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Water Resources Data North Carolina Water Year 1987

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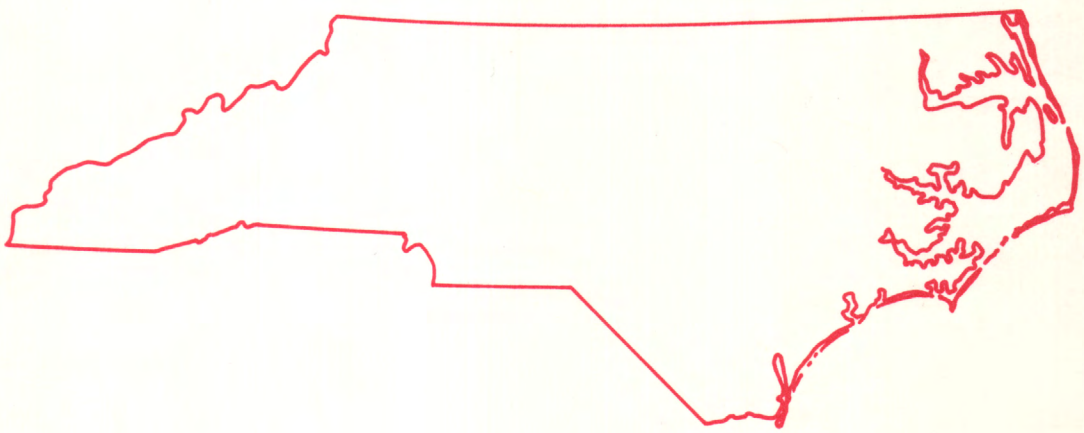

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NC-87-1
Prepared in cooperation with the North Carolina Department of Natural Resources and Community Development, and with other State, municipal, and Federal agencies

CALENDAR FOR WATER YEAR 1987

1986

OCTOBER

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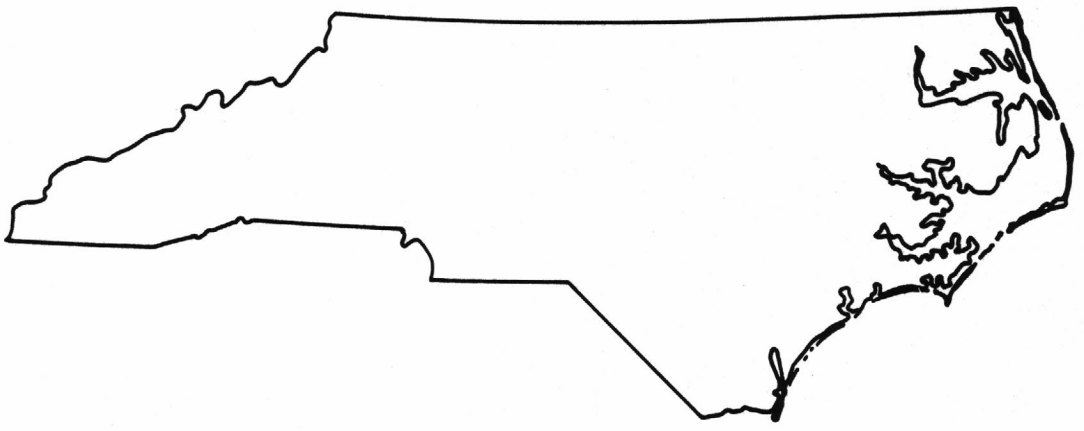
Water Resources Data North Carolina Water Year 1987

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



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NC-87-1
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UNITED STATES DEPARTMENT OF THE INTERIOR

DONALD P. HODEL, SECRETARY

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For information on the water program in North Carolina write to:

District Chief, Water Resources Division
U. S. Geological Survey
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300 Fayetteville Street
Raleigh, NC 27602

1987

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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Water resources data for the 1987 water year for North Carolina consist of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and groundwater levels. This report contains discharge records for 173 gaging stations and stage and contents for 25 lakes and reservoirs; water quality for 140 gaging stations and 21 miscellaneous sites; and water levels for 72 observation wells. Additional water data were collected at various sites not involved in the systematic data-collection program, and are published as miscellaneous measurements in this report. The collection of water-resources data in North Carolina is a part of the National Water-Data System operated by the U. S. Geological Survey in cooperation with State, municipal, and Federal agencies.

17. 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, 1987

INTRODUCTION

Water resources data for the 1987 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 173 gaging stations and stage and contents for 25 lakes and reservoirs; water quality for 141 gaging stations and 21 miscellaneous sites; and water levels for 72 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 Branch of Distribution, U.S. Geological Survey, 604 South Pickett Street, Alexandria, Virginia 22304.

Since the 1961 water year, streamflow data, and since the 1964 water year, water-quality data 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-87-1". 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) 856-4784.

COOPERATION

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

State Department of Human Resources, Phillip J. Kirk, Jr., Secretary.
State Department of Natural Resources and Community Development,
Thomas Rhodes, Secretary, through the following:
Division of Environmental Management,
Paul Wilms, Director.
State Board of Transportation, Division of Highways
George Wells, Highway Administrator.
City of Asheville, Lewis Bissett, Mayor
City of Bethel, Frank M. Hemingway, Mayor
City of Charlotte, Harvey B. Gantt, Mayor.
City of Durham, Thomas Bruce, Deputy Director of Water Resources
City of Greensboro, Ray Shaw, Assistant Director of Public Works
City of Raleigh, Jimmy Beckom, Chief Engineer
City of Rocky Mount, William H. Batchelor, City Manager.
Guilford Soil and Water Conservation District,
Coy M. Ivey, Chairman.
Orange County, William Laws, Assistant County Manager
Orange Water and Sewer Authority, W. Billingsley, Executive Director

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

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

The following organizations aided in collecting records:

City of Danville, Virginia; Anheuser-Busch Co.; 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

The 1987 water year began with a continuation of the below-normal[1] streamflow in the Piedmont and Coastal Plain (figs. 1, 2, and 3) which characterized most of 1986. During early October 1986, daily flows were at low conditions, which on the average are expected to occur once in five to ten years. In contrast, heavy rainfall in the Blue Ridge near the end of October caused minor flooding on small streams, and monthly streamflow for November for the French Broad River at Asheville was greater than median[2] flow for the first time since November 1985. Streamflow remained below normal in the Coastal Plain (fig. 1) until mid-December when heavy rainfall resulted in normal flows for the first time since December 1985. Storage in lakes and reservoirs across the state increased to the extent that water-use restrictions imposed during the summer of 1986 were lifted.

Monthly streamflows remained in the normal range in the Blue Ridge and Piedmont from January to March (figs. 2, 3, and 4). Streamflow increased in the Coastal Plain during January, setting a new monthly mean flow and a new daily maximum flow for the month of January at Contentnea Creek at Hookerton (fig. 1). Flow remained normal in the Blue Ridge and Piedmont from January to March. Heavy rainfall during early March caused significant flooding on the lower reaches of the Tar, Cape Fear, Lumber, and South Yadkin Rivers. Peak flows having recurrence intervals from 2 to 5 years occurred in the larger streams in the Coastal Plain, and flooding with recurrence intervals greater than 25 years occurred in many streams in the Piedmont. New average daily maximum flows for March were recorded at Contentnea Creek at Hookerton and South Yadkin River at Mocksville (figs. 1 and 3).

Streamflow decreased seasonally during April but remained above normal for the month in the Coastal Plain and Piedmont and normal in the Blue Ridge. Heavy rainfall occurring in Wilkes, Stokes, Surry, Guilford and Rockingham Counties during the latter part of April caused flooding with recurrence intervals from 2 to 5 years on the Yadkin and Dan Rivers and 25 years on the Haw River. As a result of continued above-normal streamflow during April, index reservoirs were at full capacity on April 30; flood control releases were made at the Kerr Lake Dam in Virginia (Roanoke River basin) for the first time since construction in 1952.

From May to August, except for minor rises that occurred during late June and July, streamflow decreased to the normal range in the Piedmont and Blue Ridge. In the Coastal Plain, streamflow decreased to below normal in June and remained below normal through August. During September, above-normal precipitation early in the month brought stream-flow back to normal seasonal ranges statewide.

The chemical quality of selected streams varied during the water year but mean values for the year were generally near the long-term average. Concentrations of major dissolved constituents, such as chloride, sodium and calcium, were near long-term averages and were approximately 25 to 50 percent less than values for 1986. Specific conductance, which is indicative of total concentration of dissolved constituents, was measured daily in the Yadkin River at Yadkin College The variations of the monthly and annual means of specific conductance at this site for the year and for the reference period 1975-86 are shown in figure 5. Specific conductance in the Yadkin River was generally above average except during March and April when it was slightly below average.

An investigation continued to determine the effects of waste discharges from Greensboro on the quality of receiving streams in the upper Haw River basin. Water samples collected from Reedy Fork Creek near Gibsonville during a flood on April 15-16 indicated concentrations of iron, manganese and aluminum reached 130,000, 1,600, and 7,500 ug/L, respectivel

Daily concentrations of suspended sediment in the Yadkin River at Yadkin College, a long-term sediment station, are used to define trends. The sediment-transport load for the 1987 water year was approximately 15 percent greater than the average annual load for the reference period 1951-87 (fig.6).

Ground-water levels in unconfined (water-table) aquifers fluctuated seasonally during the water year (figure 7). This reflects continual discharge from the ground-water reservoir to streams and periodic recharge events that occur as the result of rain. Levels were generally below average in the Blue Ridge through October and November and near average in the Piedmont during October; they were above average in these two provinces for the remainder of the year. The water level in the Blue Ridge index well reached a near-record high level at the end of September; near record highs were also reached in the Piedmont index well from the end of February through April. In the Coastal Plain, ground-water levels were above average from December through June and below average during the remainder of the year.

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 storage and that withdrawals are not being completely replenished by increased recharge and/or by a decrease in natural discharge. An example of this trend is illustrated by the hydrograph of water levels at the City of New Bern well field at Cove City (figure 8) where water has been withdrawn from the Black Creek and upper Cape Fear aquifers since 1968. Withdrawals from aquifers in several areas of the central, northern, and eastern Coastal Plain have resulted in water levels declining to record low levels. Record lows occurred during the year in some observation wells in Beaufort, Carteret, Craven, Hertford and Lenoir Counties.

[1]Adjective refers to the quartile in which streamflow values fall. The above-normal range is defined as flow in the upper quartile; below-normal as flow in the lower quartile; and normal as flow in the two middle quartiles.
[2]That value of streamflow of which 50 percent of streamflow observations, when arranged in order of magnitude, lie above and 50 percent lie below.

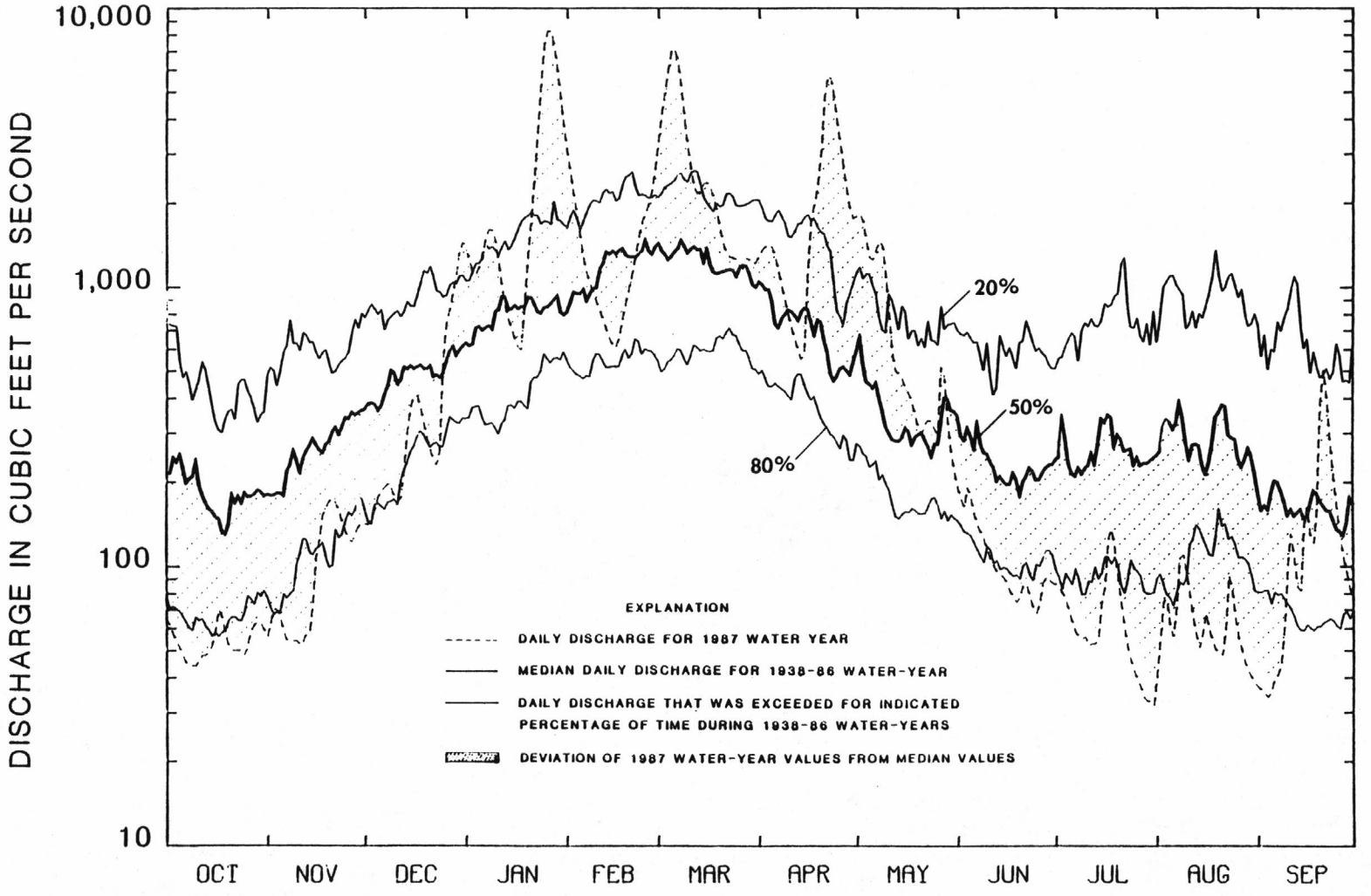

Figure 1. -- Hydrographic comparisons, Contentnea Creek at Hookerton, N.C.

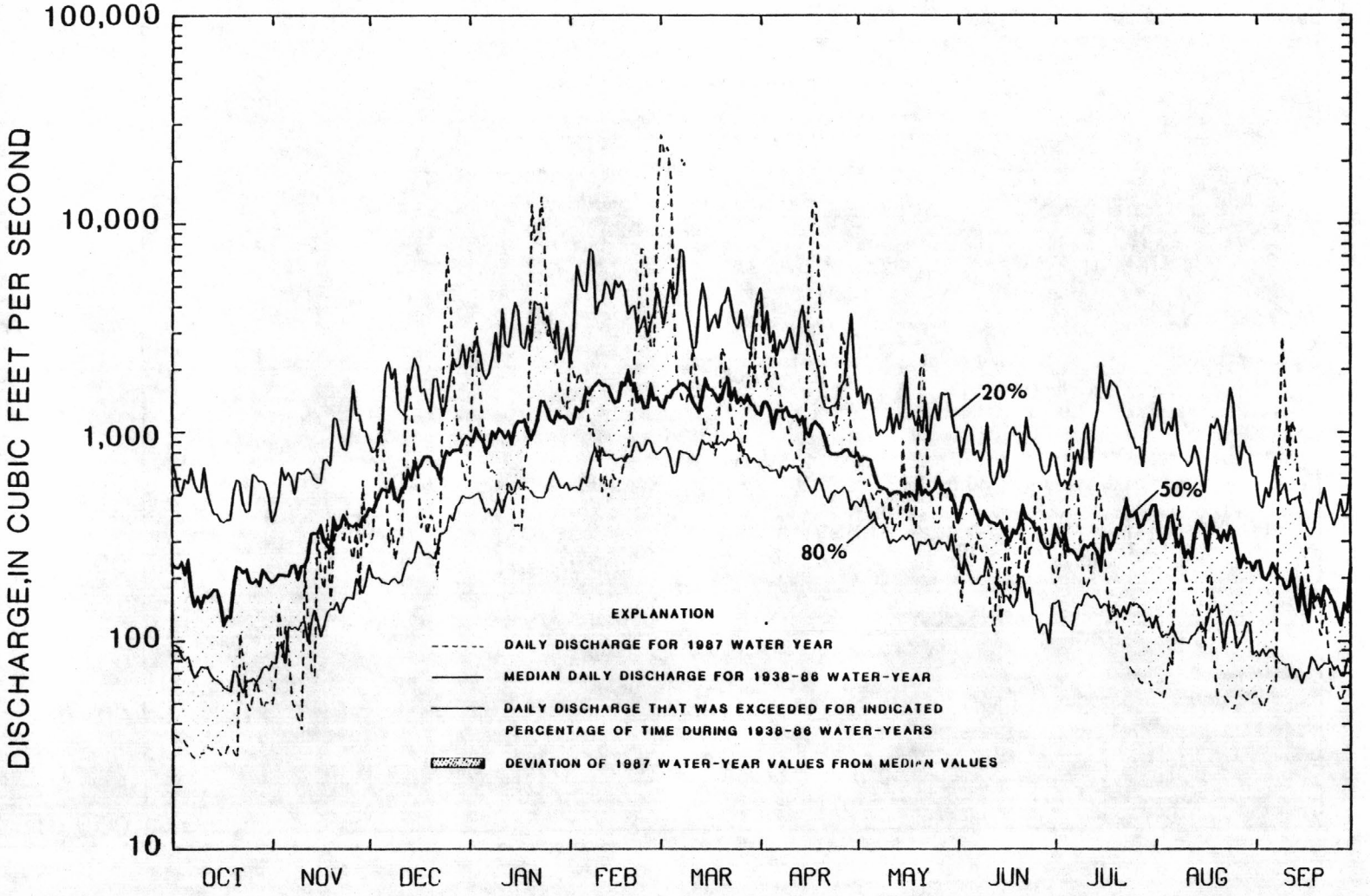

Figure 2. -- Hydrographic comparisons, Deep River near Moncure, N.C.

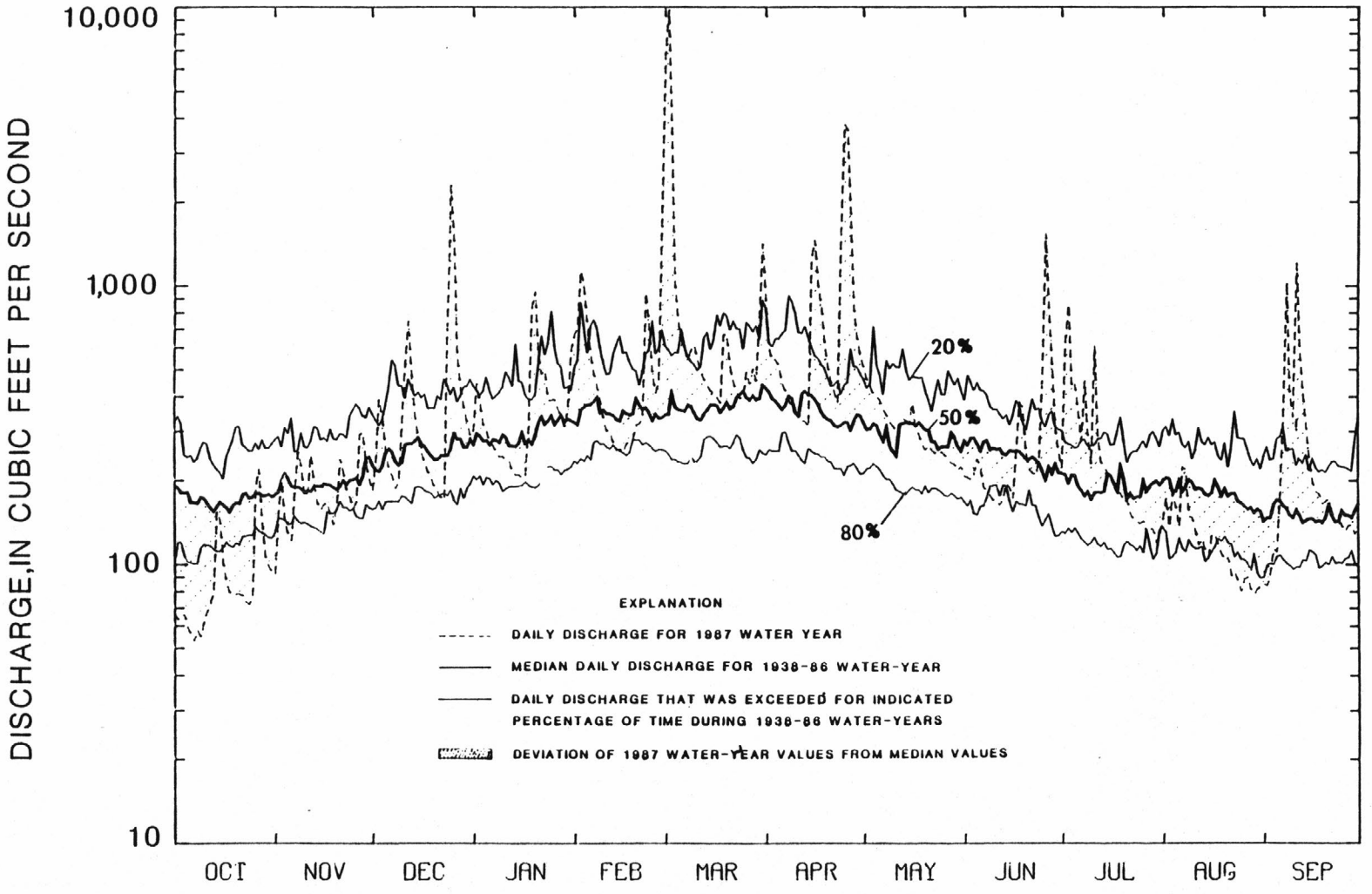

Figure 3. -- Hydrographic comparisons, South Yadkin River at Mocksville, N.C.

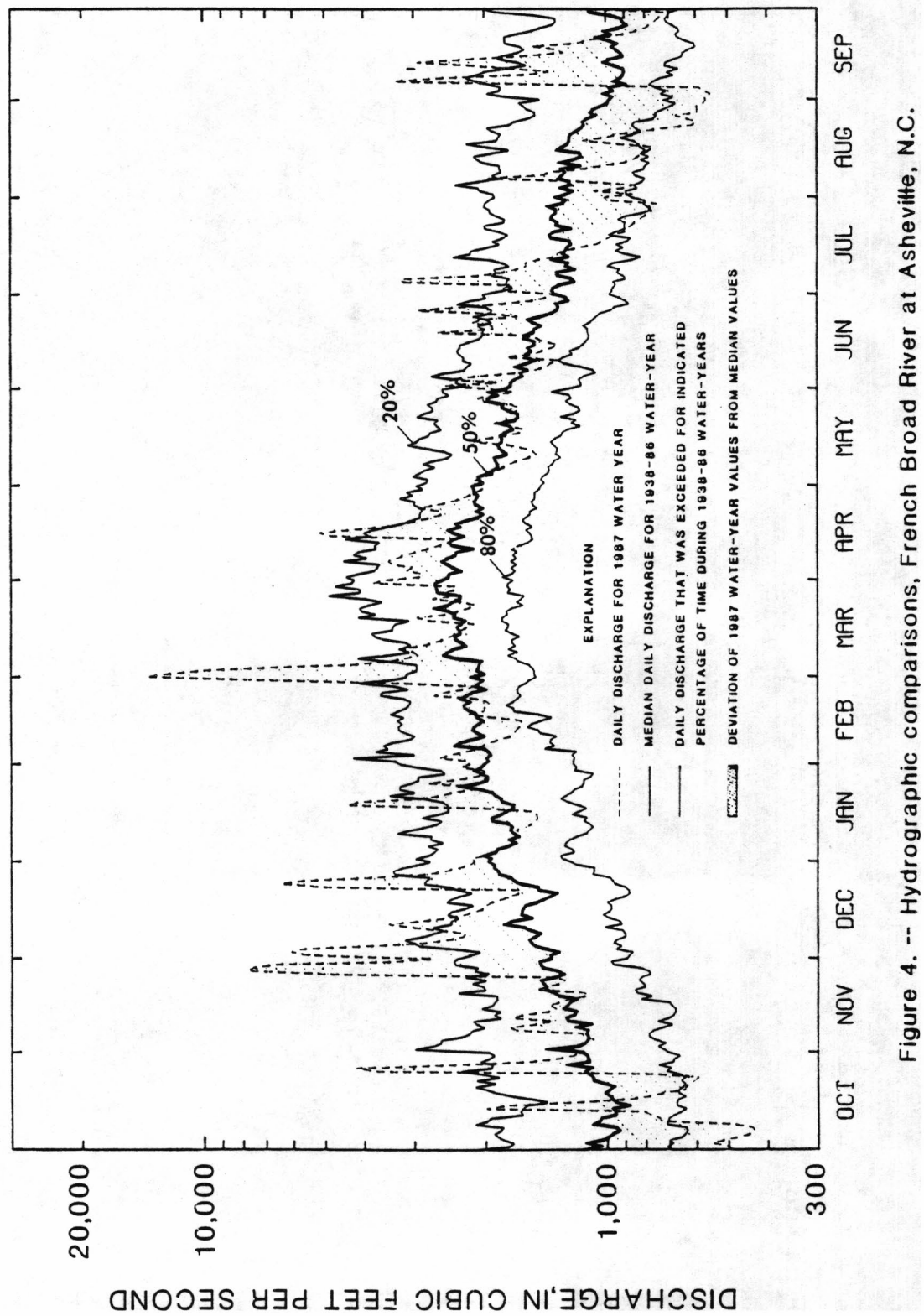

Figure 4. -- Hydrographic comparisons, French Broad River at Asheville, N.C.

