	89.19	87.52	88.67	86.66	87.42	86.43	89.33	---	88.44
10	---	---	87.61	88.84	88.53	88.20	85.71	86.78	87.16	90.41	---	88.47
15	---	---	86.94	88.21	88.23	88.82	85.76	86.49	89.05	---	---	89.94
20	---	---	87.06	89.16	87.14	88.41	86.84	86.46	89.01	91.13	---	90.57
25	---	88.33	86.31	89.01	86.63	86.61	87.13	88.12	88.32	91.11	---	90.53
EOM	---	89.04	88.76	88.72	87.78	86.07	86.70	85.95	89.13	---	89.48	90.62

WTR YR 1990 MEAN 88.08 HIGH 85.15 APR 17 LOW 91.15 JUL 21

MECKLENBURG COUNTY

350126080503903. Local number, Me-250.
LOCATION.--Lat 35°01'26", long 80°50'39", Hydrologic Unit 03050103, near Pineville. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined saprolite derived from felsic metavolcanic rock.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in, depth 26.0 ft, cased 21.0 ft, screened 21.0 to 26.0 ft below land-surface datum. Sand filter packed from 21.0 ft to 26.0 ft.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Elevation of land-surface datum is 688.6 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.20 ft above land-surface datum.
REMARKS.--Well is part of the Charlotte-Mecklenburg urban hydrology study, U.S. Hwy 521 well B1-A.
PERIOD OF RECORD.--December 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.88 ft below land-surface datum, Mar. 13, 1990; lowest, 24.38 ft below land-surface datum Nov. 19, 20, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.81	17.26	18.68	17.51	16.34	13.08	13.31	14.91	17.13	19.06	20.61	21.56
10	16.43	17.53	18.77	17.01	15.68	12.96	13.38	15.27	17.44	19.38	20.81	21.70
15	16.26	17.77	18.04	16.95	15.27	12.97	13.62	15.71	17.78	19.69	21.01	21.82
20	16.38	18.01	17.77	16.72	14.13	13.17	14.01	16.01	18.12	19.96	21.19	21.99
25	16.64	18.33	17.49	16.58	13.92	13.34	14.28	16.39	18.45	20.18	21.31	22.15
EOM	16.91	18.54	17.40	16.46	13.61	13.53	14.60	16.81	18.75	20.40	21.43	22.31

WTR YR 1990 MEAN 17.32 HIGH 12.92 MAR 13 LOW 22.31 SEP 30

MECKLENBURG COUNTY

351023080542703. Local number, Me-251.
LOCATION.--Lat 35°10'23", long 80°54'27", Hydrologic Unit 03050103, at York Road landfill, at Charlotte. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined saprolite derived from metamorphosed quartz diorite.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in, depth 25.0 ft, cased to 20.0 ft, screened from 20.0 ft to 25.0 ft. Sand filter packed from 20.0 ft to 25.0 ft.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Elevation of land-surface datum is 612 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 0.50 ft above land-surface datum.
REMARKS.--Well is part of the Charlotte-Mecklenburg urban hydrology study, York Road landfill well YRW-B.
PERIOD OF RECORD.--October 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 13.40 ft below land-surface datum, Feb. 19, 1990; lowest, 16.49 ft below land-surface datum, Oct. 7, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.47	14.89	---	14.50	14.29	13.65	13.99	14.20	14.54	15.19	15.50	15.78
10	14.69	14.84	---	14.19	13.88	13.74	14.02	14.23	14.72	15.30	15.55	15.59
15	14.73	---	---	14.42	14.01	13.83	14.02	14.41	14.81	15.25	15.62	15.57
20	14.69	---	---	14.43	13.59	13.81	14.18	14.52	14.86	15.24	15.52	15.69
25	14.84	---	14.74	14.12	13.89	13.91	14.23	14.61	14.99	15.32	15.55	15.80
EOM	14.78	---	14.61	14.24	13.80	13.82	14.17	14.25	15.07	15.42	15.65	15.79

WTR YR 1990 MEAN 14.66 HIGH 13.48 FEB 19 LOW 15.82 SEP 8

MECKLENBURG COUNTY

351331080411603. Local number, Me-252.
LOCATION.--Lat 35°13'31", long 80°41'16", Hydrologic Unit 03050103, at Harrisburg Road landfill, near Mint Hill. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined saprolite derived from metamorphosed quartz diorite.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in, depth 32.2 ft, cased 27.2 ft, screened from 27.2 ft to 32.2 ft. Sand filter packed from 27.2 ft to 32.2 ft.
INSTRUMENTATION.--Digital recorder--60-minute punch through July 9, 1990. Record for remainder of water year is based on periodic measurements with chalked tape by observer at an average frequency of every three days.
DATUM.--Land-surface datum is 758.25 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.50 ft above land-surface datum.
REMARKS.--Well is part of the Charlotte-Mecklenburg urban hydrology study, Harrisburg Road landfill well HBW 2101-A. Continuous record was interrupted when recorder was removed for landfill operations. Continuous record resumed in 1991 water year.
PERIOD OF RECORD.--November 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.80 ft below land-surface datum, May 10, 1990; lowest, 22.55 ft below land-surface datum, Oct. 28, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.81	19.33	19.48	19.11	18.42	17.54	17.11	16.94	17.19	17.46	17.14	18.01
10	18.68	19.38	19.57	18.77	18.13	17.43	17.11	16.85	17.32	17.44	17.41	18.10
15	18.78	19.41	19.17	18.70	18.03	17.46	17.07	17.12	17.41	17.52	17.03	18.21
20	18.89	19.36	19.08	18.66	17.83	17.45	17.17	17.17	17.35	17.53	16.93	18.34
25	19.02	19.57	19.08	18.40	17.74	17.46	17.14	17.36	17.53	17.58	17.32	18.47
EOM	19.11	19.55	19.17	18.36	17.52	17.29	17.12	17.28	17.19	17.24	17.72	18.59

WTR YR 1990 MEAN 18.04 HIGH 16.85 MAY 10 LOW 19.70 DEC 7

GROUND-WATER LEVELS

MECKLENBURG COUNTY

351333080405501. Local number, Me-253.
LOCATION.--Lat 35°13'33", long 80°40'55", Hydrologic Unit 03050103, at Harrisburg Road landfill, near Mint Hill. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined saprolite derived from metamorphosed quartz diorite.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in, depth 32 ft, cased to 22 ft, screened from 22 ft to 32 ft; Dec. 18, 1985. Sand filter packed from 22 ft to 32 ft. Land surface and, thus, well depth has changed several times since 1985. See datum corrections and remarks below.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Elevation of land-surface datum is 740 ft above National Geodetic Vertical Datum of 1929, Dec. 18, 1985 to Sept. 29, 1986; 745 ft, Sept. 30, 1986 to Dec. 19, 1986; 755 ft, from Dec. 20, 1986 to Apr. 21, 1988; 760 ft, from Apr. 22, 1988 to present. Land-surface elevation determined by levels Mar. 20, 1990 by Mecklenburg County. Measuring point to land-surface datum was -4.4 ft from Dec. 18, 1985 to Sept. 28, 1986; -3.2 ft from Sept. 29, 1986 to Dec. 19, 1986; 0.0 ft from Dec. 20, 1986 to Apr. 21, 1988; -3.4 ft from Apr. 22, 1988 to current water year. Finished grade completed about Sept. 30, 1988.
REMARKS.--Well is part of the Charlotte-Mecklenburg urban hydrology study, Harrisburg Road landfill well HBW 2201. The land-surface datum has changed as the landfill has been filled. Use extremes for period of record with care, noting datum changes as described above.
PERIOD OF RECORD.--December 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.28 ft below land-surface datum, Mar. 21 1986; lowest, 32.96 ft below land-surface datum Feb. 16, 17, 1989.
REVISIONS.--The elevation of land-surface datum published in the Water Resources Data for North Carolina, WDR NC-87-1 has been revised to 745 ft above National Geodetic Vertical Datum of 1929.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	31.09	31.39	31.39	30.81	29.75	29.25	28.56	30.05	30.15	30.85	31.38	31.77
10	31.15	31.19	31.30	30.64	29.56	28.91	28.59	30.07	30.27	30.89	31.47	31.89
15	31.13	31.09	31.25	30.46	29.33	28.91	28.45	29.94	30.40	31.02	31.52	31.93
20	31.06	31.17	31.22	30.09	29.25	28.80	---	29.67	30.50	31.14	31.54	31.90
25	31.24	31.39	31.12	29.92	29.31	28.58	30.06	29.71	30.53	31.22	31.52	31.93
EOM	31.37	31.32	30.98	29.87	29.25	28.60	30.07	30.01	30.59	31.31	31.77	32.01