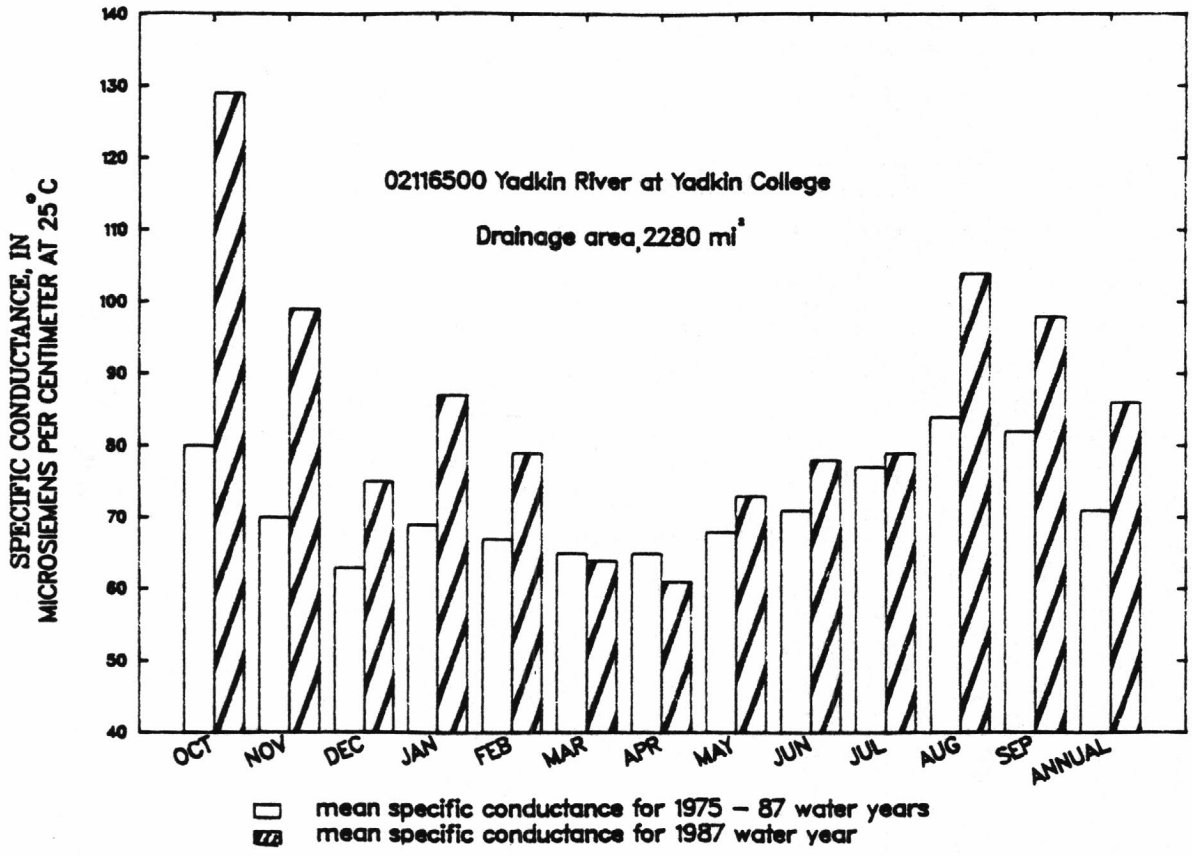

Figure 5.-- Comparison of specific conductance at Yadkin River at Yadkin College during the 1987 water year with mean values for the period 1975 – 87

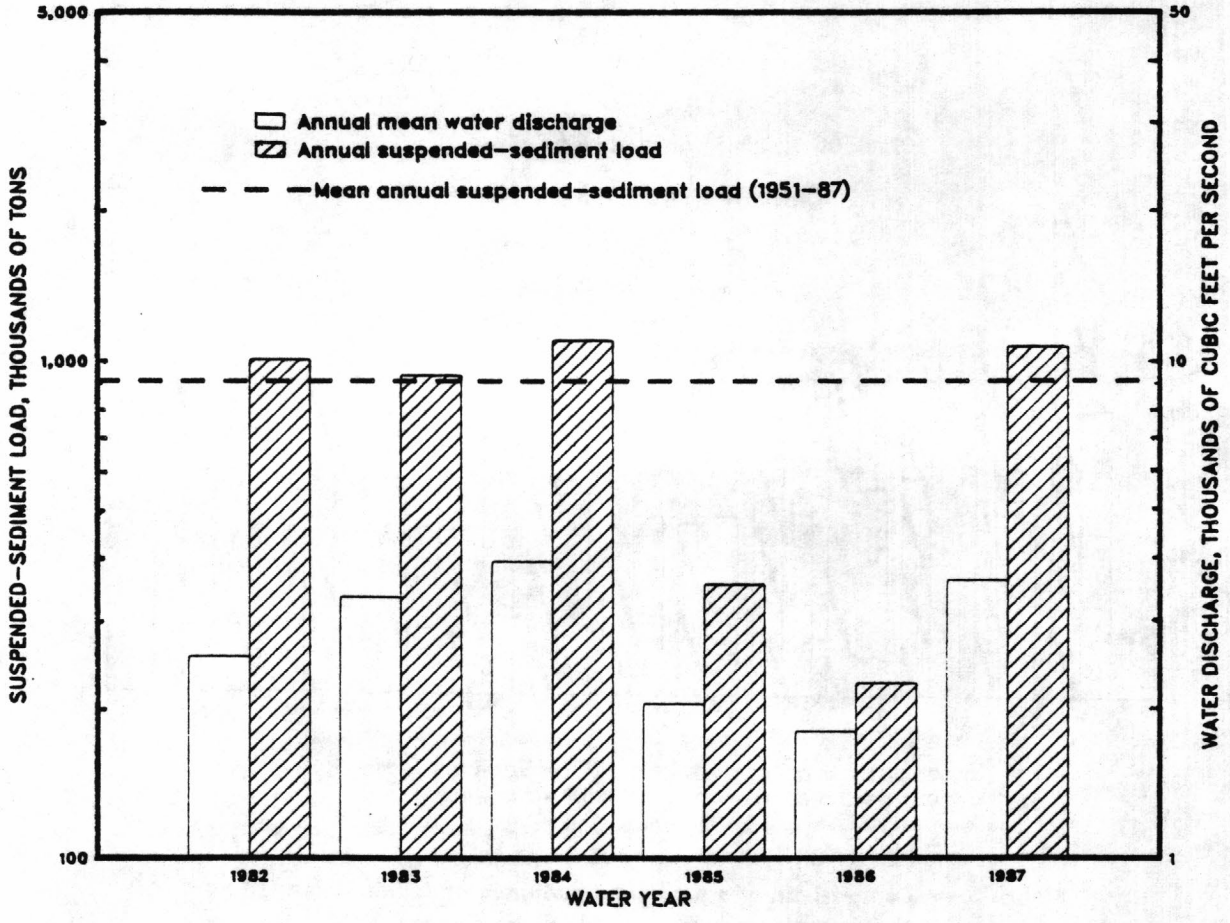

Figure 6.--Comparison of total suspended–sediment loads and mean water discharges at Yadkin River at Yadkin College, NC, 1982–87.

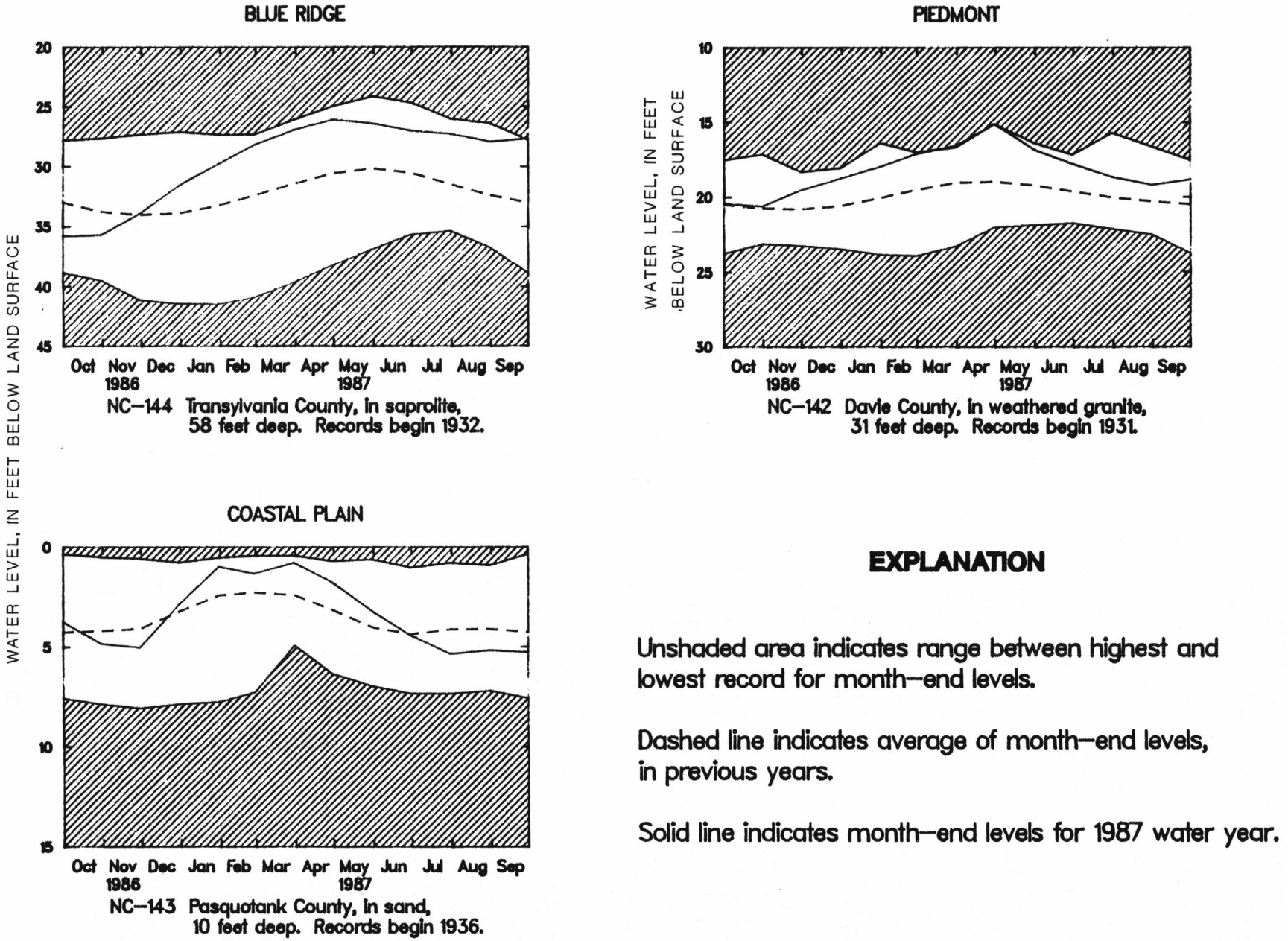

Figure 7.--Comparison of water levels at three long-term wells during the 1987 water year with month-end high, low, and average levels in previous years.

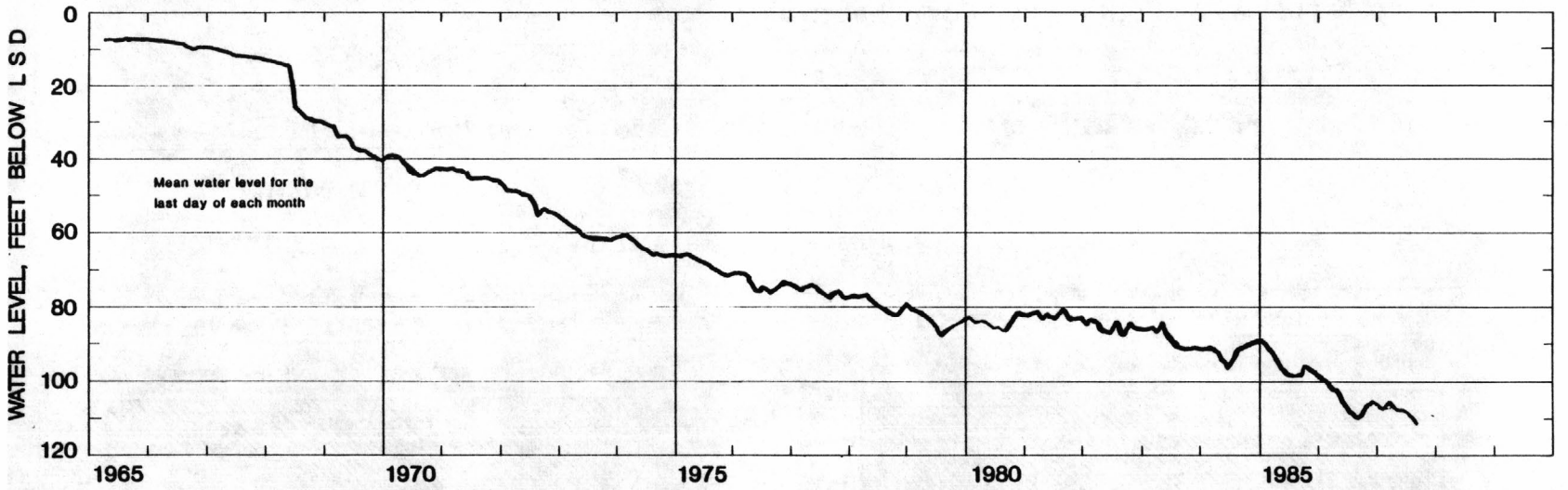

Figure 8.--Hydrograph for observation well NC-44 at the City of New Bern well field at Cove City, NC.

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 1987 water year that began October 1, 1986, and ended September 30, 1987. 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 10, 11, 12, & 13. 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 figure below.)

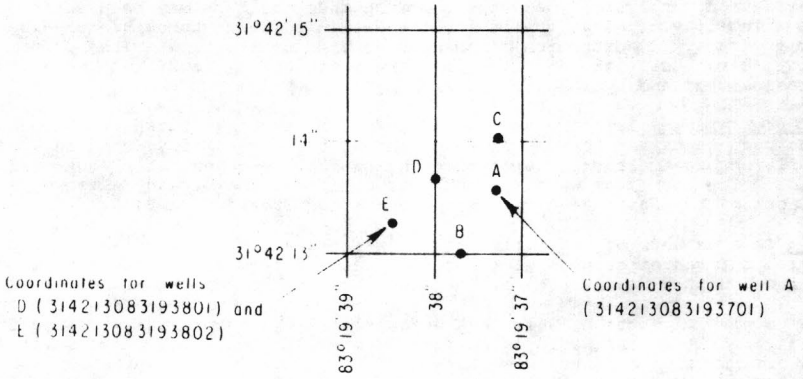

Figure 9.--System for numbering wells (latitude and longitude).

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 or 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-backwater techniques.

Data Collection and Computation--Continued

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.

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 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.

Data Presentation--Continued

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

AVERAGE DISCHARGE.--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations having at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at a station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development.

EXTREMES FOR PERIOD OF RECORD.--Extremes may include maximum and minimum stages and maximum and minimum discharges or content. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage gage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and was determined and is reported in the same manner as the maximum.

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.

EXTREMES FOR CURRENT YEAR.--Extremes given here are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

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

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for 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†/s; to the nearest tenth between 1.0 and 10 ft†/s; to whole numbers between 10 and 1,000 ft†/s; and to 3 significant figures for more than 1,000 ft†/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 12 & 13.

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 page 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, or Doraville, Georgia, 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.

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

Records of Ground-water Levels

Data Collection and Computation

The ground-water level data from observation wells in the basic statewide program and special project 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 12 and 13. 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, Pi-534, Du-122, Gu-382, and On-10 for wells in Pitt, Duplin, Guilford, and Onslow 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.

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.

Data Collection and Computation--Continued

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" if 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 for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from each of the Water Resources Division's District offices (see address given on the back of the title page).

General inquiries about WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
437 National Center
Reston, Virginia 22092

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.

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†), and periphyton and benthic organisms in grams per square meter (g/m^2).

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

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

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

Bottom material: See Bed material.

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

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

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

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

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

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†/s, ft†/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.

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).

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

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

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

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

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

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 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 x 10) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7 x 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.

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

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

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

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

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

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in micromhos per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in 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.

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, 1987, is called the "1987 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
02068000	Dan River near Asbury, NC	71.4	1924-26
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
02075160	Moon Creek near Yanceyville, NC	29.9	1961-74
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
02077660	Mayo Creek near Woodsdale, NC	52.7	1975-77
02081000	Roanoke River near Scotland Neck, NC	8,671	1940-56 1974-76
	Neuse 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
02084164	Juniper Branch near Simpson, NC	7.50	1975-86
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	0.29	1976-80
02084558	Albemarle Canal near Swindell, NC	68.0	1977-81
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	0.29	1981-82
02084909	Sevenmile Creek near Efland, NC	14.1	1981-82
02085000	Eno River at Hillsboro, NC	66.5	1927-71
02086000	Dial Creek near Bahama, NC	4.71	1925-71
02087000	Neuse River near Northside, NC	535	1927-80
0208705200	Smith Creek at Grissom, NC	6.2	1984-85
02088315	Beaverdam Creek near Grantham, NC	5.01	1978-82
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
02091960	Creeping Swamp near Calico, NC	9.80	1971-77
02091970	Creeping Swamp near Vanceboro, NC	27.0	1971-85
02092020	Palmetto Swamp near Vanceboro, NC	24.0	1971-76
	Cape Fear River Basin		
02093000	New River near Gum Branch, NC	74.5	1949-73
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
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	0.64	1979-81
02096850	Cane Creek near Teer, NC	33.7	1959-73
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
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
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
02108500	Rockfish Creek near Wallace, NC	69.3	1955-81

DISCONTINUED GAGING STATIONS--Continued

Station number	Station name	Drainage area (mi^2)	Period of record
	Pee Dee River Basin		
02112500	Fisher River near Dobson, NC	109	1920-32
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	0.05	1979-82
02115850	Salem Creek at Winston-Salem, NC	51.3	1964-70
02115854	Salem Creek Trib at Hawthorne Rd, Winston-Salem, NC	0.50	1979-82
02115856	Salem Creek near Atwood, NC	65.6	1971-82
02115860	Muddy Creek near Muddy Creek, NC	186	1964-79
02115900	South Fork Muddy Creek near Clemmons, NC	42.9	1964-79
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
02121500	Abbotts Creek at Lexington, NC	174	1940-57
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
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
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
02139200	Bailey Fork near Morganton, NC	7.86	1966-70
02139650	East Prong near Morganton, NC	8.94	1966-74
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	0.62	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
	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
03439500	French Broad at Calvert, NC	103	1924-55
03440000	Catheys Creek near Brevard, NC	11.7	1944-55
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
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
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

DISCONTINUED GAGING STATIONS--Continued

Station number	Station name	Drainage area (mi^2)	Period of record
	Kanawha River Basin		
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
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
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
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
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

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

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

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

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

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

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

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

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

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

3-A9. *Measurement of time of travel and dispersion in streams by dye tracing,* by E. F. Hubbard, F. A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1982. 44 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-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-B1. *Aquifer-test design, observation, and data analysis,* by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.

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

3-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.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

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

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

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

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

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

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

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

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

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

5-A1. *Methods for determination of inorganic substances in water and fluvial sediments* by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.

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

5-A3. *Methods for analysis of organic substances in water*, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.

5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples* edited by P. E. Greeson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.

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

5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sedments*, 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.

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.

8-B2. *Calibration and maintenance of vertical-axis type current meters* by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

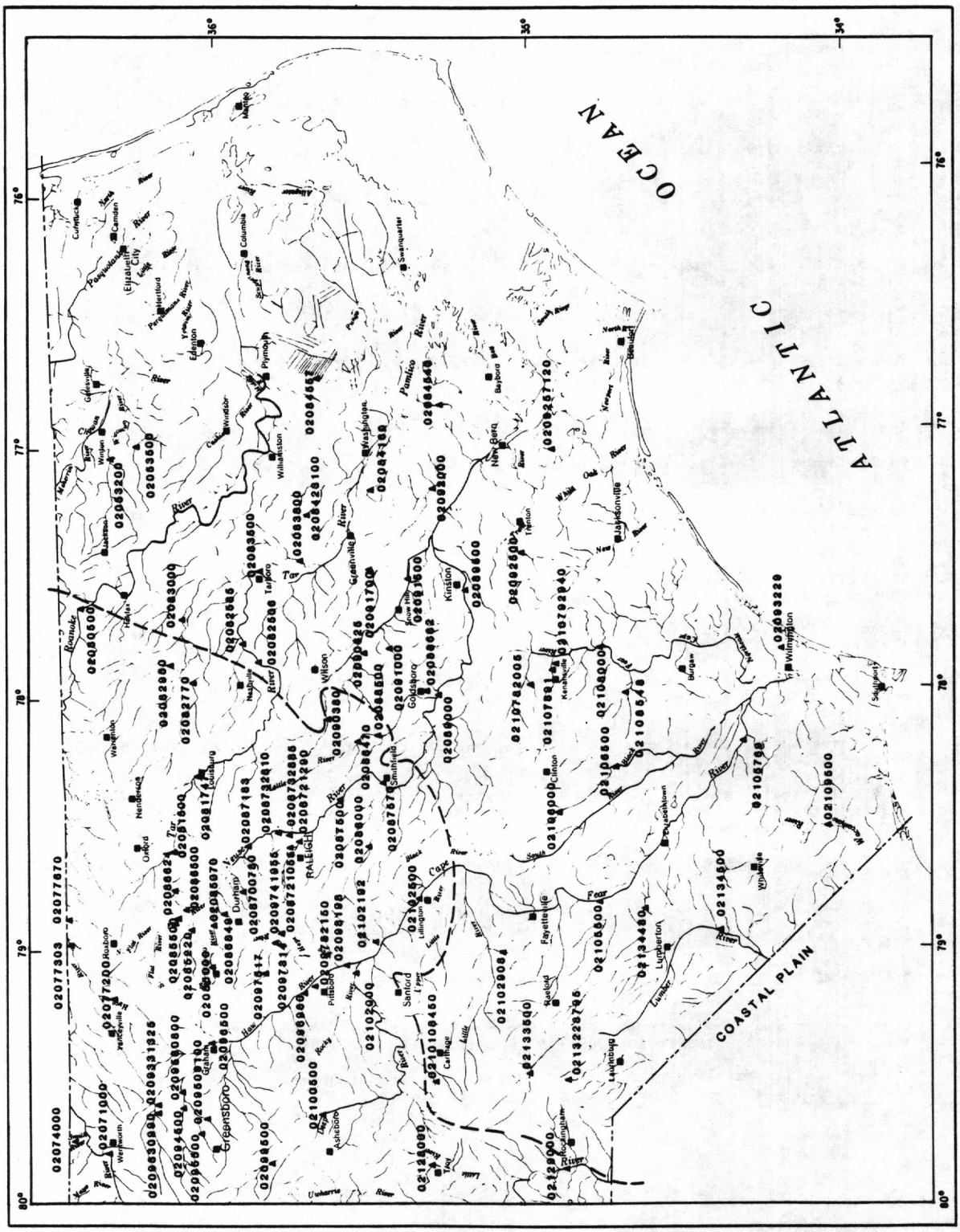


Figure 10.--Map of eastern part of North Carolina showing locations of gaging stations.

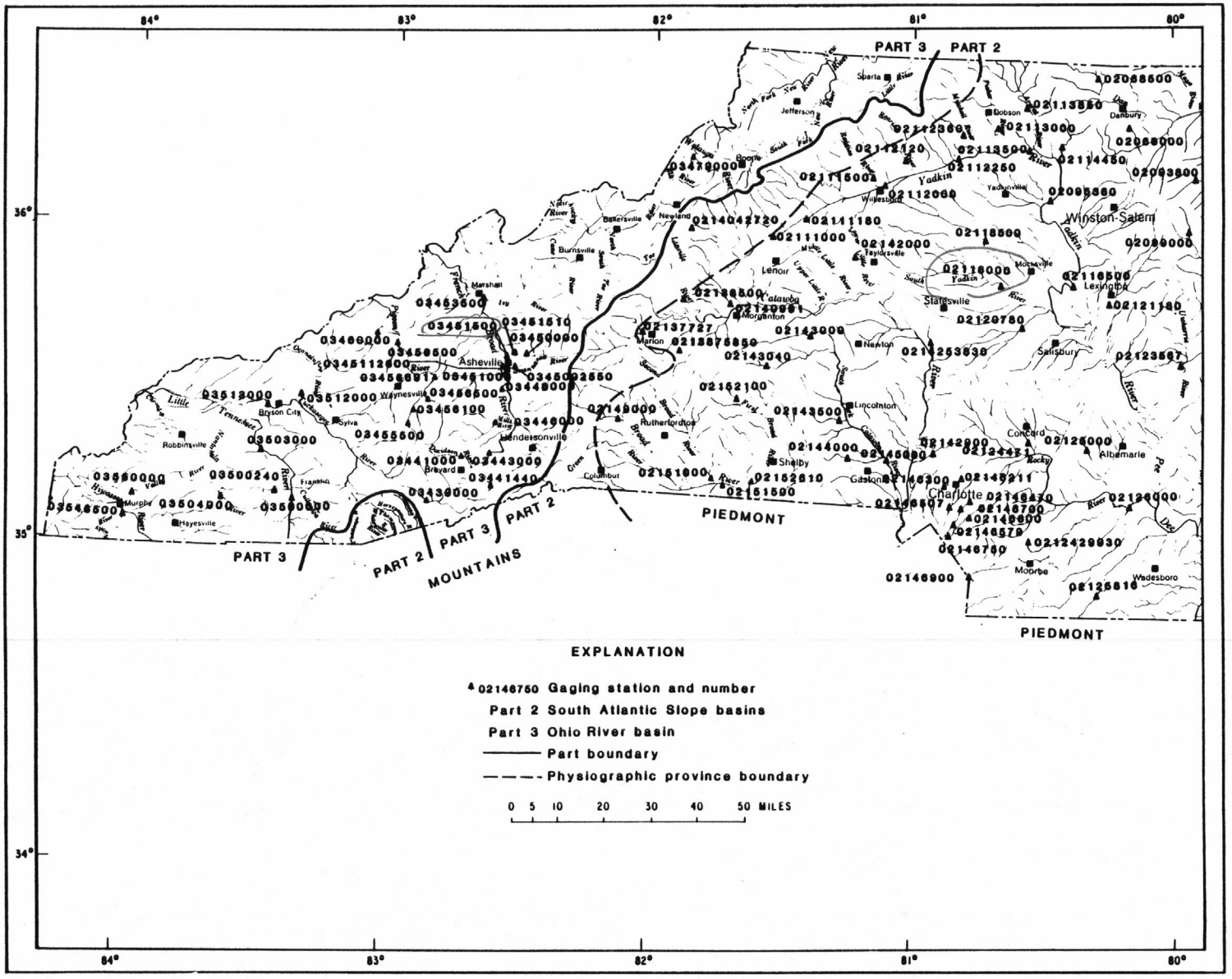
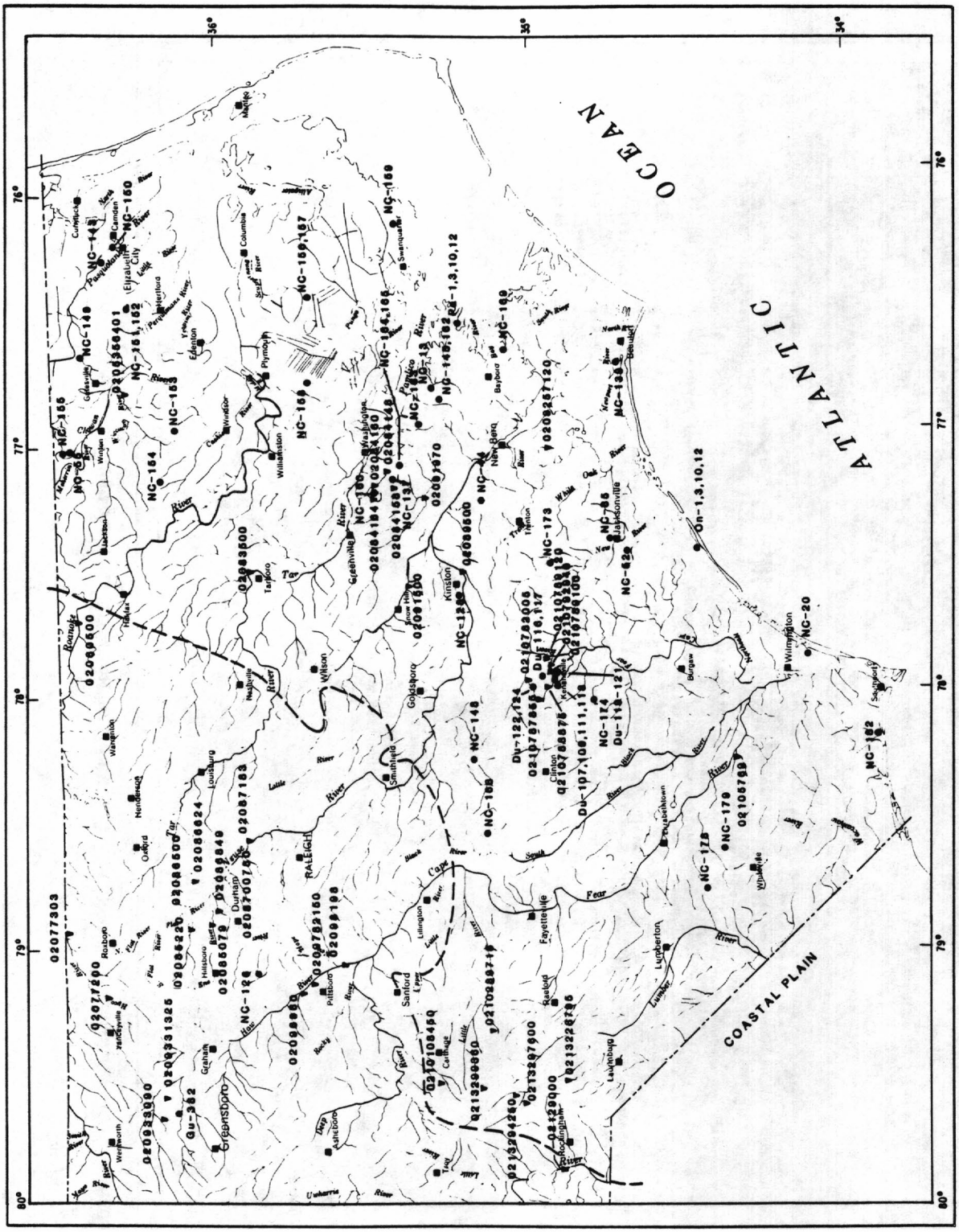


Figure 11.--Map of western part of North Carolina showing location of gaging stations.


ATLANTIC
OCEAN
COASTAL PLAIN
RALEIGH
Greensboro
Roanoke
Tar
Neuse
Cape Fear
Little
Yadkin
Catawba
Pee Dee
Lumber
Roxboro
Oxford
Henderson
Louisburg
Durham
Smithfield
Wilson
Goldsboro
Kinston
New Bern
Fayetteville
Clinton
Lumberton
Whiteville
Wilmington
Burgaw
Jacksonville
Havelock
Sanford
Asheboro
Pittsboro
Siler City
Graham
Hillsboro
Mebane
Reidsville
Eden
Madison
Mayodan
Yanceyville
Danville
Martinsville
Stuart
Leaksville
Spray
Eden
Rockingham
Laurinburg
Maxton
Red Springs
Whiteville
Tabor City
Elizabethtown
Chadbourn
Lake Waccamaw
Bolton
Southport
Oak Island
Sunset Beach
Ocean Isle Beach
Shallotte
Calabash
Supply
Ash
Holden Beach
Bolivia
Leland
Navassa
Belville
Wrightsville Beach
Carolina Beach
Kure Beach
Fort Fisher
Topsail Beach
Surf City
North Topsail Beach
Holly Ridge
Sneads Ferry
Jacksonville
Richlands
Trenton
Pollocksville
Vanceboro
Havelock
Cherry Point
Morehead City
Beaufort
Atlantic Beach
Emerald Isle
Newport
Cape Lookout
Harkers Island
Ocracoke
Hatteras
Buxton
Frisco
Avon
Rodanthe
Waves
Salvo
Nags Head
Kill Devil Hills
Kitty Hawk
Manteo
Wanchese
Roanoke Island
Columbia
Plymouth
Edenton
Hertford
Elizabeth City
Camden
Currituck
Corolla
Duck
Southern Shores
Kitty Hawk
Kill Devil Hills
Nags Head

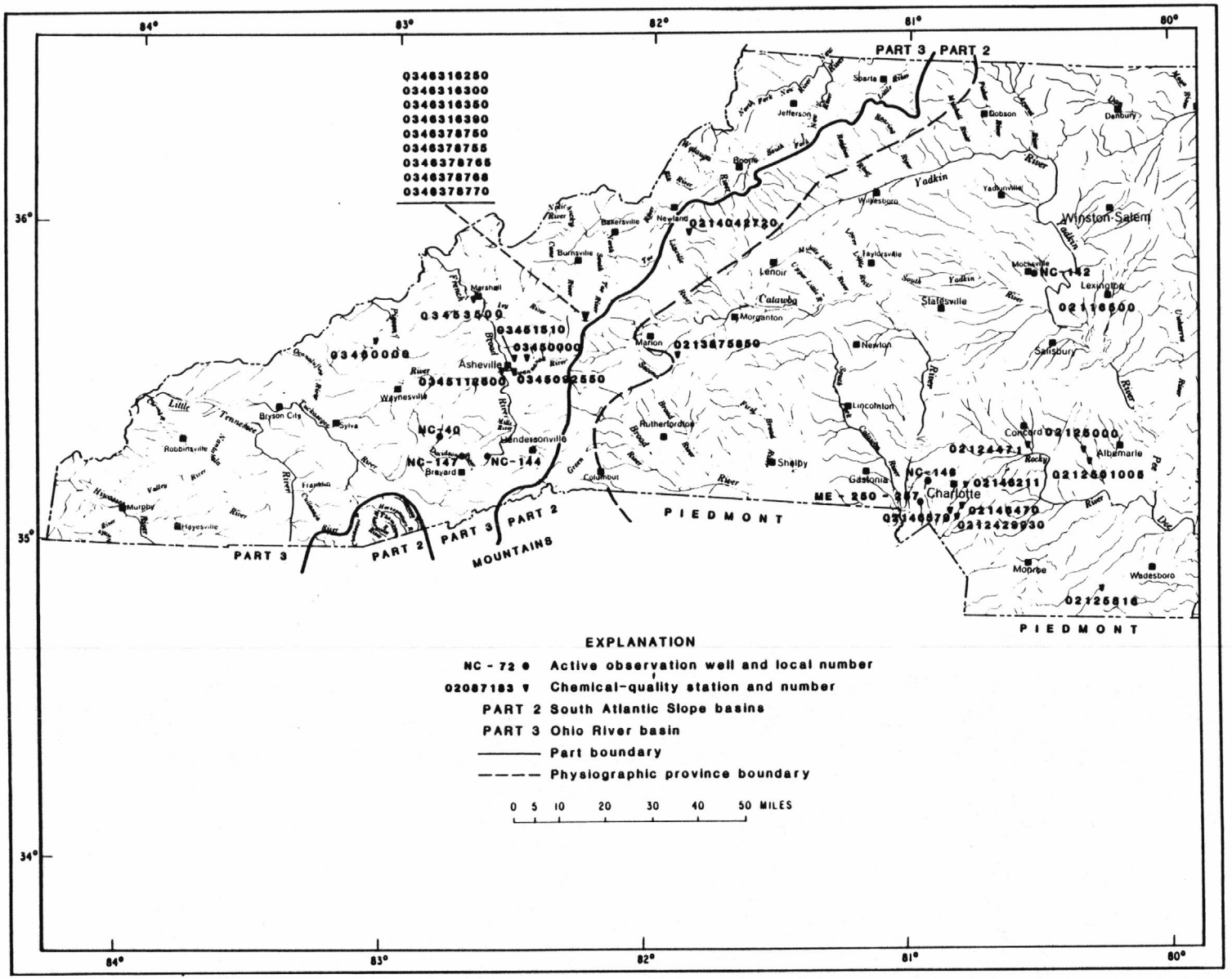


Figure 13.—Map of western part of North Carolina showing location of water-quality stations and observation well sites.

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.

WATER-DISCHARGE RECORDS

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 good above 10 ft^3/s and poor below.

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

AVERAGE DISCHARGE.--29 years, 235 ft^3/s, 14.16 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,280 ft^3/s Sept. 8, 1979, gage height, 19.77 ft; minimum, 0.2 ft^3/s July 1, 1959.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,990 ft^3/s Jan. 23, gage height, 16.57 ft; minimum, 1.0 ft^3/s Aug. 25, 26; minimum gage height, 2.17 ft Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	14	14	206	486	952	329	623	31	11	3.3	1.7
2	4.2	17	16	544	418	1260	228	428	30	8.7	4.2	1.7
3	3.6	16	24	731	397	1270	172	290	31	7.9	3.9	1.6
4	3.0	16	26	652	394	1210	174	233	34	6.4	3.8	1.6
5	3.0	15	24	608	367	1080	207	337	37	6.3	3.7	2.1
6	3.5	14	20	551	334	895	186	374	38	5.8	3.5	4.6
7	3.9	12	20	478	298	702	170	357	36	4.8	3.3	7.8
8	3.8	14	20	385	263	535	163	325	36	3.9	3.3	5.3
9	3.7	15	20	298	232	409	150	263	45	3.4	3.2	4.2
10	3.8	16	20	230	199	435	132	202	54	2.9	3.1	3.8
11	3.9	18	23	189	172	537	117	160	47	2.6	2.7	3.8
12	4.0	20	28	161	154	478	108	122	38	3.2	2.4	4.0
13	4.4	21	29	137	141	450	101	92	32	5.2	2.2	34
14	4.7	e20	25	121	131	453	92	75	27	5.7	2.1	76
15	4.7	e24	23	112	126	440	91	65	25	6.4	2.5	8.3
16	4.9	e33	22	105	126	393	328	58	25	6.1	3.0	3.8
17	5.2	e27	22	101	198	350	1380	51	23	5.8	2.6	2.6
18	5.5	e25	21	176	563	311	2130	46	21	5.7	2.4	2.3
19	5.6	18	22	815	791	273	2580	42	20	5.7	2.4	2.5
20	5.8	17	21	1870	878	256	2450	60	18	5.4	2.4	42
21	6.0	20	20	2350	949	241	1990	61	17	5.2	2.1	151
22	8.6	22	19	2580	974	216	1480	88	16	5.1	1.8	18
23	13	22	18	2930	1230	194	1010	92	15	4.9	1.6	6.9
24	13	22	35	2890	1620	173	693	76	18	4.8	1.4	5.9
25	13	21	424	2620	1610	155	799	75	19	4.7	1.2	6.7
26	7.6	20	597	2280	1550	141	1140	83	20	4.5	1.3	6.8
27	12	17	520	1860	1360	129	1100	72	18	4.3	1.4	6.3
28	14	14	450	1400	1080	137	1200	56	22	4.0	1.7	5.6
29	15	14	379	989	---	158	1100	44	18	3.6	1.7	4.8
30	16	13	309	733	---	143	855	38	14	3.3	1.6	4.7
31	11	---	240	579	---	188	---	33	---	3.1	1.6	---
TOTAL	215.3	557	3451	29681	17041	14564	22655	4921	825	160.4	77.4	430.4
MEAN	6.95	18.6	111	957	609	470	755	159	27.5	5.17	2.50	14.3
MAX	16	33	597	2930	1620	1270	2580	623	54	11	4.2	151
MIN	3.0	12	14	101	126	129	91	33	14	2.6	1.2	1.6
CFSM	.03	.08	.49	4.26	2.70	2.09	3.36	.71	.12	.02	.01	.06
IN.	.03	.09	.57	4.91	2.82	2.41	3.75	.81	.14	.02	.01	.07

CAL YR 1986 TOTAL 34491.0 MEAN 94.5 MAX 777 MIN 1.7 CFSM .42 IN. 5.70
WTR YR 1987 TOTAL 94577.9 MEAN 259 MAX 2930 MIN 1.2 CFSM 1.15 IN. 15.6

e Estimated

CHOWAN RIVER BASIN

02053200 POTECASI CREEK NEAR UNION, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/01	1200	WATER	0.1	2.25	5						
86/10/23	1210	WATER	0.1	3.03	13	101	6.90	12.0	16.0	4.4	30
86/11/13	1130	WATER	0.1			112	6.70	13.0	16.0	1.4	
86/12/16	1140	WATER	0.1			72	6.60	3.0	11.0	10.6	
87/01/20	1300	WATER	0.1			42	6.90	5.0	12.0	10.1	
87/02/09	1120	WATER	0.1			57	7.00	4.0		10.4	
87/03/11	1140	WATER	0.1			42	6.60	5.0	5.8	9.6	
87/04/01	1215	WATER	0.1	6.32	341	64	6.80	11.0	8.4	6.7	
87/05/07	1100	WATER	0.1	6.46	359	61	6.90	14.0	23.0	7.1	
87/06/24	1240	WATER	0.1			100	7.00	25.0	11.0	2.1	
87/07/22	1245	WATER	0.1			112		24.0	12.0	1.8	
87/08/31	1050	WATER	0.1			125	6.70	23.0	8.0	1.6	
87/09/24	1115	WATER	0.1	3.27	6	114	6.10	18.0	24.0	5.6	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/23	1210	WATER	0.1	32	1	120	.14	.040	.300	.110	.010K
86/11/13	1130	WATER	0.1	42	12	9	.02	.010K	.400	.150	.010
86/12/16	1140	WATER	0.1	13	9	92	.03	.030	.400	.060	.020
87/01/20	1300	WATER	0.1	6	28	160	.32	.020	.400	.170	.030
87/02/09	1120	WATER	0.1	8	1	56	.07	.020	.300	.040	.010K
87/03/11	1140	WATER	0.1	7	16	75	.14	.060	.500	.090	.010K
87/04/01	1215	WATER	0.1	13	26	140	.15	.090	1.100	.150	.010
87/05/07	1100	WATER	0.1	12	10	106	.16	.120	.700	.120	.020
87/06/24	1240	WATER	0.1	31	2	100	.18	.080	.400	.100	.010
87/07/22	1245	WATER	0.1		6	94	.11	.030	.400	.090	.010K
87/08/31	1050	WATER	0.1	35	2	110	.03	.030	.300	.090	.010K
87/09/24	1115	WATER	0.1	8	11	160					
87/09/24	1115	WATER	0.15				.23	.050	.600	.080	.010

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/23	1210	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Records fair above 10 ft^3/s and poor below. 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.

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

AVERAGE DISCHARGE.--37 years, 63.5 ft^3/s, 13.62 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,580 ft^3/s Oct. 5, 1964, gage height, 10.72 ft; maximum gage height, 12.49 ft June 1, 1984; no flow at times during most years prior to canalization; minimum daily since canalization, 1.1 ft^3/s Sept. 24, 25, 1980.

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).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 720 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 19	1600	*1,090	*9.06	Mar. 1	2000	772	7.40
Jan. 22	1530	1,070	8.95	Apr. 16	1900	1,070	8.97
Feb. 23	1130	759	7.33	Apr. 25	0900	733	7.18

Minimum discharge, 1.7 ft^3/s July 30, minimum gage height, 1.00 ft Oct. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	6.9	7.0	103	110	502	97	39	6.1	4.0	3.6	2.6
2	5.6	8.9	10	407	101	528	67	31	6.4	4.0	3.4	2.6
3	6.0	6.6	17	166	106	232	51	37	6.8	3.9	3.0	2.4
4	5.9	6.2	8.7	108	94	138	75	61	8.0	4.3	7.3	2.3
5	6.2	6.7	5.0	80	84	103	74	86	7.1	4.8	8.2	33
6	5.8	6.6	4.6	61	74	86	58	58	6.1	4.1	19	115
7	5.3	6.1	4.2	51	69	74	49	39	5.5	4.4	8.1	268
8	5.2	5.8	4.1	41	64	63	40	29	5.5	4.1	4.4	71
9	4.5	4.5	3.9	32	58	61	31	24	5.4	3.8	3.4	30
10	4.3	6.6	5.0	30	52	363	25	18	5.3	3.5	3.2	16
11	4.0	7.7	5.9	43	49	293	22	15	4.9	3.4	3.1	10
12	3.5	8.4	9.8	37	46	164	20	14	5.0	3.1	2.7	13
13	4.5	5.3	9.5	30	45	120	19	12	5.0	3.0	2.6	417
14	4.5	5.4	7.2	24	42	93	22	11	6.2	6.8	2.6	222
15	4.5	7.3	6.1	21	41	74	35	11	6.1	6.6	4.9	91
16	4.5	12	5.7	18	41	66	511	10	6.0	5.1	4.1	46
17	5.3	8.2	5.7	19	130	71	979	9.6	6.8	5.1	4.7	26
18	5.2	5.9	5.5	245	283	62	644	9.2	5.7	3.6	3.6	23
19	5.7	5.4	5.8	876	239	55	273	8.9	5.0	3.1	3.1	19
20	6.0	5.1	5.7	1080	162	61	152	9.5	4.8	3.0	3.0	271
21	5.8	5.5	5.2	818	129	55	107	8.4	4.9	2.9	3.0	199
22	5.9	5.7	4.9	767	119	47	80	8.0	4.8	2.7	2.8	98
23	5.6	5.0	5.0	985	661	40	64	7.5	4.9	2.5	2.6	53
24	5.1	4.7	95.4	575	389	33	67	7.3	4.9	2.5	2.4	32
25	7.6	5.8	296	274	192	29	632	8.1	4.7	2.4	2.1	21
26	6.7	5.1	110	291	131	25	290	13	4.4	2.3	2.8	15
27	4.2	5.4	69	206	105	23	146	8.4	6.5	2.4	2.2	12
28	4.5	5.5	46	164	120	36	96	7.4	5.3	2.2	2.3	9.4
29	5.3	5.2	31	139	---	39	67	6.9	4.6	2.1	2.9	8.3
30	6.1	5.6	22	130	---	34	50	6.4	4.4	2.1	2.5	8.8
31	6.4	---	17	129	---	88	---	6.2	---	2.4	2.5	---
TOTAL	166.5	189.1	837.9	7950	3736	3658	4843	619.8	167.1	110.2	126.1	2137.4
MEAN	5.37	6.30	27.0	256	133	118	161	20.0	5.57	3.55	4.07	71.2
MAX	7.6	12	296	1080	661	528	979	86	8.0	6.8	19	417
MIN	3.5	4.5	3.9	18	41	23	19	6.2	4.4	2.1	2.1	2.3
CFSM	.08	.10	.43	4.05	2.11	1.86	2.55	.32	.09	.06	.06	1.13
IN.	.10	.11	.49	4.67	2.20	2.15	2.85	.36	.10	.06	.07	1.26

CAL YR 1986 TOTAL 11293.6 MEAN 30.9 MAX 549 MIN 2.0 CFSM .49 IN. 6.64
WTR YR 1987 TOTAL 24540.9 MEAN 67.2 MAX 1080 MIN 2.1 CFSM 1.06 IN. 14.4

CHOWAN RIVER BASIN

02053500 AHOSKIE CREEK AT AHOSKIE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/23	1115	WATER	0.1	1.39	6	101	7.00	12.0	12.0	9.4	70
87/01/20	1210	WATER	0.1			41	6.60	6.0	11.6	10.1	
87/04/01	1200	WATER	0.1	2.69	93	64	6.60	11.0	8.4	9.0	
87/07/22	1200	WATER	0.1	1.26	3	110	6.60	29.0	14.0	8.4	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/23	1115	WATER	0.1	33	9	140	.39	.030	.200	.080	.010
87/01/20	1210	WATER	0.1	8	71	180	1.00	.030	.500	.180	.050
87/04/01	1200	WATER	0.1	10	41	150	.35	.060	.400	.140	.020
87/07/22	1200	WATER	0.1	31	8	120	.06	.020	.400	.140	.020

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/23	1115	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/01/20	1210	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	11
87/04/01	1200	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	28
87/07/22	1200	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

CHOWAN RIVER BASIN

0205356401 CHINKAPIN CREEK TRIBUTARY AT SECONDARY ROAD 1432 NEAR HARRELLSVILLE, NC

WATER-QUALITY RECORDS

LOCATION.--Lat 36°15'35, long 76°51'23", Hertford County, Hydrologic Unit 03010203, on left bank 10 ft downstream from the culvert on Secondary Road 1423, 4.5 mi southwest of Harrellsville.