WTR YR 1988 MEAN 30.52 HIGH 28.21 APR 19 LOW 32.01 SEP 30

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	32.05	32.17	32.58	32.88	32.86	32.42	31.21	30.37	29.78	29.75	30.04	30.72
10	32.05	32.32	32.62	32.91	32.86	32.20	31.13	30.22	29.78	29.83	30.24	30.75
15	32.11	32.39	32.68	32.81	32.90	31.94	30.85	30.17	29.72	29.90	30.27	29.89
20	32.17	32.36	32.76	32.79	32.82	31.84	30.80	30.06	29.69	29.86	30.41	30.15
25	32.21	32.48	32.80	32.83	32.73	31.61	30.64	29.97	29.68	30.02	30.48	30.42
EOM	32.27	32.50	32.83	32.81	32.60	31.29	30.57	29.90	29.77	30.02	30.60	30.60

WTR YR 1989 MEAN 31.35 HIGH 29.66 JUN 24 LOW 32.93 FEB 17

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	30.75	31.21	31.32	31.29	30.71	30.20	29.23	28.77	28.80	29.14	29.67	30.39
10	30.94	31.18	31.40	31.16	30.39	29.81	29.21	28.70	28.82	29.23	29.79	30.44
15	31.07	31.18	31.38	31.17	30.40	29.68	29.06	28.84	28.81	29.29	29.90	30.50
20	31.12	31.20	31.40	31.00	30.34	29.60	29.18	28.77	28.86	29.43	29.99	30.56
25	31.19	31.35	31.33	30.81	30.23	29.50	29.00	28.84	28.98	29.48	30.11	30.58
EOM	31.12	31.39	31.30	30.79	30.20	29.33	28.91	28.88	29.04	29.53	30.24	30.64

WTR YR 1990 MEAN 30.12 HIGH 28.69 MAY 29 LOW 31.45 DEC 22

MECKLENBURG COUNTY

351327080404401. Local number, Me-254.
LOCATION.--Lat 35°13'27", long 80°40'44", Hydrologic Unit 03050103, at Harrisburg Road landfill, near Mint Hill.
Owner: U.S. Geological Survey.
AQUIFER.--Unconfined saprolite derived from metamorphosed quartz diorite.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in, depth 56 ft, cased 35.0 ft, screened from 35.0 ft to 55.0 ft. Sand filter packed from 35 ft to 55 ft.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Elevation of land-surface datum is 768.0 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.20 ft above land-surface datum.
REMARKS.--Well is part of the Charlotte-Mecklenburg urban hydrology study, Harrisburg Road landfill well HBW 2301.
PERIOD OF RECORD.--January 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 13.99 ft below land-surface datum, Apr. 5, 1990; lowest, 24.37 ft below land-surface datum, Nov. 10-12, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.43	18.75	19.34	17.57	16.12	14.26	14.01	14.70	16.05	18.05	20.31	22.11
10	18.21	18.85	18.91	16.84	15.99	14.22	14.18	14.88	16.31	18.46	20.63	22.38
15	18.27	19.02	17.97	16.86	15.58	14.40	14.23	15.16	16.58	18.83	20.93	22.57
20	18.28	19.17	17.85	16.88	14.79	14.50	14.29	15.38	16.91	19.21	21.23	22.83
25	18.41	19.21	17.89	16.22	14.70	14.63	14.40	15.68	17.29	19.53	21.52	23.03
EOM	18.53	19.30	18.00	16.02	14.62	14.66	14.57	15.85	17.65	19.93	21.83	23.24

WTR YR 1990 MEAN 17.61 HIGH 14.01 APR 5 LOW 23.24 SEP 30

MECKLENBURG COUNTY

350639080405401. Local Number, Me-255
LOCATION.--Lat 35°06'39", long 80°40'54", Hydrologic Unit 35050103, near Matthews. Owner: U.S. Geological Survey.
ACQUIFER.--Unconfined saprolite derived from metavolcanic rock.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in, construction depth 33.8 ft, measured depth 1988 33.18 ft. Cased to 28.8 ft, screened from 28.8 ft to 33.8 ft. Sand filter packed from 28.8 ft to 33.8 ft.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Elevation of land-surface datum is 730 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing 3.2 ft above land-surface datum.
REMARKS.--Well is part of Charlotte-Mecklenburg Urban Hydrology study, Ridge Road landfill well °1. Due to increase of mud in well bottom, dry depth since August 1988 is 33.18 ft below land surface datum.
PERIOD OF RECORD.--September 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 22.77 ft below land-surface datum, Apr. 28, 1990; lowest measured, 33.53 ft below land-surface datum, Nov. 3-14, 1986. Well was dry (water level below 33.18 ft), from August 27, 1988 to January 19, 1989.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	28.84	28.59	29.43	28.26	26.86	24.61	23.34	22.84	24.42	26.37	28.73	30.31
10	28.81	28.71	29.55	28.26	26.24	24.28	23.13	23.01	24.60	26.81	29.00	30.55
15	28.63	28.81	29.18	27.71	26.16	24.02*	22.97	23.34	24.87	27.22	29.30	30.62
20	28.50	28.95	28.92	27.46	25.53	23.85	22.92	23.58	25.20	27.60	29.56	30.89
25	28.47	29.23	28.55	27.22	25.32	23.69	22.84	23.94	25.60	27.96	29.80	31.08
EOM	28.46	29.34	28.27	27.03	24.99	23.49	22.82	24.25	25.97	28.35	30.09	31.27

WTR YR 1990 MEAN 26.94 HIGH 22.79 APR 28 LOW 31.27 SEP 30

MECKLENBURG COUNTY

351003080544201. Local Number Me-256.
LOCATION.--Lat. 35°10'03", long 80°54'42", Hydrologic Unit 03050103, near Charlotte. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined saprolite derived from intrusive granite.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in, depth 24.5 ft, cased to 19.5 ft, screened from 19.5 ft to 24.5 ft. Sand filter packed from 19.5 ft to 24.5 ft.
INSTRUMENTATION.--Digital recorder -- 60-minute punch.
DATUM.--Elevation of land-surface datum is 584 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.70 ft above land-surface datum.
REMARKS.--Well is part of the Charlotte-Mecklenburg urban hydrology study, York Road landfill well YRW-6.
PERIOD OF RECORD.--June 27, 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.24 ft below land-surface datum, Feb. 28 1987; lowest, 8.49 ft below land-surface datum, Sept. 4, 5, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.91	6.81	6.87	---	---	5.70	6.36	5.92	6.93	7.71	8.08	8.33
10	6.61	6.22	4.11	---	---	6.19	6.39	5.26	7.16	7.83	8.14	8.01
15	6.67	5.22	5.51	---	---	6.47	5.48	6.99	7.08	7.63	7.99	6.11
20	5.99	6.46	6.14	---	---	5.96	5.37	7.07	7.32	7.68	8.06	6.90
25	6.33	5.89	6.63	---	---	6.33	6.77	7.21	7.52	8.00	8.06	7.59
EOM	6.33	6.75	---	---	---	4.66	6.49	6.42	7.59	8.03	8.28	7.98

WTR YR 1990 MEAN 6.73 HIGH 2.98 MAY 28 LOW 8.37 SEP 7

GROUND-WATER LEVELS

MECKLENBURG COUNTY

352422080560303. Local Number Me-257.
LOCATION.--Lat. 35°24'22", long 80°56'03", Hydrologic Unit 03050101, near Huntersville. Owner: U.S. Geological Survey.
AQUIFER.--Weathered granite of Paleozoic age.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in, depth 23.0 ft below land-surface datum, PVC casing to 20.5 ft with slotted well screen from 10.5 ft to 20.5 ft below land-surface datum. Sand-filled around well screen, with clay above.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Elevation of land-surface datum is 734 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.40 ft above land-surface datum.
REMARKS.--Well constructed to determine ground-water level at proposed Stephens Road landfill site, SRW-N15A.
PERIOD OF RECORD.--February 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.10 ft below land-surface datum, Feb. 23, 1990; lowest, 14.47 ft below land-surface datum Sept. 30, 1990.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.94	9.37	8.81	7.32	5.46	4.04	5.21	6.69	7.45	9.91	12.12	13.65
10	9.38	9.50	7.59	6.13	4.79	4.85	5.71	6.80	7.93	10.42	12.45	13.86
15	9.64	9.65	7.18	7.05	5.53	5.36	5.96	7.12	8.34	10.70	12.78	13.95
20	8.33	8.96	7.68	7.28	3.73	4.81	6.31	7.43	8.57	10.89	12.99	14.10
25	8.90	8.45	7.85	5.24	4.40	5.42	6.53	7.69	8.95	11.19	13.13	14.26
EOM	9.15	8.65	8.00	5.89	4.84	4.57	6.76	6.99	9.40	11.69	13.40	14.45