DRAINAGE AREA.--0.76 mi^2.

PERIOD OF RECORDS.--April 1986 to September 1987.

REMARKS.--Basin above station is 100 percent forested. Station is part of district's Natural Quality Network for determining the quality of streams relatively unaffected by man.

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

WATER QUALITY DATA, APRIL 1986 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, 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, ORGANIC TOTAL (MG/L AS N)
AUG											
12...	1215	0.23	75	4.30	23.5	2.3	0.160	0.010	0.170	0.050	0.61
13...	1200	11	43	4.10	22.5	--	<0.090	<0.010	<0.100	0.030	0.97
13...	1350	9.7	--	--	23.5	--	--	--	--	--	--
14...	1225	4.5	45	4.10	23.5	--	<0.090	<0.010	<0.100	0.040	0.86
14...	1235	4.5	--	--	--	--	--	--	--	--	--
14...	1330	4.2	--	--	--	--	--	--	--	--	--
28...	1215	14	--	--	--	--	--	--	--	--	--

DATE	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-PHORUS, ORTHO, TOTAL (MG/L AS P)	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)
AUG										
12...	0.66	0.83	3.7	0.090	0.040	810	<1	1	5	4
13...	1.0	<1.1	<4.9	0.030	0.010	990	<1	1	<1	2
13...	--	--	--	--	--	--	--	--	--	--
14...	0.90	<1.0	<4.4	0.020	<0.010	850	<1	<1	12	1
14...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--

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)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
AUG										
12...	2	670	<5	220	0.10	6	<1	50	29	0.02
13...	<1	580	<5	170	0.20	7	<1	30	6	0.18
13...	--	--	--	--	--	--	--	--	5	0.13
14...	<1	770	<5	180	--	2	<1	--	3	0.04
14...	--	--	--	--	--	--	--	--	4	0.05
14...	--	--	--	--	--	--	--	--	3	0.03
28...	--	--	--	--	--	--	--	--	16	0.60

CHOWAN RIVER BASIN

0205356401 CHINKAPIN CREEK TRIBUTARY AT SECONDARY ROAD 1432 NEAR HARRELLSVILLE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)
JAN											
19...	1155	56	60	3.90	7.0	--	--	747	7.8	66	--
19...	1255	56	--	--	--	--	--	--	--	--	--
19...	1400	54	--	--	--	--	--	--	--	--	--
19...	1420	53	--	--	--	--	--	--	--	--	--
20...	1215	9.7	60	3.90	6.0	--	--	--	11.8	--	--
20...	1300	9.3	--	--	--	--	--	--	--	--	--
22...	1325	14	60	4.70	6.0	--	--	--	11.5	--	--
22...	1335	15	--	--	--	--	--	--	--	--	--
22...	1435	9.3	--	--	--	--	--	--	--	--	--
FEB											
28...	1730	1.8	--	--	--	--	--	--	--	--	--
MAR											
01...	0920	18	--	--	--	--	--	--	--	--	--
01...	1300	26	38	3.80	10.5	--	--	757	10.6	96	8
APR											
16...	1335	40	40	5.00	14.0	190	20	747	11.0	109	7
16...	1350	42	--	--	--	--	--	--	--	--	--
JUL											
29...	1335	0.0	--	--	--	--	--	--	--	--	--

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	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)
JAN											
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
FEB											
28...	--	--	--	--	--	--	--	--	--	--	--
MAR											
01...	--	--	--	--	--	--	--	--	--	--	--
01...	0	1.4	1.2	1.7	26	0.3	1.6	--	--	--	--
APR											
16...	5	1.6	0.84	2.3	35	0.4	1.5	12	3.4	<0.10	7.2
16...	--	--	--	--	--	--	--	--	--	--	--
JUL											
29...	--	--	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	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)
JAN											
19...	--	--	--	--	<0.090	<0.010	<0.100	<0.010	<0.79	0.80	<0.90
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	<0.090	<0.010	<0.100	0.030	0.77	0.80	<0.90
20...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	<0.090	<0.010	<0.100	0.040	0.66	0.70	<0.80
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
FEB											
28...	--	--	--	--	--	--	--	--	--	--	--
MAR											
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	<0.090	<0.010	<0.100	0.080	1.1	1.2	<1.3
APR											
16...	54	30	0.07	5.8	<0.090	<0.010	<0.100	0.050	0.45	0.50	<0.60
16...	--	--	--	--	--	--	--	--	--	--	--
JUL											
29...	--	--	--	--	--	--	--	--	--	--	--

CHOWAN RIVER BASIN

0205356401 CHINKAPIN CREEK TRIBUTARY AT SECONDARY ROAD 1432 NEAR HARRELLSVILLE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ALUM-INUM, DIS-SOLVED (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)
JAN											
19...	<4.0	0.010	<0.010	370	--	<1	<1	10	1	8	350
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
20...	<4.0	0.030	0.010	730	--	<1	<1	<1	2	3	420
20...	--	--	--	--	--	--	--	--	--	--	--
22...	<3.5	0.020	<0.010	680	--	<1	<1	<1	4	4	340
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
FEB											
28...	--	--	--	--	--	--	--	--	--	--	--
MAR											
01...	--	--	--	--	--	--	--	--	--	--	--
01...	<5.8	0.010	0.010	710	690	<1	<1	<1	2	3	400
APR											
16...	<2.6	0.030	<0.010	930	--	<1	<1	7	<1	4	780
16...	--	--	--	--	--	--	--	--	--	--	--
JUL											
29...	--	--	--	--	--	--	--	--	--	--	--

DATE	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)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
JAN											
19...	<5	40	<0.10	4	<1	10	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
20...	<5	130	<0.10	7	<1	<10	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
22...	<5	100	--	5	<1	<10	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
FEB											
28...	--	--	--	--	--	--	--	--	--	--	--
MAR											
01...	--	--	--	--	--	--	--	--	--	--	--
01...	5	100	<0.10	4	<1	<10	--	--	--	--	--
APR											
16...	<5	100	0.20	<1	<1	<10	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
JUL											
29...	--	--	--	--	--	--	<1	<1.0	<0.1	<1.0	1.7

CHOWAN RIVER BASIN

0205356401 CHINKAPIN CREEK TRIBUTARY AT SECONDARY ROAD 1432 NEAR HARRELLSVILLE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
JAN											
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
FEB											
28...	--	--	--	--	--	--	--	--	--	--	--
MAR											
01...	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
APR											
16...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
JUL											
29...	0.9	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
JAN										
19...	--	--	--	--	--	--	--	--	15	2.3
19...	--	--	--	--	--	--	--	--	18	2.7
19...	--	--	--	--	--	--	--	--	10	1.5
19...	--	--	--	--	--	--	--	--	10	1.4
20...	--	--	--	--	--	--	--	--	2	0.05
20...	--	--	--	--	--	--	--	--	3	0.08
22...	--	--	--	--	--	--	--	--	6	0.24
22...	--	--	--	--	--	--	--	--	8	0.20
FEB										
28...	--	--	--	--	--	--	--	--	12	0.06
MAR										
01...	--	--	--	--	--	--	--	--	8	0.39
01...	--	--	--	--	--	--	--	--	9	0.63
APR										
16...	--	--	--	--	--	--	--	--	33	3.7
JUL										
29...	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1	--	--

ROANOKE RIVER BASIN

02068500 DAN RIVER NEAR FRANCISCO, NC

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

DRAINAGE AREA.--129 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1924 to September 1987(discontinued). Monthly discharge only for some periods, published in WSP 1303.

REVISED RECORDS.--WSP 1303: 1938-50 (monthly runoff). WSP 1433: 1925-26, 1928-29, 1931, 1942, 1948. WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 831.99 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 15, 1929, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Since 1938, considerable diurnal fluctuation and regulation by Talbott and Townes reservoirs and Pinnacles Hydroelectric Plant in Virginia, 28 mi upstream (stations 02067800, 02067820).

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

AVERAGE DISCHARGE.--63 years, 191 ft^3/s, 20.11 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,200 ft^3/s Aug. 17, 1985, gage height, 19.50 ft, from rating curve extended above 8,400 ft^3/s on basis of slope-area measurement at gage height 18.11 ft; minimum, 7.1 ft^3/s Sept. 8, 1932, gage height, 0.43 ft; minimum daily, 27 ft^3/s Aug. 24, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1916 reached a stage of about 15 ft, from information by local residents, discharge, 16,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 1	0700	*6,840	*8.80	Apr. 24	0600	6,060	8.20
Apr. 15	2100	2,580	5.13	Sept. 7	1700	5,270	7.56

Minimum discharge, 43ft^3/s Oct. 5, 6, gage height, 1.03 ft; minimum daily, 59 ft^3/s Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	92	123	167	184	3780	570	481	228	205	121	88
2	71	103	153	177	203	1130	475	465	256	415	170	90
3	66	94	166	161	234	739	446	438	250	527	129	82
4	65	89	149	162	234	566	437	362	488	459	165	80
5	64	110	140	162	213	453	418	353	301	344	140	99
6	59	140	133	169	209	389	402	388	256	391	143	174
7	60	145	130	160	177	362	352	398	245	317	182	2350
8	132	194	125	149	187	349	330	389	229	268	135	997
9	158	135	153	149	184	350	322	382	208	223	124	287
10	150	122	216	138	173	381	261	376	198	226	118	240
11	151	129	388	126	156	339	265	372	202	216	177	278
12	129	134	367	126	149	313	277	332	200	193	106	231
13	148	127	296	124	142	297	270	369	187	413	101	239
14	169	143	238	120	140	291	262	294	184	226	100	223
15	140	128	221	123	139	287	1010	300	157	169	100	223
16	125	127	176	121	157	288	1070	294	186	169	105	218
17	121	114	172	121	180	280	604	276	169	152	103	178
18	118	108	177	178	162	276	524	269	170	151	164	170
19	116	107	199	199	159	302	469	261	171	148	167	187
20	116	118	162	256	168	269	442	253	168	143	102	250
21	114	143	159	224	172	259	407	237	170	166	96	176
22	112	118	149	229	187	252	358	231	159	180	95	168
23	110	113	170	211	403	249	324	210	152	179	91	155
24	100	113	644	219	283	246	2800	315	166	144	88	145
25	98	111	413	184	224	296	1890	262	150	159	89	139
26	136	181	268	190	214	296	950	507	172	164	92	125
27	97	208	235	201	240	287	687	363	189	129	91	138
28	82	151	187	214	967	293	595	492	148	131	104	119
29	88	137	160	204	---	287	541	326	144	122	89	119
30	93	128	158	159	---	794	491	266	142	119	83	136
31	92	---	145	188	---	1040	---	249	---	120	84	---
TOTAL	3363	3862	6572	5311	6240	15740	18249	10510	6045	6968	3654	8104
MEAN	108	129	212	171	223	508	608	339	201	225	118	270
MAX	169	208	644	256	967	3780	2800	507	488	527	182	2350
MIN	59	89	123	120	139	246	261	210	142	119	83	80
(†)	-29	+15	+4	-3	+3	+16	+8	-21	-4	-13	-10	+21

CAL YR 1986	TOTAL	47224	MEAN	129	MAX	681	MIN	39	MEAN‡	129	CFSM‡	1.00	IN‡	13.58
WTR YR 1987	TOTAL	94618	MEAN	259	MAX	3780	MIN	59	MEAN‡	258	CFSM‡	2.00	IN‡	27.16

† Change in contents, equivalent in cubic feet per second, in Talbott and Townes Reservoirs; provided by city of Danville, Va.

‡ Adjusted for change in contents.

ROANOKE RIVER BASIN

02068500 DAN RIVER NEAR FRANCISCO, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/09	1320	WATER	0.1			46	7.50	16.0	2.6	9.9	130
86/11/13	1015	WATER	0.1			40	6.80	10.0	4.2	10.8	
86/12/18	1245	WATER	0.1			40	7.40	10.0	4.1	12.3	
87/02/03	1130	WATER	0.1			42	7.10	5.0	7.0	13.3	
87/02/23	1055	WATER	0.1			43	6.70	6.0	70.0	12.3	
87/03/17	1030	WATER	0.1			38	7.40	7.0	2.0	12.7	
87/04/09	1325	WATER	0.1	2.23	325	35	7.00	12.0	3.0	12.1	
87/05/14	1022	WATER	0.1	2.11	280	34	6.10	15.0	3.3	9.5	
87/06/02	1010	WATER	0.1	1.90	212	43	6.90	20.0	180.0	9.0	
87/07/01	1430	WATER	0.1	1.65	146	40	7.00	25.0	5.5	9.1	
87/08/24	1030	WATER	0.1	1.37	87	50	6.70	23.0	8.6	8.1	
87/09/16	0925	WATER	0.1	1.81	186	49	6.12	21.0	11.0	8.2	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/09	1320	WATER	0.1	13	3	35	.45	.010K	.400	.020	.010
86/11/13	1015	WATER	0.1	9	5	56					
86/12/18	1245	WATER	0.1	15	3	61					
87/02/03	1130	WATER	0.1	12	6	45					
87/02/23	1055	WATER	0.1	5	53	100					
87/03/17	1030	WATER	0.1	3	6	39					
87/04/09	1325	WATER	0.1	12	7	41					
87/05/14	1022	WATER	0.1	11	9	50					
87/06/02	1010	WATER	0.1	12	190	260					
87/07/01	1430	WATER	0.1	13	9	39					
87/08/24	1030	WATER	0.1	15	4	45					
87/09/16	0925	WATER	0.1	9	20	40					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/09	1320	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/03	1130	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/23	1055	WATER	0.1		10K	25K	10K	50K		50K	10K
87/04/09	1325	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/01	1430	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	33

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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,700 ft^3/s Mar. 1, 1987, gage height, 24.53 ft, present datum, from floodmarks; minimum, not determined, occurred during period of no gage-height record; minimum daily, 65 ft^3/s July 22, 1986.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 17, 1985 reached a stage of 25 ft, present datum, from floodmarks, discharge, about 21,500 ft^3/s. Flood of Sept. 22, 1979 reached a stage of 27.5 ft, present datum, information supplied by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 1	Unknown	*20,700	*24.53	July 2	Unknown	Unknown	Unknown
Apr. 16	1200	19,200	23.40	Sept 8	0830	10,300	20.37
Apr. 25	1130	18,900	23.19				

Minimun discharge, 103 ft^3/s Oct. 8; minimum daily, 105 ft^3/s Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	135	183	e315	424	e1000	e10400	e2400	1540	e770	285	263	e195
2	147	194	e375	535	e1080	e8000	e1800	1700	e860	e5000	282	e195
3	136	e250	e750	495	e1420	e2850	e1220	1550	e760	e1200	283	e190
4	129	e220	e540	456	e1700	e1900	1160	1430	e810	e1800	297	e185
5	126	e200	e415	435	e1280	e1480	1080	990	e1380	e1050	269	215
6	120	e245	e350	413	e1000	e1200	1000	e890	e980	e820	273	e730
7	108	e290	e320	430	e870	e1050	938	e860	e740	e740	724	e2500
8	105	e450	e280	403	e765	e950	881	e810	e670	e1300	477	e9000
9	178	e465	e325	392	e690	e940	840	e780	e590	493	492	1060
10	198	e335	e435	384	e645	e980	803	e750	508	454	e290	920
11	199	e300	e800	371	627	880	770	e720	394	440	e295	801
12	192	e400	e1610	344	606	806	738	e700	398	422	e285	822
13	211	e360	e810	333	579	749	730	e960	390	463	e260	1060
14	389	e305	e550	322	555	700	710	e810	389	648	e250	751
15	324	e290	e450	323	547	670	5130	e660	361	413	e245	507
16	224	e315	e440	324	531	644	16100	660	357	380	e240	467
17	196	e295	e425	337	575	606	3850	660	393	359	e230	453
18	186	e280	358	e560	626	584	2190	672	363	348	260	398
19	177	e265	349	e1170	587	700	1850	696	356	338	374	370
20	172	e270	354	e940	659	697	1710	844	345	328	287	468
21	171	e395	308	e700	e730	616	1880	758	338	332	241	510
22	168	e355	299	e680	e790	575	1660	734	319	337	e220	510
23	170	e305	288	e710	e2300	544	1440	721	312	331	e205	404
24	166	e280	e1000	e595	e1520	519	9970	709	313	310	e200	299
25	163	e270	e2550	662	e950	531	9830	984	298	297	e200	290
26	242	e295	e960	538	e710	547	6000	3520	336	324	e200	274
27	251	e485	e650	552	e670	648	3320	1260	401	294	e205	276
28	219	e440	554	553	e4000	644	2680	1140	319	290	e205	271
29	247	e355	478	582	---	700	2320	978	288	297	e200	265
30	206	e330	449	684	---	e1120	2030	900	280	277	e195	300
31	183	---	413	e900	---	e1500	---	810	---	274	e185	---
TOTAL	5838	9422	18200	16547	28012	44730	87030	31196	15018	20644	8632	24686
MEAN	188	314	587	534	1000	1443	2901	1006	501	666	278	823
MAX	389	485	2550	1170	4000	10400	16100	3520	1380	5000	724	9000
MIN	105	183	280	322	531	519	710	660	280	274	185	185
CFSM	.39	.65	1.22	1.11	2.08	3.01	6.04	2.10	1.04	1.39	.58	1.71
IN.	.45	.73	1.41	1.28	2.17	3.47	6.74	2.42	1.16	1.60	.67	1.91

CAL YR 1986 TOTAL 76807 MEAN 279 MAX 2550 MIN 65 CFSM .58 IN. 5.95
WTR YR 1987 TOTAL 309955 MEAN 849 MAX 16100 MIN 105 CFSM 1.77 IN. 24.0

e Estimated

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.

WATER-DISCHARGE RECORDS

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 good. Slight fluctuation and regulation at low flow caused by Talbott and Townes reservoirs (stations 02067800, 02067820).

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

AVERAGE DISCHARGE.--48 years, 1,210 ft^3/s, 15.60 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,200 ft^3/s June 22, 1972, gage height, 31.60 ft, from high-water mark in well; minimum, 65 ft^3/s Oct. 8, 1954, gage height, 0.93 ft; minimum daily, 107 ft^3/s Oct. 2, 1954.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 12,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 2	0230	*34,000	*26.58	July 2	1530	13,600	16.91
Apr. 16	2000	30,100	25.35	Sept. 8	1900	23,800	23.11
Apr. 25	1800	22,200	22.35				

Minimum discharge, 202 ft^3/s Oct. 7, gage height, 0.93 ft.; minimum daily, 208 ft^3/s Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	271	338	591	762	1870	22400	3490	2400	1050	627	649	366
2	307	370	720	955	1890	26600	2130	2130	1070	9530	562	371
3	279	475	1460	943	2750	7450	1890	1960	1020	2860	561	349
4	254	413	1080	846	3190	4210	1990	1880	999	3260	528	338
5	242	382	820	809	2330	3120	1850	1840	1810	2710	556	372
6	229	448	707	774	1830	2580	1690	1730	1130	1800	508	771
7	214	536	647	758	1650	2230	1550	1670	986	1390	974	2720
8	208	900	621	743	1600	1960	1330	1530	930	2700	1410	19400
9	242	973	643	714	1460	1900	1250	1450	880	1050	833	7200
10	342	681	871	708	1150	1990	1200	1410	839	908	627	1830
11	332	599	1710	707	1050	1860	1130	1360	804	981	555	2710
12	330	834	3450	658	983	1690	1120	1320	807	939	562	1560
13	364	718	1750	640	938	1550	1170	1800	817	960	477	2510
14	688	584	1180	626	890	1330	1120	1520	827	2610	452	1360
15	624	567	972	623	871	1250	5720	1330	793	918	446	999
16	433	623	873	627	857	1230	24900	1290	741	784	482	886
17	365	585	776	639	885	1240	17100	1300	801	748	506	837
18	345	536	740	888	1280	1180	4720	1310	777	712	464	781
19	333	503	727	3020	1100	1410	3630	1230	761	686	529	722
20	327	515	704	2920	1160	1690	2880	1650	752	656	583	1010
21	326	797	653	1640	1320	1430	2530	1410	726	631	441	927
22	325	755	619	1340	1440	1330	2180	1140	1260	631	405	748
23	322	610	602	1510	4420	1270	1920	1080	917	626	393	688
24	319	560	2240	1570	4200	1150	8230	1070	775	605	372	650
25	322	539	6230	1220	2430	1130	20700	1250	733	566	357	624
26	689	554	2110	990	1650	1370	16500	6060	821	559	366	608
27	772	953	1350	1100	1570	1290	5150	2740	953	565	383	578
28	474	908	1090	1070	4310	1280	3730	1670	793	519	385	591
29	382	718	940	1020	---	1160	3080	1500	676	508	393	567
30	354	644	846	1390	---	1860	2660	1240	647	497	371	628
31	351	---	787	1760	---	5350	---	1100	---	488	349	---
TOTAL	11365	18618	38509	33970	51074	107490	148540	52370	26895	43024	16479	53701
MEAN	367	621	1242	1096	1824	3467	4951	1689	896	1388	532	1790
MAX	772	973	6230	3020	4420	26600	24900	6060	1810	9530	1410	19400
MIN	208	338	591	623	857	1130	1120	1070	647	488	349	338
CFSM	.35	.59	1.18	1.04	1.73	3.29	4.70	1.60	.85	1.32	.50	1.70
IN.	.40	.66	1.36	1.20	1.80	3.80	5.25	1.85	.95	1.52	.58	1.90

CAL YR 1986 TOTAL 233560 MEAN 640 MAX 6230 MIN 127 CFSM .61 IN. 8.25
WTR YR 1987 TOTAL 602035 MEAN 1649 MAX 26600 MIN 208 CFSM 1.57 IN. 21.3

ROANOKE RIVER BASIN

02071000 DAN RIVER NEAR WENTWORTH, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/14	1520	WATER	0.1			57	7.60	20.0	80.0	8.0	5100
86/11/13	1210	WATER	0.1			61	7.00	11.0		10.3	
86/12/18	1045	WATER	0.1			54	6.90	9.0		12.7	
87/01/20	1045	WATER	0.1			52	6.60	6.0	100.0	11.9	
87/02/23	1355	WATER	0.1			52	6.80	6.0		11.8	
87/03/17	1400	WATER	0.1			49	7.20	12.0		11.8	
87/04/07	1125	WATER	0.1	3.60	1564	45	6.50	10.0	8.7	11.6	
87/05/14	1210	WATER	0.1	3.49	1497	46	6.30	17.0		8.6	
87/06/02	1150	WATER	0.1	2.67	1028	53	7.00	24.0		8.1	
87/07/01	1155	WATER	0.1	1.89	627	60	7.00	25.0	11.0	7.8	
87/08/24	1300	WATER	0.1	1.34	367	62	6.82	25.0		7.3	
87/09/16	1140	WATER	0.1	2.32	846	60	6.64	24.0		7.5	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/14	1520	WATER	0.1	19	41	130	.17	.030	.300	.070	.010
86/11/13	1210	WATER	0.1	17	14	91					
86/12/18	1045	WATER	0.1	20	8	73					
87/01/20	1045	WATER	0.1	12	100	180	.28	.020	.400	.130	.010K
87/02/23	1355	WATER	0.1	12	150	230					
87/03/17	1400	WATER	0.1	17	9	64					
87/04/07	1125	WATER	0.1	14	13	46	.31	.010	.100	.030	
87/05/14	1210	WATER	0.1	14	37	110					
87/06/02	1150	WATER	0.1	18	17	66					
87/07/01	1155	WATER	0.1	20	10	53	.22	.020	.100	.050	.030
87/08/24	1300	WATER	0.1	18	22	82					
87/09/16	1140	WATER	0.1	18	42	95					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/14	1520	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	11
87/01/20	1045	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/23	1355	WATER	0.1		10K	25K	10K	50K		50K	11
87/04/07	1125	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/01	1155	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	12

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.

WATER-DISCHARGE RECORDS

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 fair. 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.

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

AVERAGE DISCHARGE.--48 years, 627 ft^3/s, 15.83 in/yr, adjusted for storage.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24,700 ft^3/s Sept. 8, gage height, 16.17 ft; minimum, 69 ft^3/s Oct. 12, 13, gage height, 1.37 ft; minimum daily 100 ft^3/s Oct. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	291	290	341	271	433	11800	1980	2240	616	550	424	409
2	295	142	605	467	673	4710	2020	2170	1170	1590	255	401
3	289	292	1020	356	909	5210	1990	1320	1030	1020	253	393
4	270	336	603	218	1200	4780	1250	882	1510	886	706	384
5	124	390	484	339	1040	2510	629	1430	1490	445	726	403
6	143	384	312	307	891	2240	836	1360	e1400	381	459	686
7	294	401	253	306	752	1740	1310	1390	e1410	842	444	4900
8	269	840	375	303	438	1120	1710	1350	904	829	381	14300
9	281	371	416	298	718	854	1840	1290	886	810	228	4290
10	284	411	556	304	1150	1290	1820	1040	831	806	242	4470
11	308	437	931	179	1130	1280	945	745	866	815	495	2620
12	106	489	1380	338	1110	1250	347	1250	801	313	489	2150
13	178	429	593	417	1130	1210	602	1320	336	391	484	1840
14	378	389	366	386	969	1250	938	1320	323	1000	378	1300
15	399	329	463	391	270	863	3970	1310	751	756	302	1240
16	317	203	469	394	471	701	13400	1060	810	720	235	1160
17	302	325	447	328	497	1210	5810	404	764	683	245	1140
18	300	357	451	334	563	1260	5470	466	743	646	522	1130
19	100	374	452	1080	521	1370	4900	976	738	278	531	770
20	196	397	357	1040	537	1320	2600	1070	456	324	499	487
21	290	577	165	658	487	897	2330	1070	314	638	383	523
22	297	396	308	626	363	380	2270	985	382	583	311	515
23	295	185	322	648	1930	523	2180	e600	526	625	189	611
24	293	350	1910	402	2020	636	5970	e400	488	673	214	600
25	327	378	2430	349	1610	652	6780	e450	735	606	464	598
26	356	429	913	854	1570	673	6370	e1180	788	244	495	549
27	370	557	485	1140	1540	629	2940	1160	901	270	609	257
28	356	483	388	988	2680	548	2520	989	330	522	502	284
29	339	394	405	954	---	286	2400	970	325	555	390	465
30	328	165	359	997	---	870	2340	1050	516	539	200	600
31	330	---	330	1050	---	1960	---	982	---	445	188	---
TOTAL	8705	11500	18889	16722	27602	56022	90467	34229	23140	19785	12243	49475
MEAN	281	383	609	539	986	1807	3016	1104	771	638	395	1649
MAX	399	840	2430	1140	2680	11800	13400	2240	1510	1590	726	14300
MIN	100	142	165	179	270	286	347	400	314	244	188	257
(†)	-65	+62	+280	+76	+95	+104	-23	-21	-51	-41	-70	+6

CAL YR 1986	TOTAL 155757	MEAN 427	MAX 2430	MIN 83	MEAN‡ 420	CFSM‡ 0.78	IN‡ 10.60
WTR YR 1987	TOTAL 368779	MEAN 1010	MAX 14300	MIN 100	MEAN‡ 1039	CFSM‡ 1.93	IN‡ 26.22

e Estimated
† Change in contents, equivalent in cubic feet per second, in Philpott Lake; provided by U. S. Army Corps of Engineers.
‡ Adjusted for change in contents.

ROANOKE RIVER BASIN

02074000 SMITH RIVER AT EDEN, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/14	1230	WATER	0.1			324	7.30	19.0	9.0	7.8	2500
86/11/18	1030	WATER	0.1			218	7.00	11.0	5.0	10.1	
86/12/16	1040	WATER	0.1			134	6.90	8.0	9.4	13.0	
87/01/20	1150	WATER	0.1			101	6.80	6.0	38.0	11.7	
87/02/24	1100	WATER	0.1			72	6.90	6.0	39.0	11.8	
87/03/10	1300	WATER	0.1			87	6.80	8.0	80.0	11.2	
87/04/07	1210	WATER	0.1	3.21	1117	96	7.10	9.0	6.8	11.8	
87/05/18	1015	WATER	0.1	2.31	398						
87/05/18	1045	WATER	0.1			255	7.10	19.0	5.4	8.4	
87/06/03	1535	WATER	0.1	3.11	1030	102	7.10	19.0	8.0	9.2	
87/07/07	1035	WATER	0.1	3.04	964	125	7.10	25.0	28.0	7.1	
87/08/11	1025	WATER	0.1	2.15	323	380	7.20	25.0	8.3	5.2	
87/09/03	1035	WATER	0.1	2.22	354	425	7.17	21.0	6.8	6.3	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/14	1230	WATER	0.1	35	9	210	.52	.110	.500	.380	.310
86/11/18	1030	WATER	0.1	41	13	200					
86/12/16	1040	WATER	0.1	20	3	110					
87/01/20	1150	WATER	0.1	21	29	110					
87/02/24	1100	WATER	0.1	3	57	140					
87/03/10	1300	WATER	0.1	21	16	80					
87/04/07	1210	WATER	0.1	22	11	76					
87/05/18	1045	WATER	0.1	32	11	150					
87/06/03	1535	WATER	0.1	21	11	85					
87/07/07	1035	WATER	0.1	25	56	150					
87/08/11	1025	WATER	0.1	41	12	270					
87/09/03	1035	WATER	0.1	44	21	290					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/14	1230	WATER	0.1	10K	10K	25K	12	50K	.2K	50K	10K
87/01/20	1150	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/04/07	1210	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/07	1035	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10

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.--Records good except those below 5 ft^3/s and those that are estimated, which are fair.

AVERAGE DISCHARGE.--23 years, 45.2 ft^3/s, 13.37 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,720 ft^3/s July 14, 1975, gage height, 39.84 ft, from rating curve extended above 1,200 ft^3/s; no flow at times during most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 25	0500	910	33.40	Apr. 17	0100	1,440	34.44
Jan. 19	2400	1,080	33.79	Sept. 8	1500	*3,450	*37.12
Mar. 1	Unknown	3,120	36.77				

No flow Oct. 9-12, Aug. 7 - Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.16	7.0	8.3	66	e270	e2300	33	32	7.3	1.6	.31	.00
2	e.11	6.8	14	215	e330	e530	25	29	26	1.4	.22	.00
3	e.07	6.7	77	91	e400	e270	24	26	15	7.3	.13	.00
4	e.06	6.6	51	58	e240	e160	90	22	10	114	.08	.00
5	e.04	6.1	28	45	e170	e105	72	21	9.0	28	.06	.00
6	e.03	6.1	20	36	e130	e83	52	20	7.9	13	.02	.00
7	e.02	6.6	19	33	e95	e73	43	19	6.5	7.7	.00	.00
8	.01	12	19	29	e78	e67	35	16	5.8	5.5	.00	1630
9	.00	8.6	18	26	e62	e81	30	15	5.1	4.4	.00	317
10	.00	6.0	19	25	e51	384	25	14	4.4	3.7	.00	57
11	.00	6.0	73	24	e43	175	22	13	3.6	3.4	.00	65
12	.00	5.8	143	22	e37	107	20	12	3.4	3.3	.00	48
13	.01	5.8	64	20	e31	81	22	11	3.3	52	.00	40
14	.06	5.4	34	19	e27	65	18	12	3.4	14	.00	22
15	.08	5.2	27	19	e23	56	189	13	3.4	7.8	.00	14
16	.64	7.7	23	19	e20	49	956	12	3.3	5.9	.00	11
17	1.2	8.9	20	19	e26	46	698	10	3.0	4.8	.00	8.9
18	1.8	8.1	20	37	e35	39	263	9.2	3.0	3.9	.00	8.0
19	1.8	7.4	19	425	e29	73	226	26	3.6	3.2	.00	6.6
20	1.9	7.2	17	e800	e40	113	141	289	3.2	2.8	.00	5.9
21	1.8	12	14	e230	e80	74	101	58	2.5	2.3	.00	5.7
22	1.9	11	13	e170	e200	57	79	28	2.4	1.9	.00	5.0
23	1.8	11	13	e200	e700	47	64	20	4.3	1.4	.00	4.1
24	1.5	9.1	241	e140	e400	40	65	16	9.4	1.3	.00	3.3
25	1.6	9.4	593	e90	e300	36	134	15	7.1	1.1	.00	3.0
26	6.5	9.8	130	e100	e320	33	116	13	4.2	.84	.00	2.9
27	13	9.8	71	e63	e210	29	72	12	7.0	.66	.00	2.8
28	11	9.8	52	e46	e800	30	57	12	4.8	.54	.00	2.5
29	8.0	9.2	40	e38	---	26	45	10	2.9	.64	.00	2.1
30	7.5	8.7	34	e60	---	25	38	9.1	2.1	.60	.00	3.0
31	7.0	---	29	e310	---	39	---	7.9	---	.40	.00	---
TOTAL	69.59	239.8	1943.3	3475	5147	5293	3755	822.2	176.9	299.38	.82	2267.80
MEAN	2.24	7.99	62.7	112	184	171	125	26.5	5.90	9.66	.03	75.6
MAX	13	12	593	800	800	2300	956	289	26	114	.31	1630
MIN	.00	5.2	8.3	19	20	25	18	7.9	2.1	.40	.00	.00
CFSM	.05	.17	1.37	2.44	4.00	3.72	2.73	.58	.13	.21	.00	1.65
IN.	.06	.19	1.57	2.82	4.17	4.29	3.04	.67	.14	.24	.00	1.84

CAL YR 1986 TOTAL 5720.41 MEAN 15.7 MAX 593 MIN .00 CFSM .34 IN. 4.64
WTR YR 1987 TOTAL 23489.66 MEAN 64.4 MAX 2300 MIN .00 CFSM 1.40 IN. 19.0

e Estimated

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. Interruptions in the daily record were due to malfunctions of the monitor. No flow October 9-12, August 7 to September 7.

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.--
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, 29.5°C July 9, Aug. 6; minimum recorded, 0.0°C Dec. 23, Jan. 23-26.

TEMPERATURE, WATER, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	22.0	22.0	---	---	---	---	8.5	8.0	---	---	---	---
2	22.0	22.0	---	---	---	---	8.0	6.5	---	---	---	---
3	22.0	21.0	---	---	---	---	8.0	6.5	---	---	---	---
4	22.0	21.0	---	---	---	---	8.0	6.0	---	---	---	---
5	22.0	22.0	---	---	---	---	6.0	4.5	---	---	---	---
6	22.0	20.0	---	---	---	---	4.5	3.0	---	---	---	---
7	20.0	18.0	---	---	---	---	3.0	1.5	---	---	---	---
8	18.0	17.0	---	---	---	---	3.5	2.0	---	---	---	---
9	---	---	---	---	---	---	6.0	3.5	---	---	---	---
10	---	---	---	---	---	---	9.0	6.0	---	---	---	---
11	---	---	---	---	---	---	9.0	8.5	---	---	---	---
12	---	---	---	---	---	---	8.5	7.0	---	---	---	---
13	16.5	16.0	---	---	---	---	7.0	5.0	---	---	---	---
14	18.0	16.5	---	---	---	---	8.5	3.0	---	---	---	---
15	18.0	15.0	---	---	---	---	3.0	2.0	---	6.0	3.5	---
16	15.0	12.0	---	---	---	---	3.5	2.0	---	6.5	6.0	---
17	12.0	11.0	---	---	---	---	4.5	3.5	---	6.5	6.5	---
18	11.5	11.0	---	---	---	---	5.5	4.5	---	6.5	5.0	---
19	11.0	9.5	---	---	---	---	5.5	4.5	---	5.0	5.0	---
20	9.5	8.5	---	---	---	---	4.5	4.0	---	5.0	4.5	---
21	8.5	8.5	---	---	---	---	4.0	2.0	---	4.5	4.5	---
22	8.5	8.5	---	---	---	---	2.0	1.0	---	4.5	.5	---
23	9.5	8.5	---	---	---	---	1.0	.0	---	.5	.0	---
24	10.0	9.5	---	---	---	---	4.5	.5	---	.0	.0	---
25	11.0	10.0	---	---	---	---	6.0	4.5	---	1.0	.0	---
26	13.5	11.0	---	11.0	10.0	---	6.5	6.0	---	.0	.0	---
27	15.5	13.5	---	11.0	10.5	---	6.0	5.0	---	---	---	---
28	15.5	14.0	---	11.0	10.0	---	5.0	4.0	---	---	---	---
29	15.0	12.0	---	10.0	9.0	---	4.0	2.0	---	---	---	---
30	---	---	---	10.0	8.5	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

ROANOKE RIVER BASIN

02077200 HYCO CREEK NEAR LEASBURG, NC--Continued

TEMPERATURE, WATER, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	15.0	12.0	---	19.5	16.0	17.7
2	---	---	---	---	---	---	14.5	11.0	---	20.5	17.0	18.5
3	---	---	---	---	---	---	14.5	13.5	---	22.0	17.5	19.7
4	---	---	---	---	---	---	13.5	10.5	---	20.5	16.5	19.0
5	---	---	---	---	---	---	10.5	9.0	---	18.0	14.5	16.2
6	---	---	---	---	---	---	10.5	9.0	---	18.5	14.0	15.9
7	---	---	---	---	---	---	13.0	10.5	---	20.0	15.6	17.6
8	---	---	---	---	---	---	15.5	12.0	---	20.5	17.0	18.7
9	---	---	---	---	---	---	15.5	13.5	---	20.0	15.5	17.7
10	---	---	---	---	---	---	15.5	13.0	---	20.5	16.0	18.3
11	---	---	---	---	---	---	15.0	12.5	14.0	22.0	17.5	19.6
12	---	---	---	---	---	---	15.5	13.0	14.3	22.5	18.5	20.5
13	---	---	---	---	---	---	17.0	13.0	15.1	22.0	19.0	20.0
14	---	---	---	---	---	---	16.0	14.5	15.4	19.0	17.5	18.0
15	---	---	---	---	---	---	15.0	13.0	13.9	19.5	16.5	18.0
16	---	---	---	---	---	---	13.5	13.0	13.1	21.5	17.0	19.1
17	---	---	---	---	---	---	13.5	12.5	13.1	22.0	17.5	19.6
18	---	---	---	---	---	---	13.5	12.5	13.0	24.0	19.5	21.5
19	---	---	---	---	---	---	15.0	13.0	13.6	23.5	20.5	22.1
20	---	---	---	9.5	6.5	---	16.5	13.5	14.9	20.0	19.0	19.5
21	---	---	---	10.0	9.0	---	17.0	15.0	16.1	19.0	17.5	18.1
22	---	---	---	11.0	9.0	---	19.5	15.5	17.4	20.0	17.0	18.4
23	---	---	---	11.5	9.0	---	19.5	18.5	19.0	22.0	18.5	20.0
24	---	---	---	13.0	10.5	---	18.5	16.5	17.9	23.0	20.0	21.3
25	---	---	---	13.0	12.0	---	16.5	12.5	14.7	24.5	20.5	22.6
26	---	---	---	15.0	12.0	---	14.5	11.5	12.9	24.0	21.5	22.2
27	---	---	---	15.5	14.0	---	14.5	12.5	13.9	22.5	20.5	21.4
28	---	---	---	18.0	15.5	---	16.5	14.0	15.1	24.0	21.0	22.3
29	---	---	---	19.0	16.5	---	16.5	13.0	14.9	24.5	21.0	22.8
30	---	---	---	19.0	17.0	---	19.5	15.0	17.0	25.0	22.0	23.6
31	---	---	---	17.0	15.0	---	---	---	---	25.5	22.5	24.1
MONTH	---	---	---	---	---	---	19.5	9.0	---	25.5	14.0	19.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	25.0	23.5	24.3	26.5	24.0	25.2	27.4	24.6	25.9	---	---	---
2	25.0	22.0	23.4	26.5	24.5	25.6	28.0	24.8	26.2	---	---	---
3	25.5	22.5	23.8	26.0	24.0	25.4	28.8	24.9	26.6	---	---	---
4	25.0	23.0	23.7	24.0	23.0	23.4	28.3	25.4	26.7	---	---	---
5	25.0	21.5	23.0	25.5	23.5	24.4	28.5	25.2	26.7	---	---	---
6	24.5	20.0	22.3	27.0	24.0	25.1	29.3	25.3	26.7	---	---	---
7	25.0	20.5	22.7	27.5	24.5	26.1	---	---	---	---	---	---
8	25.5	21.5	23.3	28.5	25.0	26.7	---	---	---	23.0	22.1	22.6
9	25.5	22.0	23.7	29.7	26.0	27.6	---	---	---	24.2	22.8	23.4
10	25.0	22.5	23.8	28.3	26.1	27.3	---	---	---	24.2	23.1	23.8
11	23.5	20.0	21.6	28.4	25.8	27.1	---	---	---	24.2	23.3	23.7
12	24.5	21.5	22.7	27.7	26.0	26.7	---	---	---	24.1	23.0	23.7
13	24.0	23.0	23.6	25.9	23.4	24.4	---	---	---	24.5	23.3	23.8
14	24.5	22.5	23.4	26.1	23.8	24.6	---	---	---	24.7	22.6	23.6
15	26.0	23.0	24.4	24.6	23.0	23.8	---	---	---	24.1	21.7	22.9
16	26.0	24.5	25.2	25.1	21.7	23.3	---	---	---	23.9	21.7	22.8
17	26.0	24.5	25.2	25.4	22.1	23.6	---	---	---	24.8	22.4	23.5
18	25.5	24.5	25.0	24.7	21.8	23.4	---	---	---	24.9	22.8	23.8
19	25.5	23.5	24.4	26.1	22.2	24.0	---	---	---	23.8	22.3	22.9
20	26.5	24.0	25.0	26.7	23.5	24.9	---	---	---	22.9	22.3	22.6
21	26.5	24.5	25.5	27.2	24.0	25.4	---	---	---	23.3	21.2	22.1
22	27.0	25.0	25.7	28.1	24.6	26.2	---	---	---	21.8	19.9	20.8
23	27.0	24.5	25.8	28.3	25.0	26.6	---	---	---	20.2	17.9	19.3
24	26.0	24.0	24.7	28.3	25.4	26.8	---	---	---	19.2	16.7	18.1
25	25.0	22.5	23.9	28.1	25.7	26.8	---	---	---	19.0	16.3	17.7
26	25.0	23.5	24.2	28.9	25.8	27.1	---	---	---	19.5	17.4	18.5
27	26.0	23.0	24.4	28.3	25.5	26.8	---	---	---	19.8	17.9	18.9
28	25.0	21.5	23.4	28.3	25.8	26.8	---	---	---	20.1	18.3	19.2
29	25.0	20.5	23.0	27.8	25.2	26.4	---	---	---	20.0	18.6	19.4
30	26.5	22.5	24.2	27.3	24.5	25.8	---	---	---	20.5	19.5	19.9
31	---	---	---	27.7	24.5	25.8	---	---	---	---	---	---
MONTH	27.0	20.0	24.0	29.7	21.7	25.6	---	---	---	---	---	---

ROANOKE RIVER BASIN

02077200 HYCO CREEK NEAR LEASBURG, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/08	1145	WATER	0.1			147	7.10	18.0	4.8	5.2	10K
87/01/29	1250	WATER	0.1			87	6.90	1.0	18.0	13.5	
87/04/07	1530	WATER	0.1	26.02	43	84	6.80	13.0	14.0	11.2	
87/07/07	1345	WATER	0.1	25.21	7	110	7.10	27.0	30.0	6.8	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/08	1145	WATER	0.1	63	3	110	.03	.040	.200	.010	.010K
87/01/29	1250	WATER	0.1	19	6	100	.13	.030	.200	.030	.100K
87/04/07	1530	WATER	0.1	28	1	7	.04	.010	.200	.020	
87/07/07	1345	WATER	0.1	38	14	120	.13	.040	.400	.070	.010K

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/08	1145	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/01/29	1250	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/04/07	1530	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/07	1345	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.--Records fair. Flow regulated by Roxboro Steam-Electric Generating Plant Afterbay Reservoir (station 02077302).

AVERAGE DISCHARGE.--14 years, 188 ft^3/s, 12.64 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,300 ft^3/s July 14, 1975, gage height, 24.40 ft; no flow part of day June 26, 1980; minimum daily, 0.31 ft^3/s Sept. 21, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,560 ft^3/s Mar. 1, gage height, 22.03 ft; minimum daily, 8.7 ft^3/s Oct. 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	12	11	e20	153	6000	19	29	15	11	12	11
2	12	12	11	254	919	6010	18	22	10	11	12	11
3	13	12	11	385	1420	1390	17	24	11	11	12	11
4	13	12	11	454	1410	1120	17	28	18	11	12	11
5	13	12	11	264	661	640	17	63	29	11	16	11
6	13	11	12	106	43	129	18	80	29	11	13	11
7	13	11	11	107	183	126	18	98	29	11	12	11
8	13	11	12	107	419	125	26	125	30	11	12	793
9	14	11	11	106	609	124	55	115	16	12	12	2320
10	14	11	12	106	437	2210	73	116	12	12	11	1670
11	14	11	12	106	48	2040	79	99	14	12	11	288
12	13	11	12	75	14	864	82	60	12	12	11	273
13	13	11	12	e14	13	556	86	59	11	12	11	265
14	11	11	12	e11	12	112	78	59	11	12	11	159
15	9.1	11	12	11	17	110	393	59	11	12	11	21
16	9.2	11	12	11	43	95	2220	59	10	12	11	19
17	9.2	11	12	13	113	58	3340	59	11	12	11	19
18	9.2	11	12	37	139	47	2640	39	11	12	11	17
19	9.2	11	12	728	378	76	1700	12	11	12	11	16
20	8.8	11	12	2340	491	176	654	12	11	12	11	16
21	8.7	11	12	1650	470	265	114	11	11	12	11	16
22	8.7	11	12	1020	301	241	100	11	11	12	11	16
23	11	11	12	490	427	204	100	12	11	12	11	16
24	12	11	111	125	1440	171	108	25	11	12	11	16
25	11	11	133	126	1760	420	247	47	11	12	11	16
26	11	11	18	156	1560	489	483	104	11	12	11	16
27	11	11	231	342	994	235	767	115	11	12	11	16
28	11	11	390	566	758	233	752	112	11	12	11	17
29	11	11	209	333	---	229	384	63	11	12	11	9.8
30	11	11	290	125	---	82	48	18	11	12	11	13
31	12	---	e54	124	---	19	---	18	---	12	11	---
TOTAL	355.1	335	1705	10312	15232	24596	14653	1753	422	364	355	6104.8
MEAN	11.5	11.2	55.0	333	544	793	488	56.5	14.1	11.7	11.5	203
MAX	14	12	390	2340	1760	6010	3340	125	30	12	16	2320
MIN	8.7	11	11	11	12	19	17	11	10	11	11	9.8

CAL YR 1986 TOTAL 13638.4 MEAN 37.4 MAX 390 MIN 8.3
WTR YR 1987 TOTAL 76186.9 MEAN 209 MAX 6010 MIN 8.7

e Estimated

ROANOKE RIVER BASIN

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.

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, 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, 25.0°C Oct. 1, 2, 4, 5; minimum, 6.5°C Dec. 23, Jan. 18, 26-29, Feb. 18-24.