WTR YR 1990 MEAN 8.44 HIGH 3.15 FEB 23 LOW 14.45 SEP 30

MECKLENBURG COUNTY

351730080524203. Local number, NC-146.
LOCATION.--Lat 35°19'16", long 80°52'39", Hydrologic Unit 03050101, 6 mi south of Huntersville in Hornets Nest Park. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined saprolite derived from metamorphosed quartz diorite.
WELL CHARACTERISTICS.--Drilled observation well, depth 17.1 ft, diameter 4 in, cased to 12.1 ft, screened interval from 12.1 to 17.1 ft, sand filter pack from 12.1 to 17.1 ft.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Land-surface datum is 730 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.90 ft above land-surface datum.
REMARKS.--Well is part of climatic-effects network.
PERIOD OF RECORD.--November 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 2.40 ft below land-surface datum, Feb. 16, 1990; lowest recorded, 7.91 ft below land-surface datum, September 2 and 3, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.06	4.90	4.49	3.86	3.56	3.41	3.23	3.97	3.93	5.78	6.86	7.50
2	3.76	4.91	4.50	3.91	3.56	3.40	3.19	3.62	4.03	5.83	6.91	7.51
3	4.12	4.92	4.53	3.92	3.60	2.76	3.26	3.42	4.07	5.90	6.94	7.53
4	4.28	4.95	4.56	3.92	3.57	2.83	3.35	3.43	4.15	5.95	6.97	7.57
5	4.39	4.96	4.56	3.93	3.69	3.05	3.44	3.38	4.28	6.00	7.01	7.57
6	4.47	4.95	4.60	3.72	3.71	3.16	3.51	3.56	4.36	6.06	7.02	7.58
7	4.55	4.94	4.68	3.57	3.70	3.27	3.56	3.69	4.43	6.12	6.98	7.61
8	4.62	4.92	4.22	3.35	3.77	3.31	3.63	3.79	4.53	6.17	7.03	7.63
9	4.72	4.91	3.78	3.39	3.75	3.30	3.66	3.85	4.62	6.20	7.06	7.47
10	4.75	4.96	3.86	3.50	3.11	3.35	3.62	3.63	4.70	6.26	7.10	7.35
11	4.79	4.99	3.85	3.59	3.09	3.41	3.55	3.70	4.78	6.31	7.14	7.34
12	4.84	5.00	3.81	3.68	3.28	3.46	3.66	3.82	4.87	6.37	7.18	7.20
13	4.87	5.02	3.47	3.84	3.40	3.48	3.72	3.89	4.93	6.35	7.24	7.14
14	4.88	5.02	3.70	3.87	3.46	3.49	3.71	4.00	4.97	6.23	7.27	7.07
15	4.90	4.97	3.81	3.89	3.51	3.53	3.54	4.10	5.00	6.17	7.27	7.06
16	4.92	4.29	3.92	3.92	3.07	3.52	3.52	4.18	4.94	6.23	7.28	7.09
17	4.92	4.27	4.02	3.94	2.80	3.29	3.60	4.22	4.96	6.26	7.25	7.13
18	4.91	4.36	4.05	3.94	3.13	3.17	3.75	4.30	5.00	6.25	7.27	7.16
19	4.54	4.45	4.08	3.98	2.78	3.25	3.80	4.38	5.06	6.22	7.31	7.17
20	4.52	4.45	4.10	3.98	2.96	3.33	3.80	4.41	5.15	6.21	7.33	7.16
21	4.58	4.51	4.13	3.31	3.14	3.41	3.78	4.46	5.20	6.24	7.34	7.19
22	4.65	4.57	4.19	3.40	2.99	3.45	3.82	4.47	5.25	6.28	7.29	7.18
23	4.71	4.01	4.22	3.53	2.86	3.50	3.88	4.49	5.29	6.34	7.26	7.18
24	4.72	4.14	4.21	3.58	3.06	3.55	3.93	4.54	5.37	6.45	7.23	7.24
25	4.74	4.21	4.21	3.21	3.27	3.60	3.99	4.59	5.46	6.51	7.24	7.26
26	4.77	4.25	4.21	3.19	3.35	3.63	4.03	4.60	5.51	6.52	7.27	7.30
27	4.80	4.33	4.27	3.37	3.32	3.66	4.09	4.64	5.54	6.60	7.30	7.34
28	4.82	4.35	4.29	3.41	3.34	3.69	4.11	3.86	5.59	6.66	7.36	7.39
29	4.84	4.43	4.32	3.34	---	3.51	3.92	3.18	5.65	6.70	7.41	7.41
30	4.85	4.46	4.30	3.40	---	3.28	3.92	3.56	5.72	6.76	7.43	7.42
31	4.86	---	4.22	3.51	---	3.21	---	3.77	---	6.80	7.48	---

WTR YR 1990 MEAN 4.77 HIGH 2.76 LOW 7.63

NEW HANOVER COUNTY

341000077524201. Local number, NC-20.
LOCATION.--Lat 34°09'53", long 77°52'48", Hydrologic Unit 03030001, southeast of Wilmington, 1 mi west of Secondary Road 1492 on Secondary Road 1516. Owner: Walter J. Hodder.
AQUIFER.--Castle Hayne aquifer of Oligocene and Eocene age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 173 ft, diameter 3 in, cased and screened intervals unknown; measured depth 169 ft, September 1973.
INSTRUMENTATION.--Measured every eight weeks with chalked tape by USGS personnel.
DATUM.--Land-surface datum is 21 ft above National Geodetic Vertical Datum of 1929 (from topographic map). Measuring point: Top of instrument shelf, 1.85 ft above land-surface datum (since March 11, 1976).
REMARKS.--USGS continuous record from December 1964 to November 1980. Well is part of areal-effects network.
PERIOD OF RECORD.--November 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest recorded water level, 9.42 ft below land-surface datum, June 10, 1966; lowest recored, 23.89 ft below land-surface datum, July 10, 1985.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 5	16.57	Jan. 23	17.87	Apr. 25	20.55	Jun. 6	21.30	Jul. 12	22.48	Aug. 28	19.86
Nov. 30	18.25	Mar. 8	18.35								

ONSLOW COUNTY

344425077272501. Local number, NC-52.
LOCATION.--Lat 34°44'18", long 77°27'29", Hydrologic Unit 03030001, southwest of Jacksonville, 2 mi south of U.S. Highway 258, 0.25 mi east of U.S. Highway 17 at U.S. Marine Corps Camp Geiger. Owner: U.S. Marine Corps.
AQUIFER.--Castle Hayne aquifer of Oligocene and Eocene age.
WELL CHARACTERISTICS.--Drilled abandoned supply well, drilled to 70 ft, diameter 18 in, cased to 23 ft, open hole to 70 ft; measured depth 68 ft, January 1974.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 17.0 ft above National Geodetic Vertical Datum of 1929 (from topographic map). Measuring point: Top of instrument shelf, 1.90 ft above land-surface datum.
REMARKS.--Well is part of areal-effects network.
PERIOD OF RECORD.--January 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.67 ft below land-surface datum, September 14, 1984; lowest recorded, 10.44 ft below land-surface datum, January 3, 1966.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.26	5.81	6.84	4.07	5.67	6.29	4.65	6.27	6.23	7.20	8.21	7.94
10	4.60	5.91	4.69	3.50	5.72	6.37	5.06	6.45	6.49	7.40	7.88	8.23
15	5.08	6.05	4.57	4.37	6.00	6.52	5.24	6.63	6.81	7.59	8.16	8.36
20	5.45	6.19	4.60	4.85	6.10	6.31	5.67	6.77	7.06	7.73	8.27	8.54
25	5.79	6.49	4.84	5.18	6.21	6.53	5.96	6.56	6.81	7.92	8.22	8.68
EOM	6.03	6.71	3.79	5.48	6.12	5.14	6.18	6.00	7.00	8.02	8.19	8.80

WTR YR 1990 MEAN 6.33 HIGH 3.29 JAN 8 LOW 8.80 SEP 28

ONSLOW COUNTY

344525077254501. Local number, NC-85
LOCATION.--Lat 34°45'25", long 77°25'45", Hydrologic Unit 03030001, in Jacksonville at electrical transformer substation, 0.15 mi north of U.S. Highway 17 and 0.4 mi east of New River. Owner: Carolina Power and Light Company.
AQUIFER.--Castle Hayne aquifer of Oligocene and Eocene age.
INSTRUMENTATION.--Digital recorder --60-minute punch.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 240 ft (reported), diameter 8 in, cased and screened intervals unknown; measured depth 103 ft, January 1974.
DATUM.--Land-surface datum is 20 ft above National Geodetic Vertical Datum of 1929 (from topographic map). Measuring point: Top of instrument shelf, 3.20 ft above land-surface datum.
REMARKS.--Well is part of areal-effects network.
PERIOD OF RECORD.--January 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 6.86 ft below land-surface datum, June 10, 1964; lowest recorded, 24.19 ft below land-surface datum, July 3, 1985.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.99	14.83	17.83	---	16.52	16.57	14.98	16.06	16.71	21.39	22.56	22.67
10	16.57	14.35	18.43	---	15.89	16.37	15.16	15.43	18.13	22.29	22.03	23.15
15	15.92	14.26	19.15	---	15.78	15.56	14.73	15.64	17.96	23.02	22.88	22.87
20	15.74	15.82	20.22	---	15.60	15.20	14.84	16.38	19.08	22.46	22.97	21.88
25	15.64	17.15	---	17.32	16.24	15.31	14.65	15.98	20.45	22.95	22.57	21.23
EOM	14.74	16.66	---	17.57	17.11	15.07	15.44	15.93	21.17	22.75	23.16	20.99