TEMPERATURE, WATER, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	24.8	23.8	24.2	17.0	16.1	16.6	11.4	10.2	10.5	8.8	8.4	8.6
2	25.0	23.8	24.2	17.4	16.8	17.0	11.4	10.2	10.4	9.1	8.6	8.9
3	24.4	23.2	23.8	17.2	15.8	16.7	11.0	10.1	10.4	8.9	8.7	8.8
4	24.9	23.7	24.3	17.0	15.6	16.3	10.2	9.7	9.9	8.7	8.5	8.6
5	25.1	23.9	24.5	16.9	16.3	16.5	9.9	9.3	9.6	8.5	8.2	8.4
6	23.9	22.7	23.3	17.1	15.9	16.4	9.7	9.1	9.3	8.2	7.8	8.0
7	22.9	22.0	22.4	16.2	15.6	15.9	9.5	8.8	9.1	8.4	7.6	8.1
8	22.9	21.8	22.3	16.4	15.6	15.9	9.5	9.1	9.3	8.3	7.8	8.1
9	22.7	22.2	22.4	17.5	16.0	16.7	9.8	9.4	9.6	8.0	7.6	7.8
10	22.3	21.4	21.9	16.6	15.4	15.9	10.4	9.8	10.1	7.8	7.7	7.8
11	21.5	21.0	21.3	15.4	15.2	15.3	10.0	9.4	9.7	7.7	7.4	7.6
12	21.4	20.8	21.1	15.2	14.4	14.8	9.6	9.3	9.4	7.7	7.2	7.4
13	21.3	21.0	21.2	14.3	13.0	13.9	9.2	8.5	9.0	7.7	6.8	7.2
14	21.7	20.8	21.3	13.1	12.2	12.5	8.8	7.8	8.3	7.7	6.8	7.2
15	21.1	19.5	20.3	12.3	12.0	12.2	8.9	8.1	8.4	8.9	7.5	8.2
16	20.3	18.8	19.4	13.2	12.2	12.5	8.9	8.0	8.5	8.4	7.6	8.1
17	19.8	18.6	19.0	12.7	12.0	12.5	8.9	8.6	8.8	7.8	7.2	7.5
18	19.3	17.8	18.4	12.7	12.3	12.5	8.9	8.5	8.8	7.4	6.7	7.3
19	18.9	17.3	17.8	12.6	11.7	12.2	8.8	8.0	8.4	7.6	7.0	7.5
20	18.5	16.9	17.5	11.7	11.5	11.7	8.8	7.7	8.3	8.6	7.0	7.6
21	18.4	16.5	17.2	11.8	10.8	11.5	8.4	7.2	7.6	9.6	8.7	9.3
22	18.3	16.3	17.2	11.5	10.2	10.6	7.8	6.9	7.2	9.6	8.8	9.2
23	18.3	16.6	17.5	10.6	10.1	10.4	7.4	6.7	7.1	8.9	7.5	8.7
24	18.5	17.4	17.8	12.4	10.7	11.3	7.5	7.3	7.4	8.6	7.2	8.3
25	17.7	17.4	17.5	11.7	11.0	11.5	8.5	7.3	7.9	8.6	7.1	8.2
26	17.6	17.3	17.5	11.8	10.7	11.3	8.5	6.8	7.8	7.3	6.7	7.1
27	18.4	17.5	17.8	12.0	11.4	11.7	9.8	7.4	9.1	7.1	6.4	6.8
28	18.2	17.1	17.5	11.6	11.0	11.4	9.5	8.8	9.2	7.0	6.6	6.8
29	17.4	16.3	17.0	12.4	10.8	11.4	9.6	8.8	9.2	8.2	6.3	6.9
30	17.9	16.7	17.2	12.4	10.7	11.1	9.9	9.4	9.6	7.7	7.0	7.3
31	17.5	16.4	16.9	---	---	---	9.6	8.8	9.3	7.5	7.1	7.3
MONTH	25.1	16.3	20.1	17.5	10.1	13.5	11.4	6.7	8.94	9.6	6.3	7.89

ROANOKE RIVER BASIN

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

TEMPERATURE, WATER, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.9	7.0	7.3	9.5	8.5	8.9	13.1	11.8	12.3	17.9	16.3	17.1
2	8.1	7.2	7.4	10.6	9.5	10.2	12.5	11.5	12.0	18.2	16.2	17.0
3	8.8	8.0	8.5	10.8	10.5	10.7	12.1	11.5	11.9	18.4	16.4	17.3
4	9.2	8.7	8.9	10.7	10.3	10.6	11.9	11.5	11.7	17.3	16.3	16.8
5	9.1	7.5	8.8	10.4	9.6	10.0	11.8	11.5	11.7	19.4	17.2	18.1
6	9.1	7.0	8.0	9.9	9.6	9.7	12.2	11.4	11.7	20.8	18.0	19.3
7	9.7	9.1	9.4	10	9.5	9.7	12.3	11.4	11.9	20.8	18.6	19.6
8	9.6	9.2	9.4	9.8	9.6	9.6	13.4	11.8	12.5	18.5	17.4	17.9
9	9.4	8.9	9.1	11.3	9.6	10.3	15.0	12.1	13.3	18.2	17.4	17.8
10	8.9	8.5	8.8	11.5	9.7	10.3	15.7	12.6	14.1	18.6	17.5	18.0
11	8.7	8.1	8.5	9.8	9.7	9.7	15.1	13.8	14.5	18.6	17.5	18.0
12	9.0	8.0	8.5	10.1	9.6	9.7	15.1	13.8	14.5	18.5	17.4	17.9
13	9.1	8.2	8.6	9.9	9.5	9.7	16.1	13.9	14.9	17.6	17.4	17.5
14	8.4	7.7	8.1	9.8	9.5	9.6	14.7	13.1	13.8	17.7	10.7	16.7
15	8.5	7.9	8.2	10	9.5	9.7	13.6	12.6	13.1	19.0	17.5	18.1
16	8.1	6.9	7.6	9.6	9.3	9.5	14.5	12.5	13.7	18.0	10.7	17.4
17	7.1	6.9	7.0	9.7	9.1	9.4	15.7	14.6	15.2	19.3	17.4	18.3
18	6.9	6.7	6.8	9.5	9.1	9.3	16.5	15.8	16.2	19.5	18.0	18.5
19	7.2	6.6	6.8	9.8	9.4	9.6	16.8	16.5	16.7	19.2	17.6	18.3
20	6.8	6.6	6.8	11.0	9.6	10.0	17.0	15.8	16.7	18.0	17.2	17.5
21	6.8	6.7	6.8	11.4	9.8	10.4	16.8	15.6	16.1	17.5	16.7	17.2
22	6.8	6.5	6.7	11.1	9.7	10.2	16.7	15.6	16.2	18.8	17.2	17.8
23	7.2	6.5	6.8	10.9	9.8	10.3	16.5	16.0	16.2	19.3	17.3	18.1
24	8.2	6.7	7.3	11.2	10.2	10.7	17.2	16.2	16.7	22.6	17.9	20.2
25	8.7	8.1	8.3	11.4	10.6	11.0	17.1	16.9	17.0	23.9	21.8	22.6
26	8.9	8.7	8.8	12.3	11.4	11.9	17.2	16.7	16.9	21.6	18.5	19.8
27	8.9	8.1	8.7	12.1	11.3	11.6	17.4	16.5	17.1	18.7	18.3	18.5
28	8.5	8.1	8.4	11.8	11.1	11.5	18.3	17.2	17.7	19.0	18.3	18.6
29	---	---	---	12.0	11.4	11.6	18.3	17.2	17.6	21.0	17.7	19.0
30	---	---	---	11.8	11.3	11.7	18.4	17.0	17.6	19.6	17.7	18.8
31	---	---	---	13.2	11.6	12.3	---	---	---	19.5	18.2	18.7
MONTH	9.7	6.5	8.01	13.2	8.5	10.3	18.4	11.4	14.7	23.9	10.7	18.3

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	19.7	18.0	18.8	20.0	18.5	19.2	20.3	19.2	19.7	20.6	19.7	20.2
2	19.9	18.1	18.8	20.2	18.7	19.2	20.3	19.0	19.6	20.5	19.1	19.7
3	19.8	17.9	18.7	20.0	18.7	19.2	20.5	19.2	19.9	20.5	19.5	20.0
4	18.9	17.6	18.3	19.7	18.6	19.1	20.4	19.4	19.9	20.4	19.8	20.0
5	18.9	17.9	18.3	20.2	18.8	19.3	20.4	19.3	20.0	19.9	19.4	19.7
6	18.8	17.4	18.1	20.4	18.6	19.3	20.5	19.7	20.1	20.4	19.9	20.3
7	19.3	17.6	18.3	20.4	18.7	19.4	20.2	19.4	19.7	21.3	20.3	20.6
8	19.5	17.8	18.5	20.2	18.7	19.3	20.5	19.3	19.8	23.5	20.5	21.4
9	19.6	17.9	18.6	20.5	18.6	19.4	20.5	19.4	19.9	24.1	23.4	23.6
10	19.3	17.6	18.4	20.5	18.5	19.2	20.5	19.8	20.2	24.1	23.4	23.9
11	18.8	17.2	17.9	20.2	18.5	19.3	20.3	19.5	19.8	23.6	23.4	23.5
12	19.8	17.8	18.7	20.0	18.6	19.1	20.3	18.9	19.6	23.8	23.5	23.6
13	19.2	18.2	18.6	20.1	18.4	19.1	20.3	18.7	19.4	24.0	23.6	23.8
14	19.8	18.3	18.9	20.0	18.5	19.0	20.3	18.7	19.5	24.0	22.4	23.5
15	20.1	18.3	19.1	19.0	18.0	18.5	20.0	19.4	19.6	22.7	21.8	22.2
16	20.0	18.6	19.1	19.7	17.8	18.6	20.4	19.5	19.9	22.8	21.6	22.2
17	19.9	18.3	19.0	19.8	17.2	18.7	21.1	19.6	20.2	23.1	22.1	22.5
18	19.3	18.3	18.7	20.0	17.9	18.8	20.9	19.9	20.3	23.0	22.0	22.5
19	19.7	18.1	18.8	20.2	18.1	19.0	20.6	20.0	20.3	22.3	21.5	21.9
20	20.1	18.5	19.1	20.2	18.2	19.1	20.9	19.9	20.3	22.4	21.6	21.8
21	20.2	18.4	19.0	20.2	18.4	19.3	20.8	19.7	20.1	22.3	21.3	21.7
22	20.4	18.5	19.2	20.3	18.7	19.5	20.8	19.7	20.2	22.0	20.9	21.3
23	20.4	18.6	19.2	20.4	18.8	19.5	20.9	20.1	20.3	21.7	20.7	21.1
24	19.8	18.3	18.9	20.4	18.8	19.6	20.4	19.3	19.9	21.6	20.5	21.0
25	19.6	18.2	18.7	20.4	18.8	19.6	20.2	19.1	19.7	21.6	20.5	20.9
26	19.9	18.1	18.7	20.4	19.1	19.7	20.7	20.0	20.2	21.7	20.7	21.0
27	19.9	18.1	18.9	20.3	18.7	19.4	21.4	20.1	20.6	21.7	20.7	21.1
28	19.3	17.3	18.2	20.2	18.9	19.5	21.1	20.1	20.5	21.7	20.6	21.1
29	19.6	17.3	18.3	20.1	18.9	19.3	20.9	20.2	20.5	22.1	20.8	21.3
30	20.0	18.0	18.9	20.1	18.8	19.4	20.2	19.6	19.9	21.4	20.6	20.9
31	---	---	---	20.4	18.9	19.6	20.2	19.8	20.0	---	---	---
MONTH	20.4	17.2	18.7	20.5	17.2	19.2	21.4	18.7	20.0	24.1	19.1	21.6

YEAR MAXIMUM 25.1 MINIMUM 6.3 MEAN 15.1

ROANOKE RIVER BASIN

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/09	1245	WATER	0.1	3.63	14	132	6.50	21.0		8.5	10K
86/11/19	1130	WATER	0.1			98	6.90	12.0	5.1	10.0	
86/12/22	1030	WATER	0.1			87	7.30	5.0	3.5	18.9	
87/01/21	1130	WATER	0.1			110	6.80	8.0	7.4	11.2	
87/02/25	0900	WATER	0.1			100		5.0	15.0	11.8	
87/03/16	1245	WATER	0.1			70		8.0	17.0	12.0	
87/04/07	1130	WATER	0.1	3.74	18	48	6.00	7.0	20.0	11.8	
87/05/20	1230	WATER	0.1	3.62	12	220		19.0	20.0	9.4	
87/08/26	0740	WATER	0.1	3.60	11						

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/09	1245	WATER	0.1	45	3	100					
86/11/19	1130	WATER	0.1	30	10	110					
86/12/22	1030	WATER	0.1	20	6	88					
87/01/21	1130	WATER	0.1	21	11	130					
87/02/25	0900	WATER	0.1		9	140					
87/03/16	1245	WATER	0.1		5	94					
87/04/07	1130	WATER	0.1	16	6	84					
87/05/20	1230	WATER	0.1		32	240					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/19	1130	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
86/12/22	1030	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/01/21	1130	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/25	0900	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/03/16	1245	WATER	0.1	10K					.2K		
87/04/07	1130	WATER	0.1	10K	10K	25K	21	50K	.2K	50K	13
87/05/20	1230	WATER	0.1	10K	10K	25K	14	50K	.2K	50K	21

ROANOKE RIVER BASIN

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^2.

WATER-DISCHARGE RECORDS

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.--Records good except those that are estimated which are fair. Flow regulated by Mayo Steam Electric Generating Plant Dam.

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

AVERAGE DISCHARGE.--10 years, 35.6 ft^3/s, 9.05 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,950 ft^3/s Apr. 26, 1978; no flow Aug. 1-13, 1977, Aug. 28 to Sept. 30, 1980 and many days during 1981 and 1982 due to 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 928 ft^3/s Mar. 1, gage height, 7.38 ft; minimum, 2.3 ft^3/s Sept. 27; minimum gage height, 1.86 ft Oct. 21; minimum daily, 2.5 ft^3/s Sept. 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	3.0	e3.1	e50	100	867	53	72	16	6.8	4.7	3.6
2	2.9	3.0	e3.1	e90	117	832	51	67	20	12	3.8	3.6
3	2.9	3.0	e3.1	e69	147	698	45	63	19	18	3.8	3.6
4	2.9	3.0	e3.1	e55	163	543	56	56	17	34	3.9	3.6
5	2.9	3.0	e3.1	e45	147	412	54	52	15	45	4.1	3.8
6	2.9	3.0	e3.0	e38	127	319	52	49	14	39	4.7	3.8
7	2.9	4.0	e3.0	e31	111	249	49	44	13	35	4.5	3.9
8	2.9	3.1	e3.0	e27	101	200	47	38	11	30	3.8	15
9	2.9	2.9	e3.0	e23	87	191	44	35	9.0	25	4.3	3.9
10	2.9	3.0	e3.0	e22	76	474	41	33	6.2	21	4.1	4.1
11	2.9	3.2	e3.0	e21	68	431	40	31	5.4	17	4.1	3.8
12	2.9	3.1	e3.0	e21	62	350	40	29	5.2	17	4.2	3.8
13	3.0	3.0	e3.0	e20	55	280	42	27	4.6	19	4.3	3.8
14	3.0	3.1	e3.0	e20	50	223	38	25	4.3	16	4.2	4.0
15	2.9	3.2	e3.0	e20	47	181	83	25	4.4	12	4.3	3.5
16	2.9	2.9	e3.0	19	46	154	173	23	4.0	9.3	4.1	3.3
17	2.9	2.9	e3.0	19	70	135	239	23	3.7	6.9	4.1	3.3
18	2.9	2.9	e3.0	26	67	119	242	22	3.6	5.4	4.3	3.2
19	2.9	3.3	e3.0	139	62	115	245	21	3.6	4.2	4.5	3.1
20	2.9	3.1	e3.0	238	58	113	215	29	4.6	3.7	4.5	2.8
21	2.9	3.1	e3.0	201	58	104	183	27	11	3.7	4.8	2.8
22	3.0	3.0	e3.0	233	71	95	157	26	11	3.7	4.2	2.8
23	2.9	3.0	e36	227	209	86	135	25	15	3.6	3.8	3.2
24	2.9	3.0	e75	177	304	78	121	24	14	3.6	3.8	3.3
25	3.0	3.1	e175	141	303	72	120	21	13	3.6	3.8	2.9
26	3.3	3.2	e92	137	297	65	121	20	12	3.6	3.6	2.7
27	3.0	3.2	e60	117	287	60	112	19	13	3.8	4.0	2.5
28	3.0	3.2	e46	102	391	58	101	18	11	3.9	4.1	2.5
29	3.0	3.2	e35	90	---	54	92	17	8.7	3.8	4.0	2.8
30	3.0	e3.2	e27	85	---	52	81	16	7.3	3.8	3.6	2.7
31	3.0	---	e22	94	---	57	---	15	---	4.3	3.6	---
TOTAL	91.2	92.9	634.5	2597	3681	7667	3072	992	299.6	417.7	127.6	111.7
MEAN	2.94	3.10	20.5	83.8	131	247	102	32.0	9.99	13.5	4.12	3.72
MAX	3.3	4.0	175	238	391	867	245	72	20	45	4.8	15
MIN	2.9	2.9	3.0	19	46	52	38	15	3.6	3.6	3.6	2.5

CAL YR 1986 TOTAL 3943.5 MEAN 10.8 MAX 175 MIN 2.5
WTR YR 1987 TOTAL 19784.0 MEAN 54.2 MAX 867 MIN 2.5

e Estimated

ROANOKE RIVER BASIN

02077670 MAYO CREEK NEAR BETHEL HILL, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/09	1040	WATER	0.1			113	6.50	20.0		8.2	40
86/10/09	1050	WATER	0.1	1.88	3						
87/02/25	1000	WATER	0.1			86		5.0	1.4	11.0	
87/05/20	1315	WATER	0.1	2.45	29	81		19.0	1.8	11.0	
87/08/26	1000	WATER	0.1	1.89	4						

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/09	1040	WATER	0.1	42	1	86					
87/02/25	1000	WATER	0.1		1	98					
87/05/20	1315	WATER	0.1		20	120					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/02/25	1000	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/20	1315	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

AVERAGE DISCHARGE.--75 years (1913-87), 8,106 ft^3/s adjusted for storage, 13.13 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 261,000 ft^3/s Aug. 18, 1940, gage height, 39.0 ft from floodmarks; minimum, about 250 ft^3/s Dec. 16, 1955; minimum daily, 472 ft^3/s Sept. 21, 1932.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 36,600 ft^3/s Apr. 24, 25, gage height, 11.69 ft; minimum, 841 ft^3/s Nov. 5, gage height, 1.90 ft; minimum daily, 974 ft^3/s Nov. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6020	1090	6290	12900	18700	19300	19300	35000	15100	2630	4210	1990
2	2690	982	7630	13600	18600	19700	20000	35100	13300	2680	2460	2210
3	5890	1030	1070	17400	18800	20300	19800	35200	18700	2250	6610	2330
4	6970	1010	3370	17400	19000	20200	18900	35300	10100	2060	6170	2010
5	4440	999	4290	18400	19100	20400	19300	35200	8500	2070	2870	2020
6	2040	985	1950	19000	19100	22400	19300	35200	11300	2190	8430	2090
7	1940	983	2500	18500	14600	25200	12200	34800	8430	6870	2730	2690
8	1970	992	997	19000	13900	25000	7790	35000	18300	10100	2620	12800
9	2100	974	2210	14700	13700	25200	11200	34700	13900	5000	2770	14700
10	2140	987	3680	1020	13700	25600	12300	35100	8960	4050	3580	16200
11	2120	1000	9310	4600	11900	25200	2830	34800	9630	2240	2400	20200
12	2730	1100	8170	10500	9190	25100	2940	34900	10800	2310	2520	20100
13	2060	990	3630	7740	7570	25300	7290	34700	7950	2320	2520	19900
14	2190	1760	4220	13200	2280	25500	4660	34800	8060	2340	2520	20100
15	2200	997	1820	12900	11300	25200	7060	32400	10600	2250	2570	20100
16	2160	1420	5540	8710	13400	25400	19400	29800	5950	2190	2750	20200
17	2020	1020	6450	4810	6270	25600	20400	29800	8550	2280	5640	20300
18	1850	1010	8290	7450	5830	25400	21600	26700	8940	2280	4250	20100
19	1830	2690	6290	10100	5650	24700	25300	24600	4450	5020	2490	20100
20	2100	7730	4050	12900	5800	20400	26000	24900	7970	8770	2480	20000
21	2160	7210	6260	9960	2240	19900	31300	24800	5240	14600	2330	20000
22	2040	1700	10900	13700	2450	19900	34900	24800	8140	14600	2180	19800
23	1890	1080	7240	13700	9540	20100	35000	24000	6740	8630	2100	20100
24	1780	2970	8090	13700	18800	19900	35600	20200	9170	6660	2170	18400
25	1860	5480	9440	13700	18500	18400	35400	20100	3010	2640	2270	8920
26	1790	5560	11400	13600	19200	16500	34200	20200	2410	2500	2250	2150
27	1700	1070	12000	15000	18400	17600	34400	20100	2350	2570	7600	2060
28	1730	997	12700	17400	19000	14900	35000	20100	2230	3030	5280	8640
29	1730	1020	12700	18700	---	13200	35200	20000	2130	2690	2150	8310
30	1750	2760	12700	18000	---	15800	34900	19300	3390	7430	2150	6050
31	1890	---	12700	18700	---	18900	---	13900	---	10800	2130	---
TOTAL	77780	59596	207887	410990	356520	666200	643470	885500	254300	148050	105200	374570
MEAN	2509	1987	6706	13260	12730	21490	21450	28560	8477	4776	3394	12490
MAX	6970	7730	12700	19000	19200	25600	35600	35300	18700	14600	8430	20300
MIN	1700	974	997	1020	2240	13200	2830	13900	2130	2060	2100	1990
(†)	-907	+1842	+4060	-2285	+351	+1383	+19010	-19062	-3525	-567	-1630	+3802

CAL YR 1986 TOTAL 1517280 MEAN 4157 MAX 15800 MIN 974 MEAN‡ 4410 CFSM‡ 0.53 IN‡ 7.19
WTR YR 1987 TOTAL 4190060 MEAN 11480 MAX 35600 MIN 974 MEAN‡ 11870 CFSM‡ 1.42 IN‡ 19.28

† 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 Roanoke Rapids Lake, furnished by North Carolina Power Company.
‡ Adjusted for change in contents.

ROANOKE RIVER BASIN

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 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV											
13...	1530	996	116	7.50	16.0	2.6	768	9.4	94	<4	K64
JAN											
29...	1230	17800	120	7.20	3.5	5.3	766	14.0	105	K9	K6
APR											
27...	1330	34500	67	7.00	13.0	20	757	10.2	97	K140	130
SEP											
01...	1300	1990	90	7.20	25.0	2.1	759	8.1	99	<4	K8

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WHOLE IT-FLD (MG/L)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
NOV											
13...	31	0	7.1	3.2	9.6	38	0.8	2.3	51	42	9.7
JAN											
29...	33	1	7.8	3.2	11	40	0.9	2.2	39	32	13
APR											
27...	26	3	6.0	2.6	5.6	30	0.5	1.7	27	22	11
SEP											
01...	31	0	7.2	3.1	6.1	28	0.5	2.2	49	40	12

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
NOV										
13...	9.5	0.10	9.0	81	74	0.11	218	--	0.100	0.030
JAN										
29...	11	0.10	8.2	80	76	0.11	3840	--	0.280	--
APR										
27...	5.6	<0.10	7.3	58	54	0.08	5400	0.280	0.290	0.030
SEP										
01...	6.4	0.10	8.2	63	64	0.09	338	--	--	--

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,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)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)
NOV										
13...	0.040	0.05	0.47	0.50	0.010	0.010	<0.010	<10	<1	19
JAN										
29...	0.060	0.08	--	0.60	0.030	0.010	<0.010	60	<1	19
APR										
27...	0.090	0.12	0.47	0.50	0.040	0.020	<0.010	150	<1	21
SEP										
01...	--	--	--	--	--	--	--	<10	1	19

ROANOKE RIVER BASIN

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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 13...	<0.5	<1	<1	<3	2	14	<5	<4	--	--
JAN 29...	<0.5	<1	<1	<3	1	100	<5	<4	7	<0.1
APR 27...	<0.5	<1	<1	<3	4	170	<5	<4	7	<0.1
SEP 01...	<0.5	<1	3	<3	2	26	<5	<4	27	<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. [2] FINER THAN .062 MM
NOV 13...	<10	<1	<1	<1	56	<6	3	2	5.4	100
JAN 29...	<10	<1	<1	<1	54	<6	8	6	288	93
APR 27...	10	2	<1	<1	43	<6	9	13	1210	98
SEP 01...	<10	1	4	<1	51	<6	6	5	27	65

ROANOKE RIVER BASIN

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/14	1150	WATER	0.1	3.04	2183	100	6.80	21.0		7.4	10
86/11/04	1010	WATER	0.1			88	7.20	16.0	1.4	9.3	
86/12/08	1100	WATER	0.1			78	7.40	8.0	1.6	10.3	
87/01/07	1215	WATER	0.1			89	7.10	8.0	8.5	10.5	
87/02/10	1130	WATER	0.1			65	7.30	5.0	17.0	11.6	
87/03/17	0900	WATER	0.1			58		6.0	23.0	12.6	
87/04/27	0915	WATER	0.1	11.25	33954	67		13.0	22.0	9.2	
87/05/19	1045	WATER	0.1	8.79	20664	75		19.0	40.0	11.6	
87/07/01	1250	WATER	0.1	3.42	2837	100		25.0	6.0	6.9	
87/09/29	1430	WATER	0.1	7.39	14496	75	6.85	24.0	19.0	5.4	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/14	1150	WATER	0.1	38	3	72					
86/11/04	1010	WATER	0.1	37	8	79					
86/12/08	1100	WATER	0.1	30	3	74					
87/01/07	1215	WATER	0.1	27	10	99					
87/02/10	1130	WATER	0.1	31	8	97					
87/03/17	0900	WATER	0.1		14	93					
87/04/27	0915	WATER	0.1		10	110					
87/05/19	1045	WATER	0.1		8	100					
87/07/01	1250	WATER	0.1		3	63					
87/09/29	1430	WATER	0.1	28	12	67					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/02/10	1130	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/19	1045	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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 good except periods of estimated record which are fair. Occasional intermittent diversion for irrigation.