WTR YR 1990 MEAN 18.08 HIGH 14.12 NOV 16 LOW 23.38 SEP 11

GROUND-WATER LEVELS

ONSLOW COUNTY

342652077312401. Local number, ON-1.
LOCATION.--Lat 34°26'52", long 77°31'24", Hydrologic Unit 03030001, near West Onslow Beach. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined marine sands and clays of the surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 3 in., depth 4.40 ft, cased to 1.00 ft, screened from 1.00 ft to 4.40 ft.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Measuring point: Top of casing, 6.08 ft above National Geodetic Vertical Datum of 1929, 5.20 ft above land surface.
REMARKS.--Well is part of a study of open-marsh water-management techniques. Water level affected by tidal fluctuations.
PERIOD OF RECORD.--August 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.57 ft above NGVD, Jan. 1, 1987; lowest, 1.08 ft below NGVD, June 11, 1987.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	.95	.95	.56	.98	.98	.95	.92	.60	.54	.01	.79	1.00
10	.98	.92	1.16	1.00	.99	.91	.69	.44	.34	.88	.96	1.05
15	.89	.95	.97	.92	.87	.70	.86	.10	.76	.71	.72	1.11
20	.90	.86	1.04	.83	.97	.94	.52	-.52	.83	.80	.75	1.08
25	.75	.90	1.00	.75	.94	.70	.24	1.00	.79	.98	.98	.91
EOM	1.13	.81	1.05	.98	.90	1.05	.57	.99	.37	.96	.96	.83

WTR YR 1990 MEAN .82 MAX 1.20 MIN -.52

ONSLOW COUNTY

342649077312501. Local number, ON-3.
LOCATION.--Lat 34°26'49", long 77°31'25", Hydrologic Unit 03030001, near West Onslow Beach. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined marine sands and clays of the surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 3 in., depth 4.90 ft, cased to 1.00 ft, screened from 1.00 ft to 4.90 ft.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Measuring point: Top of casing, 6.35 ft above National Geodetic Vertical Datum of 1929, 5.35 ft above land surface.
REMARKS.--Well is part of a study of open-marsh water-management techniques. Water level affected by tidal fluctuations.
PERIOD OF RECORD.--August 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.50 ft above NGVD, Jan. 1, 1987; lowest, 1.19 ft below NGVD, June 11,1987.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	.93	.93	.39	.95	.95	.94	.90	.48	.70	-.31	.83	.97
10	.95	.90	1.14	.96	.95	.88	.76	.26	.29	.93	.96	1.01
15	.86	.91	.96	.91	.86	.68	.85	-.19	.59	.76	.80	1.06
20	.91	.86	1.03	.84	.95	.92	.42	-.85	.79	.84	.70	1.04
25	.66	.87	.97	.62	.93	.67	.01	.98	.69	.95	.98	.91
EOM	1.08	.78	1.02	.96	.90	1.05	.51	.95	.20	.95	.96	.82

WTR YR 1990 MEAN .77 MAX 1.16 MIN -.85

ONSLOW COUNTY

342655077312201. Local number, ON-10.
LOCATION.--Lat 34°26'55", long 77°31'22", Hydrologic Unit 03030001, near West Onslow Beach. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined marine sands and clays of the surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 3 in., depth 4.90 ft, cased to 1.00 ft, screened from 1.00 ft to 4.90 ft.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Measuring point: Top of casing, 6.10 ft above National Geodetic Vertical Datum of 1929, 5.20 ft above land surface.
REMARKS.--Well is part of a study of open-marsh water-management techniques. Water level affected by tidal fluctuations.
PERIOD OF RECORD.--August 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.55 ft above NGVD, Jan. 1, 1987; lowest, 1.27 ft below NGVD, June 11, 1987.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	.97	.95	.50	.98	.97	.93	.90	.37	.49	.18	.83	1.01
10	1.00	.91	1.15	.99	.93	.79	.55	.34	.21	.92	.98	1.04
15	.91	.92	.99	.83	.71	.58	.79	.03	.83	.55	.60	1.06
20	.98	.87	1.03	.69	.96	.95	.41	-.68	.96	.75	.54	1.07
25	.75	.91	1.00	.60	.93	.64	.12	.99	.93	.97	.98	.93
EOM	1.10	.75	1.04	.98	.80	1.02	.35	.97	.60	.98	.96	.70

WTR YR 1990 MEAN .79 MAX 1.17 MIN -.68

ONSLOW COUNTY

342653077312301. Local number, ON-12.
LOCATION.--Lat 34°26'53", long 77°31'23", Hydrologic Unit 03030001, near West Onslow Beach. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined marine sands and clays of the surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 3 in., depth 5.10 ft, cased to 1.00 ft, screened from 1.00 ft to 5.10 ft.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Measuring point: Top of casing, 6.21 ft above National Geodetic Vertical Datum of 1929, 5.30 ft above land surface.
REMARKS.--Well is part of a study of open-marsh water-management techniques. Water level affected by tidal fluctuations.
PERIOD OF RECORD.--August 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.58 ft above NGVD, Jan. 1, 1987; lowest, 1.21 ft below NGVD, June 11, 1987.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	.96	.94	.47	.95	.98	.93	.90	.50	.41	-.12	.70	.86
10	1.00	.90	1.18	.96	.95	.83	.55	.33	.09	.91	.91	.93
15	.95	.93	.97	.82	.76	.60	.73	-.17	.81	.63	.74	1.01
20	1.06	.83	1.04	.70	.97	.98	.33	-.80	.93	.70	.80	1.03
25	.68	.90	.97	.63	.93	.61	-.10	1.00	.88	.97	.89	.88
EOM	1.12	.73	1.05	.98	.79	1.08	.53	1.00	.42	.95	.68	.79

WTR YR 1990 MEAN .77 MAX 1.25 MIN -.80

ORANGE COUNTY

355522079043001. Local number, NC-126.
LOCATION.--Lat 35°55'22", long 79°04'30", Hydrologic Unit 03030002, in Chapel Hill, west of University of North Carolina campus, southeast of intersection of Cameron Avenue and Ransom Street. Owner: Chi Psi Fraternity.
AQUIFER.--Unconfined saprolite derived from granite of Paleozoic age.
WELL CHARACTERISTICS.--Dug observation well, depth 48 ft, diameter 36 in, lined with rock; measured depth 46.2 ft, August 1986.
INSTRUMENTATION.--Measured every eight weeks with chalked tape by USGS personnel.
DATUM.--Land-surface datum is 511.50 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelf, 3.27 ft above land-surface datum (since July 21, 1981).
REMARKS.--Continuos Record March 1965 to Sept. 1988. Well is part of terrane-effects network.
PERIOD OF RECORD.--August 1938 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest recorded water level, 35.22 ft below land-surface datum, May 14, 1984; lowest recorded, dry, October 11 to December 31, 1940 and Oct.13 to Jan.24, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Nov. 1	43.35	Mar. 8	41.14	Apr. 23	40.16	Jun. 4	39.41	Jul. 20	39.90	Aug. 29	40.85
Jan. 8	41.79	Apr. 5	40.52								

PAMLICO COUNTY

351424076332601. Local number, PA-1.
LOCATION.--Lat 35°14'24", long 76°33'26", Hydrologic Unit 03020105, near Hobucken. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined marine sands and clays of the surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 3 in., depth 6.06 ft, cased to 2.00 ft, screened from 2.00 ft to 6.06 ft.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Measuring point: Top of casing, 6.24 ft above National Geodetic Vertical Datum of 1929, 4.81 ft above land surface.
REMARKS.--Well is part of a study of open-marsh water-management techniques. Water level affected by tidal fluctuations.
PERIOD OF RECORD.--March 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 3.58 ft above NGVD, Nov. 4, 1985; lowest, 1.64 ft below NGVD, June 29, 1985.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1.57	1.70	.95	1.51	1.51	1.49	1.47	1.50	1.50	---	1.42	1.67
10	1.54	1.52	1.87	1.52	1.50	1.49	.95	.88	.66	---	1.54	1.59
15	1.38	1.39	1.52	1.35	1.30	1.14	1.33	1.46	1.32	---	1.54	1.55
20	1.54	1.37	1.56	1.06	1.49	1.51	1.12	.48	1.51	---	1.52	1.55
25	1.64	1.52	1.47	1.28	1.47	1.08	.67	1.49	1.26	---	1.65	1.50
EOM	1.62	1.39	1.57	1.52	1.38	1.57	1.38	1.66	---	1.55	1.70	1.14

WTR YR 1990 MEAN 1.41 MAX 2.10 MIN -.12

GROUND-WATER LEVELS

PAMLICO COUNTY

351425076332201. Local number, PA-3.
LOCATION.--Lat 35°14'25", long 76°33'24", Hydrologic Unit 03020105, near Hobucken. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined marine sands and clays of the surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 3 in., depth 6.31 ft, cased to 2.00 ft, screened from 2.00 ft to 6.31 ft.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Measuring point: Top of casing, 5.99 ft above National Geodetic Vertical Datum of 1929, 4.59 ft above land surface.
REMARKS.--Well is part of a study of open-marsh water-management techniques. Water level affected by tidal fluctuations.
PERIOD OF RECORD.--March 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 3.42 ft above NGVD, Nov. 4, 1985; lowest, 0.69 ft below NGVD, July 24, 1990.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1.62	1.75	1.00	1.41	1.41	1.44	1.41	1.45	1.44	.92	1.39	1.72
10	1.57	1.50	2.02	1.47	1.33	1.45	1.18	.98	.89	.57	1.52	1.63
15	1.34	1.33	1.47	1.23	1.15	1.14	1.26	1.36	1.38	.12	1.51	1.55
20	1.53	1.21	1.52	1.12	1.47	1.44	1.41	---	1.46	-.26	1.47	1.53
25	1.61	1.44	1.35	1.18	1.35	1.18	.96	1.48	1.22	-.31	1.64	1.44
EOM	1.64	1.26	1.52	1.39	1.22	1.58	1.26	1.68	.73	1.54	1.65	1.17

WTR YR 1990 MEAN 1.31 MAX 2.03 MIN -.65

PAMLICO COUNTY

351422076333101. Local number, PA-10.
LOCATION.--Lat 35°14'22", long 76°33'31", Hydrologic Unit 03020105, near Hobucken. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined marine sands and clays of the surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 3 in., depth 5.71 ft, cased to 2.00 ft, screened from 2.00 ft to 5.71 ft.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Measuring point: Top of casing, 6.69 ft above National Geodetic Vertical Datum of 1929, 5.21 ft above land surface.
REMARKS.--Well is part of a study of open-marsh water-management techniques. Water level affected by tidal fluctuations.
PERIOD OF RECORD.--March 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 4.00 ft above NGVD, Nov. 4, 1985; lowest, 0.89 ft below NGVD, June 26, 1985.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1.63	1.71	1.03	1.39	1.39	1.42	1.35	1.37	1.40	.05	.99	1.65
10	1.55	1.51	1.93	1.43	1.39	1.41	.97	.83	.69	-.19	1.52	1.64
15	1.43	1.39	1.51	1.26	1.23	1.09	1.17	1.29	.40	-.53	1.47	1.61
20	1.49	1.30	1.52	1.10	1.42	1.39	.69	.54	1.32	-.67	1.41	1.52
25	1.55	1.45	1.46	1.20	1.31	1.06	.38	1.43	.94	-.62	1.68	1.32
EOM	1.62	1.37	1.47	1.40	1.25	1.58	.90	1.70	.28	1.37	1.64	1.00

WTR YR 1990 MEAN 1.18 MAX 1.93 MIN -.84

PAMLICO COUNTY

351424076332701. Local number, PA-12.
LOCATION.--Lat 35°14'24", long 76°33'27", Hydrologic Unit 03020105, near Hobucken. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined marine sands and clays of the surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 3 in., depth 7.50 ft, cased to 2.50 ft, screened from 2.50 ft to 7.50 ft.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Measuring point: Top of casing, 4.97 ft above National Geodetic Vertical Datum of 1929, 3.52 ft above land surface.
REMARKS.--Well is part of a study of open-marsh water-management techniques. Water level affected by tidal fluctuations.
PERIOD OF RECORD.--March 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 3.18 ft above NGVD, Nov. 4, 1985; lowest, 0.76 ft below NGVD, June 26, 1985.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1.74	1.83	1.12	1.44	---	---	1.54	1.47	1.45	.29	1.12	1.81
10	1.65	1.58	2.05	1.50	---	1.50	1.30	1.01	.98	.03	1.54	1.72
15	1.45	1.48	1.60	1.35	---	1.25	1.39	1.36	.82	-.35	1.50	1.69
20	---	---	1.57	1.21	---	1.47	1.13	---	1.34	-.50	1.52	1.59
25	---	---	1.53	1.27	---	1.26	.86	1.53	1.10	---	1.77	1.42
EOM	1.70	1.42	1.50	1.41	---	1.67	1.05	1.77	.51	1.35	1.71	1.09

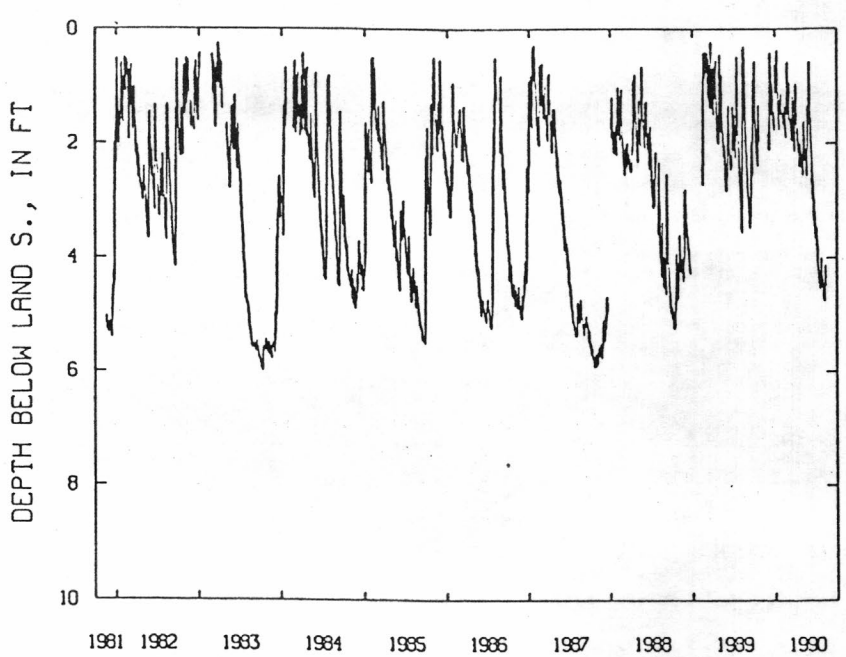
WTR YR 1990 MEAN 1.30 MAX 2.05 MIN -.61

361828076163401. Local number, NC-143.
LOCATION.--Lat 36°18'28", long 76°16'34", Hydrologic Unit 03010205, northwest of Elizabeth City, 1 mi west of Secondary Road 1307 on Secondary Road 1309. Owner: U.S. Geological Survey.
AQUIFER.--Surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Bored observation well, augered to 10.2 ft, diameter 3 in, cased to 5 ft, screened interval from 5.0 ft to 10.2 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 13 ft above National Geodetic Vertical Datum of 1929 (from topographic map). Measuring point: Top of casing, 2.35 ft above land-surface datum.
REMARKS.--In May 1984, well replaced nearby NC-86. Well is part of climatic-effects network.
PERIOD OF RECORD.--November 1981 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.01 ft below land-surface datum, January 22, 1987; lowest recorded, 6.00 ft below land-surface datum, October 10, 1983.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.49	---	---	.63	1.55	1.60	.98	2.27	1.44	3.46	4.61	---
2	.57	---	---	.77	1.52	1.54	1.09	2.44	1.59	3.55	4.69	---
3	.71	---	---	.90	1.60	.95	1.04	2.56	1.62	3.75	4.71	---
4	1.11	---	1.83	.96	1.47	.96	1.24	2.14	1.55	3.79	4.73	---
5	1.39	---	1.83	1.11	1.63	1.25	1.53	1.61	1.79	3.76	4.75	---
6	1.51	---	1.91	.75	1.68	1.40	1.64	1.64	1.89	3.86	4.76	---
7	1.67	---	2.11	.63	1.61	1.65	1.72	1.81	1.96	4.11	4.73	---
8	1.75	---	1.54	.38	1.69	1.66	1.87	1.94	2.10	4.21	4.48	---
9	1.94	---	.42	.47	1.63	1.57	1.96	2.02	2.17	4.16	4.13	---
10	1.99	---	.44	.62	1.35	1.69	1.82	1.87	2.26	4.20	4.15	---
11	2.06	---	.58	.80	1.41	1.75	1.73	2.14	2.42	4.31	4.26	---
12	2.16	---	.68	1.06	1.58	1.79	2.01	2.31	2.60	4.38	4.41	---
13	2.20	---	.67	1.47	1.71	1.82	2.16	2.18	2.68	4.44	4.47	---
14	2.24	---	.87	1.60	1.73	1.87	2.08	2.09	2.67	4.36	4.49	---
15	2.30	---	.96	1.58	1.77	1.94	1.97	2.20	2.77	4.35	---	---
16	2.38	---	1.22	1.64	1.73	1.95	2.08	2.21	2.89	4.52	---	---
17	2.39	---	1.43	1.66	1.78	1.88	2.14	2.21	2.97	4.55	---	---
18	2.35	---	1.51	1.62	1.90	1.18	2.36	2.42	2.96	4.49	---	---
19	1.33	---	1.41	1.76	1.19	1.21	2.42	2.55	2.98	4.49	---	---
20	1.34	---	.96	1.68	1.22	1.36	2.32	2.57	3.21	4.49	---	---
21	1.53	---	1.12	1.25	1.41	1.62	2.17	2.55	3.30	4.40	---	---
22	1.75	---	1.46	1.25	1.28	1.73	2.00	2.03	3.36	4.00	---	---
23	1.91	---	1.58	1.45	.58	1.75	2.03	1.34	3.22	4.09	---	---
24	1.96	---	1.59	1.50	.62	1.89	2.12	1.50	3.20	4.30	---	---
25	---	---	1.66	1.46	1.20	1.93	2.20	1.65	3.43	4.45	---	---
26	---	---	1.62	1.13	1.50	1.97	2.23	1.65	3.51	4.52	---	---
27	---	---	1.72	1.27	1.43	2.08	2.32	1.64	3.52	4.46	---	---
28	---	---	1.74	1.34	1.46	2.15	2.39	1.63	3.59	4.35	---	4.99
29	---	---	1.77	1.23	---	2.06	2.42	.58	3.64	4.35	---	4.98
30	---	---	1.64	1.38	---	1.04	2.32	.79	3.66	4.38	---	4.94
31	---	---	1.19	1.53	---	.97	---	1.20	---	4.42	---	---