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

AVERAGE DISCHARGE.--48 years, 157 ft^3/s, 12.77 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,200 ft^3/s Apr. 27, 1978, gage height, 18.87 ft; no flow for part of Aug. 14, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 25	0930	3,120	8.90	Mar. 2	unknown	*7,610	*13.88
Jan. 20	0430	5,360	11.63	Mar. 11	unknown	unknown	unknown
Feb. 24	0500	2,780	8.42	Apr. 16	0430	4,390	10.53

Minimum daily discharge, 0.74 ft^3/s Aug. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e3.8	e7.0	511	242	512	e2500	e346	109	25	11	2.4	e3.1
2	e3.5	e5.0	170	1490	510	e4500	160	97	64	9.8	1.6	e2.0
3	e3.3	e4.0	79	429	558	e2600	130	90	62	14	2.9	e1.3
4	e3.1	e3.0	e185	210	424	e1280	251	81	68	104	5.0	e1.1
5	e3.0	e2.2	e105	145	270	e391	243	77	57	98	3.0	e1.3
6	e2.8	e2.5	e63	113	196	e284	165	75	39	44	2.1	e2.6
7	e2.6	3.0	e46	97	163	e241	135	69	29	27	1.7	e7.8
8	e2.5	3.9	e40	87	142	e220	120	63	23	19	e1.1	e17
9	e2.4	21	e38	77	121	e241	108	57	20	15	e1.2	e35
10	e2.6	13	e41	73	104	e1020	98	51	17	12	e1.1	e14
11	e2.8	7.9	e92	81	95	e1740	92	48	15	9.8	e1.0	e9.8
12	e3.0	9.7	e373	79	90	e1370	91	45	14	8.0	e.94	e5.5
13	e3.0	14	e164	68	87	e407	99	42	15	8.0	e.86	e18
14	e3.1	27	e93	59	82	e292	92	43	14	7.5	e.78	e13
15	e4.0	19	e71	55	82	e246	1170	44	14	8.8	e.86	e6.6
16	e5.2	15	e63	52	86	e223	4090	43	15	7.8	e1.2	e4.3
17	e4.5	23	e59	53	115	e222	2630	39	280	6.7	e1.3	e3.4
18	e4.0	20	46	256	138	e208	1080	36	78	5.9	e1.4	e7.4
19	e3.5	16	37	2130	135	e207	783	35	40	5.0	e1.4	e5.5
20	e3.2	83	e46	3630	164	e348	409	166	27	4.6	e1.2	e5.0
21	e3.0	88	e42	576	270	e301	286	96	20	4.4	e1.0	e3.7
22	e2.7	46	e39	905	521	e224	220	64	17	4.3	e1.2	e3.0
23	e2.7	30	e36	1080	2040	e187	176	51	16	3.8	e1.4	e2.5
24	e2.8	84	450	406	2190	e164	261	43	20	3.5	e1.5	2.2
25	e3.0	262	2330	315	922	e150	829	37	19	3.6	e1.2	1.3
26	e8.0	93	475	307	843	e142	604	39	16	2.9	e.94	.95
27	e15	52	212	227	609	e137	286	47	18	2.6	e.86	e.84
28	e22	38	140	179	1190	e708	198	40	26	2.4	e.78	e.82
29	e16	34	107	151	---	e974	152	35	18	2.0	e.74	e.78
30	e12	54	90	181	---	e332	125	31	13	2.2	e.78	e.90
31	e9.0	---	79	648	---	e304	---	28	---	2.4	e1.3	---
TOTAL	162.1	1080.2	6322	14401	12659	22163	15429	1821	1099	460.0	44.74	180.69
MEAN	5.23	36.0	204	465	452	715	514	58.7	36.6	14.8	1.44	6.02
MAX	22	262	2330	3630	2190	4500	4090	166	280	104	5.0	35
MIN	2.4	2.2	36	52	82	137	91	28	13	2.0	.74	.78
CFSM	.03	.22	1.22	2.78	2.71	4.28	3.08	.35	.22	.09	.01	.04
IN.	.03	.24	1.41	3.21	2.82	4.94	3.44	.41	.24	.10	.01	.04

CAL YR 1986 TOTAL 29941.07 MEAN 82.0 MAX 3840 MIN .98 CFSM .49 IN. 6.67
WTR YR 1987 TOTAL 75821.27 MEAN 208 MAX 4500 MIN .74 CFSM 1.24 IN. 16.9

e Estimated

PAMLICO RIVER BASIN

02081500 TAR RIVER NEAR TAR RIVER, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/24	0825	WATER	0.1	.00	3	58	7.00	11.0		7.3	130
86/12/01	1000	WATER	0.1			55	6.70	9.0		8.1	
87/01/15	1015	WATER	0.1			42	7.30	4.0		12.6	
87/02/09	1110	WATER	0.1			40	6.80	4.0	17.0	10.3	
87/03/12	1200	WATER	0.1			32	6.50	7.0		11.1	
87/04/27	0630	WATER	0.1	4.31	315	35	6.40	12.0		8.8	
87/05/06	0900	WATER	0.1	3.52	75	58		15.0	11.0	6.8	
87/07/01	1020	WATER	0.1	1.55	11	78		25.0		4.5	
87/08/25	0740	WATER	0.1	.00	1						
87/09/28	0830	WATER	0.1	.00	1	65	7.15	18.0		4.2	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/24	0825	WATER	0.1	35	7	120					
86/12/01	1000	WATER	0.1	23							
87/01/15	1015	WATER	0.1	17							
87/02/09	1110	WATER	0.1	6	2	67	.25	.040	.300	.030	.010K
87/03/12	1200	WATER	0.1	24							
87/04/27	0630	WATER	0.1	14							
87/05/06	0900	WATER	0.1		5	62	.20	.070	.400	.050	.010K
87/09/28	0830	WATER	0.1	30							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/02/09	1110	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/06	0900	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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 days which are fair.

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

AVERAGE DISCHARGE.--14 years, 447 ft^3/s, 14.22 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,100 ft^3/s Apr. 28, 1978, gage height, 24.36 ft from floodmarks; minimum gage height observed, 1.30 ft several days in September 1967, August, September and October 1968 at site and datum, 0.4 mi upstream. Minimum discharge, 7.3 ft^3/s Aug. 14, 1977.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 21	0730	5,830	19.36	Mar. 2	2000	*7,990	*21.24
Jan. 24	0100	4,320	17.12	Mar. 11	2000	4,820	17.96
Feb. 25	0630	4,960	18.19	Apr. 17	1237	7,330	20.75

Minimum discharge, 17 ft^3/s Oct. 8, 9; minimum gage height, 3.53 ft Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	29	95	304	1110	4280	885	433	134	e38	41	79
2	28	28	121	1950	858	7470	619	390	148	e40	68	50
3	26	29	199	2500	915	6660	500	366	188	e60	45	33
4	25	28	472	752	838	3280	550	337	242	e120	33	27
5	23	31	268	456	638	1000	678	324	250	e115	48	33
6	21	31	162	345	473	727	542	303	199	e110	44	67
7	19	31	117	285	394	616	453	286	e190	e80	31	200
8	18	39	101	249	358	562	401	271	e150	e60	29	438
9	17	75	97	219	317	617	364	255	e110	e50	30	908
10	20	67	104	205	274	2620	334	238	e90	e38	27	368
11	22	62	234	212	249	4440	311	222	e75	e35	26	250
12	24	77	953	207	239	3520	315	206	e78	e33	24	140
13	22	93	420	187	229	1040	343	197	e70	e32	22	471
14	24	98	239	169	217	747	322	201	e55	e36	20	335
15	25	82	181	157	214	629	804	207	e40	e40	22	169
16	43	96	e162	150	222	569	5000	204	e30	e45	30	110
17	41	104	e151	154	276	567	7180	192	e240	e44	34	87
18	34	93	135	258	457	533	6080	177	e150	e42	36	190
19	26	84	127	1950	491	528	4090	175	e78	e40	36	141
20	23	74	117	4230	476	891	1980	453	e60	e38	32	129
21	21	85	108	5570	591	769	1050	452	e45	e35	26	95
22	19	93	99	3830	971	573	801	276	e50	e33	31	76
23	19	88	92	3960	2650	477	660	229	e58	e32	36	64
24	20	81	169	3770	4260	419	687	199	e58	e35	39	55
25	20	78	1710	1260	4780	383	2240	181	e52	29	30	49
26	38	74	2860	914	3270	363	2070	245	e54	28	24	45
27	61	71	828	739	1870	350	1130	229	e60	26	22	42
28	71	116	402	555	1900	1810	735	197	e70	25	20	40
29	42	172	299	484	---	2490	594	181	e60	26	19	38
30	31	114	242	444	---	848	500	159	e49	32	20	42
31	29	---	208	866	---	778	---	144	---	35	33	---
TOTAL	882	2223	11472	37331	29537	50556	42218	7929	3133	1432	978	4771
MEAN	28.5	74.1	370	1204	1055	1631	1407	256	104	46.2	31.5	159
MAX	71	172	2860	5570	4780	7470	7180	453	250	120	68	908
MIN	17	28	92	150	214	350	311	144	30	25	19	27
CFSM	.07	.17	.87	2.82	2.47	3.82	3.30	.60	.24	.11	.07	.37
IN.	.08	.19	.99	3.25	2.57	4.40	3.68	.69	.27	.12	.09	.42

CAL YR 1986 TOTAL 77343 MEAN 212 MAX 3560 MIN 9.3 CFSM .50 IN. 6.74
WTR YR 1987 TOTAL 192462 MEAN 527 MAX 7470 MIN 17 CFSM 1.23 IN. 16.8

e Estimated

PAMLICO RIVER BASIN

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/15	0850	WATER	0.1	3.74	26	82	6.90	13.0		7.3	300
86/12/08	0930	WATER	0.1			51	6.90	4.0		11.4	
87/01/07	1010	WATER	0.1			50	7.40	4.0		13.5	
87/02/10	1015	WATER	0.1			48	7.00	4.0	16.0	10.3	
87/03/17	0730	WATER	0.1			41	6.10	6.0		11.6	
87/04/27	0720	WATER	0.1	9.78	1249	49	6.80	12.0		8.8	
87/05/19	0900	WATER	0.1	5.09	164	80		22.0	7.4	8.7	
87/07/01	1650	WATER	0.1	.00	38	90		26.0		6.5	
87/09/28	1045	WATER	0.1	3.99	41	83	7.15	20.0		7.2	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/15	0850	WATER	0.1	42	6	120					
86/12/08	0930	WATER	0.1	16							
87/01/07	1010	WATER	0.1	20							
87/02/10	1015	WATER	0.1	20	9	87	.33	.040	.200	.060	.010
87/03/17	0730	WATER	0.1	12							
87/04/27	0720	WATER	0.1	20							
87/05/19	0900	WATER	0.1		11	87	.26	.050	.400	.080	.010K
87/09/28	1045	WATER	0.1	35							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/02/10	1015	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	40
87/05/19	0900	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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 good except estimated periods which are fair. The city of Rocky Mount diverted an average of 13.3 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.

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

AVERAGE DISCHARGE.--15 years, 829 ft^3/s, 14.49 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft^3/s Apr. 30, 1978, gage height, 21.62 ft; minimum, 35 ft^3/s Oct. 19, 20, 1981, gage height, 3.17 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,100 ft^3/s Apr. 19, gage height, 19.97 ft; minimum, 56 ft^3/s Nov 11, 12; minimum gage height, 3.33 ft Aug. 29-31, Sept 2, 3, and 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	81	75	e700	1310	5350	1540	931	273	192	114	78
2	97	81	77	e1800	1590	7400	1510	819	258	170	117	76
3	98	81	78	2610	1410	6210	1180	828	257	160	115	76
4	96	81	82	3200	1410	7610	1060	823	321	150	112	77
5	93	80	247	1870	1300	7980	1040	806	382	160	113	79
6	94	81	365	1010	1050	6760	1150	745	401	e170	114	78
7	96	81	285	719	840	1930	998	669	362	e200	115	78
8	98	80	220	582	747	1250	853	591	296	e240	114	78
9	97	74	190	508	681	1160	780	567	246	e250	113	79
10	97	62	178	473	625	2260	724	527	200	e160	105	85
11	97	57	178	472	554	3820	670	483	184	e110	103	89
12	97	58	228	449	522	4720	662	439	177	e120	104	93
13	97	59	768	427	507	5020	737	407	161	e140	103	143
14	94	60	919	399	482	3120	750	335	162	e170	103	628
15	92	61	575	361	462	1570	1100	366	166	e200	103	708
16	92	61	386	330	476	1280	5320	386	171	e240	103	453
17	92	62	298	340	647	1150	8010	392	197	e300	101	293
18	91	67	256	553	892	1070	9160	371	469	e270	98	213
19	90	70	234	3120	1230	1090	9920	350	888	e230	98	187
20	92	70	215	5300	1360	1260	9740	415	571	e210	97	388
21	92	71	197	5650	1380	1550	8110	693	376	e170	95	472
22	90	72	186	6460	1590	1440	3210	824	303	e150	93	355
23	90	73	181	7570	3220	1130	1650	656	301	120	87	266
24	89	74	344	7980	4250	875	1410	507	333	119	86	208
25	87	75	e275	6950	4830	1820	2690	424	491	119	84	164
26	87	75	e720	4530	5090	96	3800	370	428	118	83	139
27	83	74	e2000	2050	5280	415	3460	376	306	116	79	122
28	81	74	e2400	1560	4550	1060	2140	415	237	120	77	114
29	81	75	e1100	1240	---	2340	1450	381	273	123	76	110
30	81	75	e650	1070	---	3010	1100	349	239	123	75	111
31	82	---	e570	985	---	1950	---	313	---	117	78	---
TOTAL	2842	2145	14477	71268	48285	87696	85924	16558	9429	5237	3058	6040
MEAN	91.7	71.5	467	2299	1724	2829	2864	534	314	169	98.6	201
MAX	99	81	2400	7980	5280	7980	9920	931	888	300	117	708
MIN	81	57	75	330	462	96	662	313	161	110	75	76
CFSM	.12	.09	.60	2.96	2.22	3.64	3.69	.69	.40	.22	.13	.26
IN.	.14	.10	.69	3.41	2.31	4.20	4.11	.79	.45	.25	.15	.29

CAL YR 1986 TOTAL 122984 MEAN 337 MAX 3380 MIN 57 CFSM .43 IN. 5.89
WTR YR 1987 TOTAL 352959 MEAN 967 MAX 9920 MIN 57 CFSM 1.24 IN. 16.9

e Estimated

PAMLICO RIVER BASIN

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/15	1320	WATER	0.1	3.55	92	75	6.90	18.0		6.3	20
86/11/05	1045	WATER	0.1			72	6.70	16.0		7.1	
86/12/09	1015	WATER	0.1			65	7.30	10.0		10.2	
87/01/13	0950	WATER	0.1			45	6.10	5.0		13.0	
87/02/23	0930	WATER	0.1			70	6.70	5.0	16.0	13.3	
87/03/17	1245	WATER	0.1			38		8.0		11.9	
87/04/27	1210	WATER	0.1	10.93	3476	49	6.00	13.0		9.2	
87/05/19	1320	WATER	0.1	4.52	346	86		26.0	11.0	7.3	
87/07/07	1010	WATER	0.1	.00	200	80	7.30	29.5		4.6	
87/09/28	1445	WATER	0.1	3.60	113	65	6.95	25.0		5.7	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/15	1320	WATER	0.1	34	2						
86/11/05	1045	WATER	0.1	36							
86/12/09	1015	WATER	0.1	30							
87/01/13	0950	WATER	0.1	12							
87/02/23	0930	WATER	0.1		13	83	.43	.160	.900	.110	.020
87/04/27	1210	WATER	0.1	16							
87/05/19	1320	WATER	0.1		25	110	.20	.140	.600	.090	.010
87/09/28	1445	WATER	0.1	22							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/02/23	0930	WATER	0.1	10K	10K	25K	20	50K		50K	38
87/05/19	1320	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	39

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.

WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Records good. Some regulation at low flow by mill above station. The city of Rocky Mount diverted an average of 17.3 ft^3/s for municipal water supply, most of which was returned as treated effluent below station.

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

AVERAGE DISCHARGE.--11 years, 928 ft^3/s, 13.62 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,300 ft^3/s May 1, 1978, gage height, 23.66 ft; minimum, 6.1 ft^3/s Oct. 2, 1983, Oct. 10, 1986; minimum gage height, 2.84 ft Oct 2, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,100 ft^3/s Apr. 18, gage height, 23.55 ft; minimum, 6.1 ft^3/s Oct.10; minimum gage height, 2.86 ft Dec. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	74	161	713	1330	6660	1730	1080	313	228	100	69
2	79	80	122	1800	1660	8390	1670	951	247	197	102	48
3	139	134	139	2910	1480	8830	1310	996	296	144	101	46
4	28	11	27	3750	1450	8220	1150	976	379	116	100	46
5	87	145	283	2250	1370	8660	1170	935	395	57	94	268
6	81	34	437	1090	1150	8170	1230	857	456	287	91	115
7	81	86	355	791	959	3370	1110	728	345	346	102	77
8	85	158	283	634	846	1420	964	653	316	269	97	78
9	274	42	246	546	725	1290	869	613	260	210	98	63
10	63	156	260	518	673	2890	777	555	213	172	107	72
11	12	26	216	519	601	4300	725	497	190	164	89	80
12	17	46	310	484	562	5540	738	469	177	165	84	173
13	57	83	710	450	528	5750	844	448	165	144	84	331
14	94	85	959	420	524	4190	835	412	159	127	83	608
15	112	120	632	390	505	1820	1300	395	247	117	94	777
16	16	115	459	376	518	1410	6550	319	161	113	87	503
17	142	106	337	375	783	1270	10100	449	242	110	79	347
18	21	102	317	744	1140	1190	11800	428	415	116	75	211
19	80	109	294	4160	1490	1240	11200	356	948	113	75	155
20	79	111	275	6920	1700	1390	10700	605	635	109	72	664
21	78	111	255	7470	1710	1620	9490	762	414	105	70	514
22	76	110	248	8070	1940	1580	5620	902	322	103	71	418
23	73	111	231	9110	4110	1240	2080	730	325	103	66	273
24	72	193	653	9510	5160	1030	1560	553	350	101	57	226
25	78	25	1040	8850	5880	2000	2930	470	491	107	55	170
26	144	144	1890	6730	5900	156	4730	367	457	107	53	142
27	28	47	3100	3000	5890	466	4560	394	353	102	48	123
28	69	134	1950	1860	5770	1140	2730	405	428	102	44	105
29	84	111	855	1430	---	2270	1670	436	292	103	44	230
30	137	46	589	1250	---	3320	1260	320	270	99	49	88
31	14	---	459	1160	---	2400	---	319	---	98	99.2	---
TOTAL	2456	2855	18092	88280	56354	103222	103402	18380	10261	4434	2470.2	7020
MEAN	79.2	95.2	584	2848	2013	3330	3447	593	342	143	79.7	234
MAX	274	193	3100	9510	5900	8830	11800	1080	948	346	107	777
MIN	12	11	27	375	505	156	725	319	159	57	44	46
CFSM	.09	.10	.63	3.08	2.18	3.60	3.73	.64	.37	.15	.09	.25
IN.	.10	.11	.73	3.55	2.27	4.15	4.16	.74	.41	.18	.10	.28

CAL YR 1986 TOTAL 141779.0 MEAN 388 MAX 3510 MIN 11 CFSM .42 IN. 5.70
WTR YR 1987 TOTAL 417226.2 MEAN 1143 MAX 11800 MIN 11 CFSM 1.24 IN. 16.8

PAMLICO RIVER BASIN

02082585 TAR RIVER AT NC 97 AT ROCKY MOUNT, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/15	1155	WATER	0.1	4.16	334	77	6.70	19.0		6.0	260
86/11/05	1130	WATER	0.1			77	6.70	16.0		6.5	
86/12/09	1045	WATER	0.1			67	6.80	10.0		9.7	
87/01/13	1030	WATER	0.1			50	6.30	5.0		12.4	
87/02/23	1000	WATER	0.1			47	6.70	5.0	33.0	12.0	
87/03/17	1215	WATER	0.1			41		8.0		12.5	
87/04/27	1150	WATER	0.1	12.91	4650	48	6.40	15.0		8.6	
87/05/19	1230	WATER	0.1	4.48	416	26		23.0	7.4	7.2	
87/07/07	1025	WATER	0.1	4.28	359	75	7.70	29.5		5.0	
87/09/28	1540	WATER	0.1	3.37	98	67	7.00	25.0		8.1	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/15	1155	WATER	0.1	33	3	100					
86/11/05	1130	WATER	0.1	36							
86/12/09	1045	WATER	0.1	31							
87/01/13	1030	WATER	0.1	14							
87/02/23	1000	WATER	0.1		31	110	.47	.080	.500	.140	.020
87/04/27	1150	WATER	0.1	19							
87/05/19	1230	WATER	0.1		5	84	.32	.080	.400	.090	.010
87/09/28	1540	WATER	0.1	17							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/02/23	1000	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	22
87/05/19	1230	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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.

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

AVERAGE DISCHARGE.--24 years, 157 ft^3/s, 12.84 in/yr.