WTR YR 1990 MEAN 2.19 HIGH .38 LOW 4.99



361828076163401 PK-140 (NC-143) ELIZABETH CITY
MEAN DAILY DEPTH BELOW LAND S. (FT)

GROUND-WATER LEVELS

PITT COUNTY

353219077153801. Local number, NC-160; USGS well PI-532.
LOCATION.--Lat 35°32'19", long 77°15'38", Hydrologic Unit 03020103, 2.7 mi southwest of Simpson in southeast corner of intersection of Secondary Roads 1755 and 1769. Owner: U.S. Geological Survey.
AQUIFER.--Surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Bored observation well, augered to 12 ft, diameter 6 in, cased to 5.9 ft, screened interval from 5.9 ft to 10.9 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 56.27 ft above National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service). Measuring point: File cut on top of casing, 1.04 ft above land-surface datum.
REMARKS.--From December 1976 to April 1987, well was part of a study of the effects of channelization on hydrology of Chicod Creek watershed. It has been incorporated into the climatic-effects network.
PERIOD OF RECORD.--December 1976 to current year. Prior to October 1986, published as Local number, PI-532.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.05 ft below land-surface datum, September 14, 1984; lowest recorded, 8.84 ft below land-surface datum, November 6, 7, and 8, 1978.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.16	4.37	3.71	2.07	2.73	3.33	2.49	4.33	2.83	5.82	7.61	4.84
2	2.27	4.36	3.73	2.27	2.80	3.34	2.49	4.31	2.99	5.92	7.68	4.92
3	2.40	3.90	3.84	2.41	2.87	3.16	2.62	4.31	3.10	6.03	7.72	5.02
4	2.65	3.82	3.94	2.49	2.77	3.04	2.81	3.70	3.23	6.12	7.75	5.15
5	2.82	3.86	4.00	2.58	2.52	3.13	2.97	3.39	3.41	6.23	7.78	5.21
6	2.95	3.89	4.05	2.46	2.70	3.21	3.07	3.46	3.58	6.25	7.82	5.31
7	3.06	3.93	4.12	2.42	2.80	3.31	3.13	3.57	3.73	5.59	7.77	5.46
8	3.10	3.95	3.39	1.89	2.91	3.38	3.23	3.71	3.90	5.74	6.55	5.60
9	3.20	3.93	2.10	2.10	2.95	3.41	3.31	3.82	4.02	5.91	5.12	5.66
10	3.26	3.86	2.07	2.28	2.97	3.48	3.36	3.84	4.16	6.15	5.05	5.72
11	3.35	3.92	2.30	2.42	3.06	3.54	3.29	4.03	4.27	6.05	5.26	5.40
12	3.44	4.00	2.40	2.60	3.16	3.62	3.35	4.13	4.38	6.26	5.48	5.48
13	3.52	4.05	2.47	2.79	3.24	3.68	3.46	4.19	4.47	6.34	5.65	5.58
14	3.59	4.06	2.55	2.86	3.30	3.77	3.50	4.30	4.58	6.41	5.80	5.65
15	3.68	4.07	2.62	2.90	3.34	3.83	3.56	4.40	4.67	6.49	5.79	5.75
16	3.78	4.09	2.74	2.94	3.37	3.89	3.67	4.51	4.77	6.58	4.05	5.88
17	3.84	4.23	2.83	2.97	3.44	3.93	3.76	4.59	4.91	6.65	3.88	6.04
18	3.83	4.28	2.89	2.99	3.51	3.31	3.92	4.75	5.02	6.70	3.97	6.12
19	3.78	4.33	2.85	3.04	3.20	3.22	4.01	4.87	5.00	6.81	4.14	6.15
20	3.79	4.33	2.67	3.06	3.11	3.31	4.06	4.88	5.11	6.90	4.23	6.24
21	3.87	4.44	2.74	3.06	3.20	3.46	4.09	4.82	5.22	6.99	3.76	6.34
22	3.98	4.49	2.89	3.12	3.20	3.56	4.16	4.72	5.21	7.07	3.81	6.36
23	4.05	4.01	2.97	3.19	2.88	3.66	4.24	4.23	5.02	7.16	3.85	6.54
24	4.08	3.71	3.02	3.24	2.87	3.76	4.34	4.31	5.00	7.22	3.85	6.68
25	4.13	3.71	3.06	3.23	3.08	3.82	4.44	4.44	5.16	7.28	3.98	6.74
26	4.20	3.73	3.08	2.49	3.18	3.89	4.51	4.52	5.26	7.33	4.08	6.80
27	4.26	3.78	3.07	2.55	3.21	3.99	4.62	4.58	5.35	7.32	4.21	6.91
28	4.30	3.77	3.09	2.69	3.26	4.08	4.70	3.54	5.47	7.26	4.36	6.96
29	4.34	3.60	2.99	2.68	---	3.36	4.51	1.90	5.61	7.38	4.49	7.01
30	4.35	3.61	2.78	2.57	---	2.29	4.31	2.31	5.72	7.43	4.60	7.04
31	4.28	---	2.52	2.65	---	2.43	---	2.61	---	7.52	4.72	---

WTR YR 1990 MEAN 4.16 HIGH 1.89 LOW 7.82

SCOTLAND COUNTY

345812079313401. Local number, NC-194.
LOCATION.--Lat 34°58'17", long 79°31'41", Hydrologic Unit 03040204, in Sandhills Game Management Area, 0.15 mi west of Secondary Road 1328, 3.4 mi east of Marston, 4.8 mi south of Hoffman, and 6.1 mi southwest of Silver Hill. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined sand of post miocene age.
WELL CHARACTERISTICS.--Drilled observation well, depth 35.6 ft, diameter 4 in, cased to 30.5 ft, screened interval from 30.6 to 35.6 ft. Annular space filled with native clayey sand from 0 to 30 ft below land surface.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Land-surface datum is 433 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.93 ft above land-surface datum.
REMARKS.--Well is part of Jordan Creek Acid Precipitation Study site, and serves as a terrain-effects well.
PERIOD OF RECORD.--September 1987 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 29.63 ft below land-surface datum, Aug. 23, 1989; lowest recorded, 32.63 ft below land-surface datum, September 7, 1988.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30.25	30.37	30.60	30.69	30.76	30.84	30.78	30.72	30.86	31.14	31.47	31.81
2	30.25	30.38	30.60	30.71	30.72	30.82	30.76	30.72	30.86	31.15	31.48	31.82
3	30.27	30.38	30.60	30.71	30.72	30.77	30.77	30.72	30.85	31.18	31.50	31.82
4	30.31	30.42	30.62	30.70	30.70	30.83	30.81	30.70	30.85	31.19	31.51	31.83
5	30.33	30.43	30.63	30.70	30.76	30.85	30.82	30.68	30.89	31.19	31.52	31.84
6	30.33	30.42	30.62	30.69	30.79	30.85	30.79	30.70	30.90	31.21	31.52	31.85
7	30.30	30.39	30.61	30.68	30.75	30.87	30.81	30.72	30.91	31.22	31.52	31.86
8	30.32	30.36	30.60	30.67	30.77	30.89	30.86	30.73	30.91	31.23	31.53	31.86
9	30.36	30.35	30.62	30.70	30.75	30.85	30.86	30.72	30.91	31.24	31.53	31.86
10	30.38	30.42	30.62	30.70	30.71	30.82	30.78	30.67	30.92	31.26	31.55	31.87
11	30.39	30.45	30.62	30.70	30.76	30.82	30.74	30.72	30.94	31.26	31.57	31.88
12	30.39	30.45	30.61	30.70	30.81	30.82	30.80	30.73	30.97	31.27	31.59	31.89
13	30.39	30.45	30.62	30.75	30.82	30.82	30.83	30.71	30.97	31.28	31.60	31.90
14	30.37	30.42	30.63	30.76	30.79	30.82	30.79	30.71	30.97	31.29	31.61	31.91
15	30.37	30.38	30.63	30.74	30.77	30.82	30.74	30.71	30.97	31.30	31.61	31.93
16	30.37	30.34	30.66	30.72	30.75	30.81	30.73	30.71	30.97	31.31	31.62	31.96
17	30.36	30.48	30.67	30.70	30.78	30.80	30.73	30.68	30.99	31.33	31.63	32.05
18	30.34	30.51	30.67	30.69	30.82	30.81	30.77	30.71	31.00	---	31.65	32.07
19	30.33	30.51	30.67	30.70	30.78	30.83	30.80	30.74	31.01	---	31.66	32.02
20	30.40	30.49	30.65	30.69	30.83	30.84	30.78	30.73	31.03	---	31.66	32.01
21	30.44	30.49	30.64	30.66	30.85	30.87	30.75	30.73	31.04	---	31.67	32.00
22	30.45	30.55	30.69	30.68	30.79	30.87	30.73	30.72	31.03	---	31.68	32.00
23	30.46	30.55	30.70	30.72	30.74	30.85	30.74	30.76	31.04	---	31.69	32.07
24	30.46	30.58	30.71	30.71	30.81	30.85	30.75	30.77	31.07	---	31.70	32.15
25	30.45	30.58	30.70	30.69	30.89	30.86	30.76	30.78	31.10	---	31.71	32.12
26	30.46	30.54	30.70	30.71	30.91	30.85	30.75	30.78	31.11	---	31.73	32.10
27	30.46	30.52	30.69	30.78	30.88	30.85	30.75	30.78	31.11	31.42	31.75	32.15
28	30.45	30.50	30.71	30.76	30.85	30.87	30.75	30.78	31.11	31.43	31.76	32.15
29	30.41	30.54	30.72	30.69	---	30.83	30.74	30.77	31.12	31.43	31.77	32.14
30	30.37	30.59	30.71	30.72	---	30.81	30.73	30.83	31.13	31.45	31.77	32.11
31	30.35	---	30.68	30.75	---	30.78	---	30.86	---	31.46	31.79	---

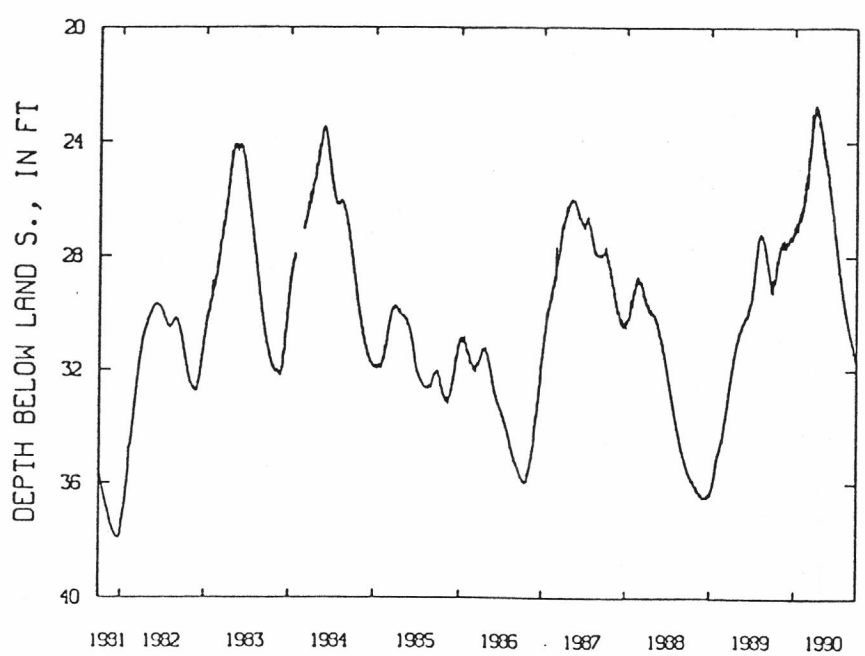
WTR YR 1990 MEAN 30.92 HIGH 30.25 LOW 32.15

351808082374302. Local number, NC-144.
LOCATION.--Lat 35°18'08", long 82°37"43", Hydrologic Unit 06010105, at Blantyre, 0.25 mi northwest of U.S. Highway 64 on King Road (Secondary Road 1502). Owner: U.S. Geological Survey.
AQUIFER.--Unconfined saprolite derived from gneiss of Paleozoic age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 70 ft, diameter 4 in, cased to 58 ft, casing perforated from 15 to 58 ft, gravel filter pack from 5 to 58 ft, backfilled with gravel and saprolite from 58 to 70 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 2,147.11 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.30 ft above land-surface datum.
REMARKS.--In September 1984, well replaced nearby NC-127. Well is part of terrane-effects network.
PERIOD OF RECORD.--October 1981 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 22.66 ft below land-surface datum, April 10, 1990; lowest recorded, 37.95 ft below land-surface datum, December 23 and 24, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.83	27.70	27.56	27.09	26.51	24.91	22.75	23.84	25.57	27.36	29.39	30.76
2	28.75	27.63	27.47	27.18	26.37	24.70	22.71	23.92	25.58	27.46	29.45	30.77
3	28.90	27.65	27.57	27.09	26.35	24.47	22.69	24.05	25.51	27.59	29.48	30.80
4	28.95	27.70	27.51	26.97	26.19	24.59	22.72	24.00	25.55	27.66	29.52	30.88
5	28.96	27.69	27.46	26.96	26.39	24.62	22.78	23.91	25.71	27.68	29.56	30.87
6	28.92	27.57	27.46	26.95	26.33	24.56	22.79	24.11	25.80	27.72	29.61	30.88
7	28.88	27.51	27.54	26.92	26.20	24.53	22.91	24.25	25.84	27.84	29.69	30.90
8	28.86	27.45	27.40	26.80	26.24	24.43	23.02	24.32	25.90	27.94	29.74	30.99
9	28.92	27.48	27.34	26.87	26.09	24.19	23.04	24.27	25.94	27.97	29.77	31.02
10	28.82	27.64	27.39	26.87	25.78	24.16	22.81	24.15	25.97	28.04	29.79	31.06
11	28.76	27.69	27.38	26.78	25.93	24.11	22.79	24.44	26.09	28.10	29.87	31.10
12	28.70	27.71	27.26	26.85	26.03	24.05	23.00	24.49	26.19	28.17	29.93	31.12
13	28.61	27.69	27.33	27.11	26.02	23.96	23.09	24.41	26.25	28.22	29.96	31.14
14	28.50	27.61	27.39	27.02	25.96	23.86	23.01	24.54	26.23	28.24	29.98	31.13
15	28.45	27.48	27.28	26.92	25.90	23.82	22.92	24.59	26.24	28.38	30.03	31.15
16	28.38	27.38	27.43	26.87	25.36	23.65	23.02	24.59	26.39	28.52	30.09	31.22
17	28.24	27.65	27.44	26.79	25.39	22.95	23.09	24.58	26.48	28.56	30.15	31.36
18	28.18	27.71	27.41	26.74	25.57	23.13	23.33	24.75	26.47	28.59	30.18	31.39
19	28.10	27.72	27.28	26.76	25.43	23.29	23.43	24.78	26.51	28.62	30.22	31.33
20	28.17	27.51	27.32	26.66	25.58	23.39	23.35	24.70	26.63	28.66	30.29	31.36
21	28.17	27.59	27.29	26.57	25.57	23.45	23.22	24.74	26.71	28.70	30.32	31.40
22	28.19	27.60	27.41	26.64	25.22	23.38	23.26	24.80	26.76	28.75	30.32	31.38
23	28.14	27.59	27.38	26.65	25.11	23.30	23.37	24.96	26.81	28.82	30.37	31.50
24	28.04	27.72	27.30	26.60	25.27	23.21	23.44	25.01	26.99	28.92	30.45	31.59
25	27.98	27.60	27.18	26.44	25.56	23.16	23.53	25.08	27.10	29.01	30.50	31.57
26	27.95	27.49	27.19	26.61	25.49	23.11	23.56	25.05	27.15	29.08	30.53	31.58
27	27.90	27.50	27.21	26.72	25.22	23.08	23.60	25.04	27.18	29.11	30.55	31.65
28	27.83	27.43	27.24	26.61	25.00	23.05	23.57	25.07	27.25	29.14	30.57	31.69
29	27.78	27.61	27.21	26.35	---	22.92	23.64	25.15	27.31	29.20	30.59	31.70
30	27.68	27.58	27.13	26.47	---	22.84	23.74	25.38	27.34	29.24	30.66	31.70
31	27.60	---	26.93	26.56	---	22.75	---	25.50	---	29.30	30.74	---

WTR YR 1990 MEAN 26.96 HIGH 22.69 LOW 31.70



351808082374302 TR-65 (NC-144) BLANTYRE
MEAN DAILY DEPTH BELOW LAND S. (FT)

TRANSYLVANIA COUNTY

351709082434101. Local number, NC-147
LOCATION.--Lat 35°17'09", long 82°43'41", Hydrologic Unit 06010105, 3.5 mi north of Brevard on U.S. Highway 276, 700 ft northwest of U.S. Forest Service Ranger Station in Pisgah National Forest. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined alluvial sand.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 25 ft, diameter 4 in, cased to 11.6 ft, screened interval from 11.6 to 21.6 ft; measured depth 22.9 ft, June 1985.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 2,176.70 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.24 ft above land-surface datum.
REMARKS.--Well is part of climatic-effects network.
PERIOD OF RECORD.--June 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 7.43 ft below land-surface datum, October 2, 1989; lowest recorded, 17.66 ft below land-surface datum, October 8 and 9, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.59	12.26	11.84	12.33	11.85	10.14	10.75	12.46	13.17	14.99	15.63	15.20
2	7.49	12.31	11.88	12.27	11.92	10.26	10.83	12.53	13.21	15.07	15.64	15.07
3	7.85	12.35	11.94	12.27	12.00	9.89	10.90	12.61	13.22	15.16	15.62	15.09
4	8.49	12.42	12.01	12.28	11.83	9.76	11.00	12.03	13.28	15.23	15.62	15.21
5	9.10	12.47	12.06	12.20	11.49	9.94	11.12	11.43	13.37	15.29	15.67	15.34
6	9.62	12.51	12.14	12.12	11.50	10.14	11.23	11.56	13.45	15.34	15.70	15.46
7	10.05	12.47	12.23	11.99	11.59	10.34	11.33	11.80	13.53	15.41	15.74	15.55
8	10.37	12.46	12.20	11.85	11.72	10.50	11.45	12.04	13.61	15.45	15.77	15.66
9	10.66	12.44	11.95	11.65	11.80	10.56	11.53	12.19	13.68	15.48	15.79	15.70
10	10.87	12.48	11.87	11.68	11.22	10.61	11.57	11.88	13.73	15.52	15.75	15.68
11	11.05	12.53	11.86	11.80	10.64	10.69	11.55	11.62	13.79	15.55	15.70	15.68
12	11.24	12.58	11.84	11.91	10.73	10.78	11.60	11.77	13.88	15.60	15.69	15.70
13	11.39	12.64	11.49	12.06	10.93	10.86	11.69	11.97	13.95	15.63	15.69	15.71
14	11.51	12.67	11.41	12.17	11.10	10.92	11.74	12.16	14.01	15.54	15.64	15.70
15	11.62	12.61	11.51	12.25	11.24	10.99	11.78	12.32	14.07	15.33	15.62	15.69
16	11.71	9.53	11.64	12.31	9.63	10.94	11.84	12.44	14.11	15.30	15.63	15.73
17	11.62	9.57	11.79	12.37	8.08	8.84	11.90	12.52	14.15	15.32	15.67	15.79
18	11.38	10.14	11.89	12.40	8.19	7.95	11.99	12.61	14.21	15.33	15.73	15.85
19	11.28	10.66	11.97	12.45	8.31	8.22	12.08	12.69	14.29	15.32	15.79	15.90
20	11.28	11.00	12.03	12.49	8.65	8.60	12.13	12.74	14.38	15.29	15.82	15.95
21	11.39	11.24	12.10	12.38	9.02	8.97	12.16	12.77	14.46	15.25	15.89	16.01
22	11.54	11.44	12.17	12.28	9.00	9.27	12.20	12.82	14.52	15.25	15.94	16.03
23	11.68	11.17	12.23	12.28	8.68	9.53	12.26	12.89	14.59	15.31	15.92	16.06
24	11.77	11.11	12.28	12.31	8.90	9.79	12.33	12.94	14.67	15.36	15.92	16.10
25	11.83	11.21	12.31	12.19	9.25	10.00	12.39	12.99	14.74	15.35	15.82	16.13
26	11.91	11.33	12.35	11.77	9.56	10.19	12.44	13.04	14.81	15.35	15.67	16.17
27	12.00	11.48	12.43	11.75	9.79	10.35	12.48	13.08	14.86	15.43	15.61	16.21
28	12.06	11.57	12.49	11.87	9.96	10.50	12.50	13.09	14.88	15.51	15.63	16.24
29	12.12	11.68	12.54	11.94	---	10.62	12.42	13.02	14.88	15.56	15.69	16.27
30	12.18	11.77	12.58	11.79	---	10.70	12.40	13.04	14.93	15.58	15.72	16.30
31	12.21	---	12.55	11.75	---	10.71	---	13.11	---	15.61	15.54	---

WTR YR 1990 MEAN 12.71 HIGH 7.49 LOW 16.30

GROUND-WATER LEVELS

WAYNE COUNTY

351849078163901. Local number, NC-148.
LOCATION.--Lat 35°18'49", long 78°16'39", Hydrologic Unit 03020201, 6 mi west of Grantham, 0.5 mi south of Johnston County line on Secondary Road 1009. Owner: U.S. Geological Survey.
AQUIFER.--Surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Bored observation well, augered to 10.4 ft, diameter 3 in, cased to 5.4 ft, screened interval from 5.4 to 10.4 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 190 ft above National Geodetic Vertical Datum of 1929 (from topographic map). Measuring point: File cut on top of casing, 1.80 ft above land-surface datum.
REMARKS.--Well is part of climatic-effects network.
PERIOD OF RECORD.--February 1980 to current year. Records for June 17 to September 30, 1987, published in U.S.G.S. annual report, Water Resources Data-North Carolina NC-87-1, are unreliable and should not be used.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.04 ft above land-surface datum, MAY 2, 1989; lowest recorded, 8.40 ft below land-surface datum, September 19 and 20, 1983.
REVISED RECORD.--See PERIOD OF RECORD.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.26	---	1.71	.98	1.60	1.47	.36	---	---	4.45	6.59	4.81
2	2.48	---	1.76	.89	1.61	1.50	.35	---	---	4.56	6.64	4.88
3	1.90	---	1.79	.95	1.62	1.07	.43	---	---	4.67	6.68	4.96
4	1.98	---	1.84	1.03	1.59	.83	.65	---	---	4.78	6.72	5.05
5	2.11	---	1.86	1.10	1.49	.98	.83	---	---	4.89	6.78	5.12
6	2.22	---	1.90	1.06	1.57	1.12	.98	---	---	5.01	6.83	5.19
7	2.32	---	1.93	.86	1.62	1.25	1.00	---	---	5.10	6.87	5.27
8	2.38	---	1.47	.52	1.66	1.33	1.11	---	---	5.18	6.89	5.38
9	2.44	---	.77	.38	1.69	1.35	1.25	---	---	5.25	6.89	5.45
10	2.50	---	.66	.54	1.62	1.38	1.33	---	---	5.35	6.81	5.48
11	2.56	---	.49	.70	1.64	1.46	1.38	---	---	5.44	6.64	5.51
12	2.65	---	.33	.82	1.70	1.52	1.49	---	---	5.53	6.52	5.54
13	2.73	---	.33	.93	1.76	1.57	1.58	---	---	5.59	6.44	5.55
14	2.79	---	.48	1.05	1.79	1.64	1.63	---	---	5.64	6.39	5.55
15	2.84	---	.65	1.14	1.82	1.69	1.67	---	---	5.66	6.35	5.56
16	2.90	---	.79	1.21	1.80	1.74	1.71	---	---	5.69	6.33	5.61
17	2.92	---	.90	1.26	1.52	1.66	1.79	---	---	5.72	6.27	5.68
18	2.98	---	.96	1.30	1.60	.70	1.90	---	---	5.76	6.05	5.74
19	2.38	---	1.01	1.34	1.25	.74	1.97	---	---	5.80	5.80	5.77
20	2.17	---	1.03	1.38	1.07	.91	2.04	---	---	5.85	5.63	5.80
21	2.17	---	1.07	1.31	1.22	1.07	2.09	---	3.68	5.89	5.43	5.83
22	2.24	---	1.14	1.34	1.26	1.19	2.15	---	3.77	5.95	5.20	5.85
23	2.33	1.44	1.19	1.43	1.11	1.29	2.23	---	3.70	5.99	5.02	5.89
24	2.39	1.24	1.20	1.48	1.06	1.39	2.32	---	3.73	6.03	4.89	5.97
25	2.45	1.31	1.23	1.50	1.22	1.45	2.42	---	3.87	6.05	4.72	6.02
26	2.54	1.35	1.22	1.40	1.35	1.50	2.52	---	3.97	---	4.60	6.08
27	2.61	1.45	1.16	1.39	1.38	1.55	---	---	4.05	---	4.55	6.14
28	2.67	1.50	1.21	1.46	1.41	1.62	---	---	4.14	---	4.54	6.20
29	---	1.57	1.23	1.46	---	1.06	---	---	4.25	---	4.59	6.24
30	---	1.64	1.23	1.51	---	.36	---	---	4.35	---	4.67	6.28
31	---	---	1.22	1.57	---	.36	---	---	---	6.51	4.73	---

WTR YR 1990 MEAN 2.88 HIGH .33 LOW 6.89

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October 1, 1978

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).

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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