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

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 2	0630	1,010	8.14	Mar. 12	2100	1,480	10.48
Jan. 18	2300	1,480	10.50	Apr. 18	0230	*4,970	*13.87
Jan. 22	0300	1,960	11.83	Apr. 25	0100	1,280	9.51
Feb. 23	1300	1,310	9.64	Apr. 27	1830	1,040	8.31
Mar. 3	2200	1,910	11.74				

Minimum discharge, 11 ft^3/s July 29, 31, Aug. 29, 30; minimum gage height, 2.12 ft Aug. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	26	45	211	e229	1370	226	192	70	47	15	23
2	29	27	47	927	e222	1710	173	160	77	44	37	35
3	27	26	72	694	209	1810	139	142	78	44	59	36
4	25	27	92	569	183	1630	173	137	105	68	48	30
5	23	29	88	308	155	637	192	139	119	90	69	27
6	22	30	64	166	135	316	166	128	94	82	42	31
7	20	33	52	129	127	237	128	114	81	70	25	46
8	18	32	48	112	123	196	109	102	69	58	21	76
9	17	33	47	99	115	209	98	94	60	47	20	132
10	18	50	49	92	105	991	87	86	55	40	20	172
11	20	46	63	102	98	1290	80	81	51	35	18	140
12	23	40	122	98	94	1420	85	76	49	31	21	81
13	23	57	130	88	94	1140	106	72	49	30	18	114
14	38	66	107	79	93	462	110	72	51	49	14	196
15	26	59	75	76	93	290	395	74	57	50	13	200
16	26	63	64	77	97	233	2630	77	59	38	14	112
17	30	69	59	233	228	216	4480	83	64	34	17	71
18	26	64	56	1080	406	191	4460	78	159	33	25	58
19	22	54	55	1320	486	189	2480	70	413	28	22	57
20	20	48	53	1020	480	238	1190	80	251	26	18	88
21	20	46	51	1480	470	213	587	167	104	23	19	150
22	18	52	47	1890	490	173	391	162	79	21	21	81
23	18	56	46	1440	1200	135	298	107	74	20	18	64
24	18	51	263	1050	1170	113	508	92	105	18	22	50
25	19	47	483	578	1030	99	1010	83	87	16	21	44
26	24	46	329	374	982	92	709	78	68	15	18	39
27	48	47	382	283	717	89	924	88	60	13	14	36
28	57	46	197	223	718	392	710	105	58	13	13	34
29	49	46	113	216	---	422	341	90	75	12	12	31
30	35	45	92	259	---	461	246	81	55	13	19	32
31	29	---	83	234	---	306	---	75	---	13	25	---
TOTAL	818	1361	3474	15507	10549	17270	23231	3185	2776	1121	738	2286
MEAN	26.4	45.4	112	500	377	557	774	103	92.5	36.2	23.8	76.2
MAX	57	69	483	1890	1200	1810	4480	192	413	90	69	200
MIN	17	26	45	76	93	89	80	70	49	12	12	23
CFSM	.16	.27	.68	3.01	2.27	3.36	4.66	.62	.56	.22	.14	.46
IN.	.18	.30	.78	3.48	2.36	3.87	5.21	.71	.62	.25	.17	.51

CAL YR 1986 TOTAL 37363 MEAN 102 MAX 924 MIN 4.5 CFSM .62 IN. 8.37
WTR YR 1987 TOTAL 82316 MEAN 226 MAX 4480 MIN 12 CFSM 1.36 IN. 18.4

e Estimated

PAMLICO RIVER BASIN

02082770 SWIFT CREEK AT HILLIARDSTON, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/15	0950	WATER	0.1	2.24	26	58	6.80	15.0		6.6	1600
86/11/05	1000	WATER	0.1			55	6.80	13.0		7.7	
86/12/09	0930	WATER	0.1			42	7.30	6.0		11.1	
87/01/20	1010	WATER	0.1			30	6.20	5.0		10.0	
87/02/23	1400	WATER	0.1			31	7.10	5.0	75.0	11.1	
87/03/17	1145	WATER	0.1			42		7.0		12.0	
87/04/27	1120	WATER	0.1	7.82	953	32	6.60	14.0		8.3	
87/05/27	0800	WATER	0.1	2.73	80	62		20.0	8.8	10.2	
87/07/01	1610	WATER	0.1	2.46	46	75		24.0		6.6	
87/09/28	1330	WATER	0.1	2.31	34	69	7.20	19.0		7.4	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/15	0950	WATER	0.1	31	4	90					
86/11/05	1000	WATER	0.1	31							
86/12/09	0930	WATER	0.1	22							
87/01/20	1010	WATER	0.1	7							
87/02/23	1400	WATER	0.1		72	170	.37	.330	.700	.170	.030
87/04/27	1120	WATER	0.1	26							
87/05/27	0800	WATER	0.1		2	82	.39	.030	.300	.080	.010
87/09/28	1330	WATER	0.1	25							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/05/27	0800	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Records good.

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

AVERAGE DISCHARGE.--28 years, 170 ft^3/s, 13.04 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft^3/s Oct. 7, 1972, gage height, 24.80 ft from floodmarks, from rating curve extended above 6,900 ft^3/s on basis of slope-conveyance study of peak flow; minimum, 0.72 ft^3/s Sept. 5, 1980.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 25	0730	1,360	10.94	Mar. 2	2300	2,160	14.27
Jan. 3	0900	1,320	10.79	Mar. 12	0300	2,860	15.92
Jan. 21	0830	1,890	13.33	Apr. 17	2300	*5,630	*19.19
Jan. 24	0200	2,010	13.76	Apr. 24	2130	1,410	11.19
Feb. 24	2230	2,020	13.82				

Minimum discharge, 9.4 ft^3/s Aug. 15; minimum gage height, 1.81 ft, Aug. 29-31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	15	24	224	312	1510	351	203	62	31	13	13
2	20	15	26	1130	246	2040	257	181	88	28	19	11
3	20	15	53	1220	227	1800	207	179	149	31	16	12
4	18	15	61	463	191	531	226	184	183	40	19	12
5	17	16	44	196	153	323	223	181	230	47	16	21
6	16	16	34	140	133	258	190	166	110	63	13	73
7	14	16	27	113	127	223	175	148	77	53	12	87
8	13	16	25	99	121	204	163	136	62	36	12	79
9	13	19	25	87	111	235	153	126	54	30	11	79
10	13	22	28	82	98	1280	141	115	47	25	40	48
11	12	21	50	97	93	2140	133	106	42	23	22	33
12	13	22	161	91	94	2480	136	98	39	21	14	34
13	14	34	95	78	96	641	147	93	39	120	11	113
14	17	39	51	69	92	356	133	93	46	104	10	85
15	17	34	41	66	98	285	365	97	50	46	11	54
16	15	37	37	65	105	251	1890	100	50	32	11	37
17	14	39	37	65	223	277	4390	91	119	27	12	30
18	13	35	36	254	471	246	4440	82	173	23	17	29
19	12	29	35	1140	547	228	2000	76	79	21	20	27
20	11	26	34	1680	500	259	703	93	75	19	31	167
21	11	29	32	1820	491	231	434	92	85	18	21	92
22	11	35	30	1260	565	199	341	88	57	16	16	51
23	11	35	28	1840	1440	180	273	83	51	15	14	37
24	11	30	410	1710	1900	168	540	77	133	14	14	30
25	12	28	1260	519	1780	161	1060	81	128	13	12	27
26	15	27	968	350	824	156	973	159	67	12	12	24
27	30	27	310	283	526	153	643	226	56	12	11	22
28	34	27	144	211	665	453	386	109	48	14	11	20
29	24	27	100	191	---	723	291	87	40	16	10	19
30	18	26	81	198	---	362	237	77	34	15	9.9	19
31	15	---	73	332	---	346	---	66	---	13	11	---
TOTAL	495	772	4360	16073	12229	18699	21601	3693	2473	978	471.9	1385
MEAN	16.0	25.7	141	518	437	603	720	119	82.4	31.5	15.2	46.2
MAX	34	39	1260	1840	1900	2480	4440	226	230	120	40	167
MIN	11	15	24	65	92	153	133	66	34	12	9.9	11
CFSM	.09	.15	.79	2.93	2.47	3.41	4.07	.67	.47	.18	.09	.26
IN.	.10	.16	.92	3.38	2.57	3.93	4.54	.78	.52	.21	.10	.29

CAL YR 1986 TOTAL 34179.8 MEAN 93.6 MAX 1300 MIN 6.6 CFSM .53 IN. 7.18
WTR YR 1987 TOTAL 83229.9 MEAN 228 MAX 4440 MIN 9.9 CFSM 1.29 IN. 17.5

PAMLICO RIVER BASIN

02082950 LITTLE FISHING CREEK NEAR WHITE OAK, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/15	1015	WATER	0.1	2.12	17	72	6.90	15.0		6.6	180
86/11/05	0930	WATER	0.1			68	6.80	13.0		6.3	
86/12/09	0900	WATER	0.1			58	7.20	6.0		10.8	
87/01/20	1100	WATER	0.1			20	6.30	5.0		9.9	
87/02/23	1300	WATER	0.1			25	7.00	3.0	65.0	11.4	
87/03/17	1120	WATER	0.1			38		7.0		12.3	
87/04/27	1105	WATER	0.1	7.16	651	44	7.60	13.0		8.0	
87/05/27	0730	WATER	0.1	4.77	281						
87/07/01	1520	WATER	0.1	2.47	31	80		24.5		5.4	
87/09/29	1620	WATER	0.1	2.06	19	68	7.05	21.0		7.5	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/15	1015	WATER	0.1	48	1	99					
86/11/05	0930	WATER	0.1	38							
86/12/09	0900	WATER	0.1	28							
87/01/20	1100	WATER	0.1	6							
87/02/23	1300	WATER	0.1		71	160					
87/04/27	1105	WATER	0.1	22							
87/09/29	1620	WATER	0.1	34							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/02/23	1300	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	11

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.

WATER-DISCHARGE RECORDS

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 fair. Slight diurnal fluctuation and some regulation at low flow caused by mills above station.

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

AVERAGE DISCHARGE.--64 years, 497 ft^3/s, 12.84 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,600 ft^3/s Dec. 2, 1934, Aug. 18, 1940; maximum gage height, 17.72 ft Aug. 18, 1940; minimum daily discharge, 6.9 ft^3/s Oct. 5, 1968.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,200 ft^3/s Apr. 19, gage height, 16.47 ft; minimum, 42 ft^3/s Aug. 30, gage height, 0.25 ft; minimum daily, 44 ft^3/s Aug. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	82	112	337	875	2930	1010	690	217	123	50	54
2	78	76	110	1700	788	4040	852	613	221	114	60	59
3	77	76	127	2770	704	4740	686	621	285	108	67	57
4	74	76	221	2990	660	4830	650	606	415	124	65	61
5	69	78	274	1790	585	3720	703	602	496	155	78	66
6	66	82	201	750	527	1760	675	583	462	185	71	110
7	59	84	155	498	496	908	599	536	331	215	53	214
8	51	85	134	432	483	734	558	491	241	173	51	253
9	48	88	126	394	461	695	528	459	197	130	47	257
10	53	97	128	363	427	1950	500	432	173	109	46	272
11	55	118	141	364	398	3440	473	403	154	96	83	264
12	59	114	253	386	388	4170	461	380	144	86	93	213
13	64	115	470	359	387	4900	473	360	138	88	68	414
14	69	140	383	324	383	3880	492	346	138	229	53	438
15	79	158	262	296	379	1780	494	346	154	212	49	388
16	74	145	197	286	395	935	2430	359	163	142	53	286
17	77	148	171	285	493	803	4600	355	185	109	54	177
18	74	159	161	374	919	791	7440	320	406	94	63	131
19	66	141	155	1860	1310	734	9890	294	593	83	74	112
20	62	121	152	3820	1420	754	7600	287	502	76	69	244
21	59	112	148	4370	1310	776	4240	348	333	72	78	476
22	57	113	139	4650	1290	695	2150	364	279	68	68	375
23	57	133	133	5270	2530	622	1090	334	204	65	63	195
24	59	136	183	5450	3640	576	878	310	256	61	57	136
25	61	122	1920	4830	4130	547	2710	284	346	56	56	109
26	66	114	2460	3310	4230	527	3160	289	283	51	55	90
27	77	114	2080	1650	3390	516	2600	410	202	51	50	80
28	131	114	1160	913	2400	609	1670	403	173	48	47	75
29	153	112	558	708	---	1280	1050	317	159	47	44	72
30	115	114	397	659	---	1560	804	275	140	50	44	71
31	92	---	333	727	---	1110	---	243	---	48	49	---
TOTAL	2260	3367	13444	52915	35398	57312	61466	12660	7990	3268	1858	5749
MEAN	72.9	112	434	1707	1264	1849	2049	408	266	105	59.9	192
MAX	153	159	2460	5450	4230	4900	9890	690	593	229	93	476
MIN	48	76	110	285	379	516	461	243	138	47	44	54
CFSM	.14	.21	.82	3.25	2.40	3.51	3.90	.78	.51	.20	.11	.36
IN.	.16	.24	.95	3.74	2.50	4.05	4.35	.90	.57	.23	.13	.41

CAL YR 1986 TOTAL 116259 MEAN 319 MAX 3280 MIN 21 CFSM .61 IN. 8.22
WTR YR 1987 TOTAL 257687 MEAN 706 MAX 9890 MIN 44 CFSM 1.34 IN. 18.2

PAMLICO RIVER BASIN

02083000 FISHING CREEK NEAR ENFIELD, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/15	1055	WATER	0.1	.67	80	75	6.90	17.0		7.4	240
86/11/04	1200	WATER	0.1			62	6.90	14.0		7.5	
86/12/08	1145	WATER	0.1			48	7.10	6.0		11.4	
86/12/08	1415	WATER	0.1			48	7.10	6.0		11.4	
87/01/20	1130	WATER	0.1			25	6.40	6.0		11.3	
87/02/23	1230	WATER	0.1			30	6.90	5.0	65.0	11.2	
87/03/17	1100	WATER	0.1			38		7.0		12.2	
87/04/27	1035	WATER	0.1	12.18	2664	40	6.20	13.0		7.9	
87/05/27	0900	WATER	0.1	3.11	381	70		21.0	31.0	8.6	
87/07/01	1450	WATER	0.1	1.26	120	80		27.0		5.3	
87/09/29	1145	WATER	0.1	.65	71	71	6.90	20.0		6.7	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/15	1055	WATER	0.1	44	2	110					
86/11/04	1200	WATER	0.1	37							
86/12/08	1145	WATER	0.1	25							
86/12/08	1415	WATER	0.1	25							
87/01/20	1130	WATER	0.1	6							
87/02/23	1230	WATER	0.1		81	160					
87/04/27	1035	WATER	0.1	17							
87/05/27	0900	WATER	0.1		11	100					
87/09/29	1145	WATER	0.1	32							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/02/23	1230	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/27	0900	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.--No estimated daily discharges. Records good. Some diurnal fluctuation at low flow caused by mills above station. Town of Tarboro diverted 4.0 ft^3/s for municipal water supply.

AVERAGE DISCHARGE.--60 years, 2,231 ft^3/s, 13.88 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,200 ft^3/s Aug. 20, 1940, gage height, 31.77 ft; minimum, 36 ft^3/s Oct. 17, 22, 1933, Oct. 6, 1968.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 25,200 ft^3/s April 22, gage height, 28.37 ft; minimum, 144 ft^3/s Aug. 30, 31, gage height, 1.45 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	272	276	282	1780	4980	13100	5210	6260	787	561	240	186
2	244	231	325	2680	4240	14400	4730	4720	773	503	231	291
3	242	247	368	3880	4090	15500	4280	3900	670	463	250	195
4	294	279	360	4710	3800	16400	3720	3330	784	416	244	177
5	233	234	316	5490	3550	17100	3260	3030	937	397	254	305
6	219	232	414	5540	3280	17300	3060	2750	993	352	258	543
7	231	231	645	4900	2910	17300	2980	2480	1130	469	264	589
8	226	193	599	3970	2580	14400	2760	2220	1020	614	277	463
9	226	264	548	2710	2330	10400	2490	1990	899	589	271	495
10	338	231	483	2100	2100	7700	2280	1800	756	509	247	472
11	263	226	484	1810	1930	7240	2080	1630	632	450	223	449
12	188	254	486	1630	1780	7470	1940	1480	552	412	229	461
13	183	218	555	1500	1690	8900	1910	1360	507	398	198	832
14	200	240	944	1390	1600	9950	1950	1270	485	368	231	1240
15	243	262	1310	1290	1560	11100	2020	1200	468	355	238	1420
16	252	308	1070	1210	1520	10700	4450	1150	514	429	239	1570
17	214	364	857	1170	1660	8810	8480	1070	592	430	229	1310
18	251	340	721	1310	2230	6910	12000	1100	716	380	207	1010
19	226	333	663	3580	3110	5190	18300	1080	834	346	201	792
20	207	334	633	6960	3960	4350	22800	1040	1540	325	202	933
21	226	337	599	9430	4520	3910	25200	1180	1320	306	211	1490
22	221	323	564	11800	4950	3870	25000	1310	1010	283	214	1470
23	216	310	556	16100	6140	3690	21900	1440	861	267	215	1400
24	210	302	592	19400	7840	3210	16600	1320	829	252	208	1100
25	207	358	1330	19900	8680	2980	12400	1190	816	240	191	889
26	225	332	1990	20700	9620	3170	9760	1100	923	237	175	724
27	297	297	3460	20600	10800	2080	8990	1020	939	235	169	577
28	227	295	4380	17300	11900	2520	9020	976	779	228	163	474
29	198	295	4270	13700	---	3000	9180	1050	741	219	157	402
30	245	308	3260	9810	---	4240	7830	995	649	218	148	436
31	331	---	2180	7120	---	5040	---	871	---	221	152	---
TOTAL	7355	8454	35244	225470	119350	261930	256580	57312	24456	11472	6736	22695
MEAN	237	282	1137	7273	4262	8449	8553	1849	815	370	217	756
MAX	338	364	4380	20700	11900	17300	25200	6260	1540	614	277	1570
MIN	183	193	282	1170	1520	2080	1910	871	468	218	148	177
CFSM	.11	.13	.52	3.33	1.95	3.87	3.92	.85	.37	.17	.10	.35
IN.	.13	.14	.60	3.84	2.03	4.46	4.37	.98	.42	.20	.11	.39

CAL YR 1986 TOTAL 370273 MEAN 1014 MAX 5240 MIN 123 CFSM .46 IN. 6.31
WTR YR 1987 TOTAL 1037050 MEAN 2841 MAX 25200 MIN 148 CFSM 1.30 IN. 17.7

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 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV											
13...	0930	219	130	7.00	13.0	3.2	768	8.0	75	110	K12
JAN											
29...	0900	15500	49	6.90	1.0	32	768	13.9	97	96	360
APR											
27...	1100	8950	53	6.70	15.0	32	759	7.9	79	920	1800
SEP											
01...	1045	165	163	7.50	24.0	3.3	761	6.7	80	<4	170

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WHOLE IT-FLD (MG/L)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
NOV											
13...	31	5	7.6	2.9	12	42	1	3.7	32	26	15
JAN											
29...	14	2	3.3	1.3	3.0	28	0.4	2.3	10	8	12
APR											
27...	18	8	4.4	1.8	3.8	28	0.4	2.2	12	10	11
SEP											
01...	30	0	7.3	2.9	19	54	2	3.7	44	36	14

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE 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)
NOV											
13...	9.4	0.20	16	82	84	0.11	48	--	0.450	0.030	0.050
JAN											
29...	5.2	<0.10	8.2	54	44	0.07	2260	--	0.340	0.030	0.030
APR											
27...	4.1	0.10	9.6	66	45	0.09	1590	0.270	0.280	0.080	0.090
SEP											
01...	12	0.30	12	99	95	0.13	44	--	0.580	0.060	0.040

DATE	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)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)
NOV										
13...	0.06	0.27	0.30	0.260	0.250	0.200	0.61	40	<1	25
JAN										
29...	0.04	0.57	0.60	0.080	0.040	0.030	0.09	510	<1	22
APR										
27...	0.12	0.72	0.80	0.130	0.120	0.080	0.25	340	1	30
SEP										
01...	0.05	--	<0.20	0.360	0.340	0.280	0.86	20	1	27

PAMLICO RIVER BASIN

02083500 TAR RIVER AT TARBORO, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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 13...	<0.5	1	<1	<3	3	470	<5	<4	--	--
JAN 29...	<0.5	<1	<1	<3	2	390	<5	<4	18	<0.1
APR 27...	<0.5	<1	<1	<3	16	710	<5	<4	34	<0.1
SEP 01...	<0.5	<1	6	<3	2	330	<5	<4	140	<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. [2] FINER THAN .062 MM
NOV 13...	<10	2	<1	<1	56	<6	10	1	0.59	60
JAN 29...	<10	<1	<1	<1	20	<6	13	21	879	91
APR 27...	<10	<1	<1	<1	33	<6	16	31	749	97
SEP 01...	<10	1	<1	<1	59	<6	6	6	2.7	89

PAMLICO RIVER BASIN

02083500 TAR RIVER AT TARBORO, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/15	1230	WATER	0.1	1.91	248	112	7.10	18.0		7.8	50
86/11/05	1210	WATER	0.1			104	6.70	15.0		8.0	
86/12/09	1130	WATER	0.1			69	7.30	9.0		10.2	
87/01/13	1110	WATER	0.1			53	6.30	5.0		11.4	
87/02/23	1100	WATER	0.1			50	6.90	5.0	18.0	11.5	
87/03/17	1330	WATER	0.1			35		9.0		11.3	
87/04/27	1245	WATER	0.1	17.55	8888	50	6.50	15.0		8.8	
87/05/27	1045	WATER	0.1	4.30	1057	93		22.0	7.5	7.6	
87/07/07	1100	WATER	0.1	2.70	470	110	7.50	28.5		4.1	
87/09/29	1035	WATER	0.1	2.49	405	102	6.85	21.0		6.4	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/15	1230	WATER	0.1	39	1	120					
86/11/05	1210	WATER	0.1	40							
86/12/09	1130	WATER	0.1	30							
87/01/13	1110	WATER	0.1	12							
87/02/23	1100	WATER	0.1		27	100					
87/04/27	1245	WATER	0.1	20							
87/05/27	1045	WATER	0.1		10	120					
87/09/29	1035	WATER	0.1	23							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/02/23	1100	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	19
87/05/27	1045	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--30 years (1958-87), 80.1 ft^3/s, 13.93 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,580 ft^3/s Aug. 23, 1967, gage height, 15.74 ft; minimum, 0.40 ft^3/s Aug. 28, 29, Sept. 3, 1980, gage height, 0.07 ft.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 470 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 20	1000	633	10.42	Mar. 2	0800	678	10.82
Jan. 24	0200	769	11.71	Apr. 19	0300	*864	*12.68

Minimum discharge, 0.69 ft^3/s, Aug. 27, 28, 29, gage height, 0.29 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	2.8	3.0	47	140	479	168	84	14	5.9	22	3.5
2	4.1	2.8	3.6	189	129	651	126	75	13	5.6	6.6	4.0
3	4.0	2.5	7.6	100	123	404	107	102	14	5.6	4.3	2.9
4	3.9	2.9	11	69	112	242	116	95	15	6.1	2.9	2.6
5	3.6	2.6	6.3	56	101	184	113	85	22	6.7	3.1	63
6	3.5	2.7	5.4	47	95	154	97	76	14	7.1	4.6	89
7	3.3	2.6	4.9	42	93	135	87	67	12	8.5	6.1	29
8	3.3	2.6	4.9	38	90	123	79	60	11	6.1	5.1	21
9	3.4	2.3	5.0	34	84	118	71	54	11	4.4	4.1	14
10	3.5	2.3	5.2	34	76	203	64	49	10	4.0	3.7	11
11	3.8	2.9	5.7	42	72	200	60	44	9.7	10	3.4	9.6
12	3.9	3.5	7.2	38	70	163	57	41	9.5	36	3.3	9.7
13	3.8	3.4	14	34	67	144	56	38	9.4	14	3.0	162
14	3.9	3.2	14	30	64	125	54	35	9.7	9.1	2.7	139
15	3.7	3.9	12	29	64	111	61	34	9.7	7.1	3.4	60
16	3.4	3.8	11	27	64	102	433	32	8.6	6.7	7.9	36
17	3.3	4.0	11	27	96	100	752	30	69	6.1	6.9	25
18	3.2	4.1	10	88	172	93	830	28	26	5.6	4.6	20
19	2.9	3.6	10	390	172	93	832	26	17	5.1	4.5	16
20	2.8	3.3	10	619	143	138	508	26	14	4.0	3.9	170
21	2.8	3.4	9.3	394	124	126	278	25	11	4.1	3.6	125
22	2.7	3.2	8.7	476	114	108	219	23	10	3.8	3.2	67
23	2.7	3.2	8.5	747	288	93	185	22	8.6	3.3	2.9	45
24	2.5	3.5	27	728	248	84	171	21	8.3	3.0	2.7	33
25	2.4	3.4	113	406	176	78	311	20	7.6	2.7	2.6	27
26	3.1	3.4	56	396	143	73	220	21	7.8	2.6	2.3	22
27	3.3	3.4	40	321	135	79	165	20	10	2.9	1.5	18
28	3.2	3.0	32	240	247	213	135	18	8.1	3.4	.92	16
29	2.9	3.0	28	196	---	160	114	17	6.6	3.6	1.5	14
30	2.7	2.9	25	176	---	126	99	16	6.4	3.3	1.9	17
31	2.7	---	22	162	---	161	---	15	---	2.9	3.7	---
TOTAL	102.5	94.2	531.3	6222	3502	5263	6568	1299	403.0	199.3	132.92	1271.3
MEAN	3.31	3.14	17.1	201	125	170	219	41.9	13.4	6.43	4.29	42.4
MAX	4.2	4.1	113	747	288	651	832	102	69	36	22	170
MIN	2.4	2.3	3.0	27	64	73	54	15	6.4	2.6	.92	2.6
CFSM	.04	.04	.22	2.57	1.60	2.17	2.80	.54	.17	.08	.05	.54
IN.	.05	.04	.25	2.96	1.67	2.51	3.13	.62	.19	.09	.06	.61

CAL YR 1986 TOTAL 7062.03 MEAN 19.3 MAX 150 MIN 2.3 CFSM .25 IN. 3.36
WTR YR 1987 TOTAL 25588.39 MEAN 70.1 MAX 832 MIN .92 CFSM .90 IN. 12.2

PAMLICO RIVER BASIN

02083800 CONETOE CREEK NEAR BETHEL, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/23	1540	WATER	0.1	.35	3	144	6.90	15.0		9.4	320
86/11/13	1425	WATER	0.1			151	6.80	12.0	4.5	6.7	
86/12/16	1400	WATER	0.1			138	6.70	6.0	14.0	12.4	
87/01/20	1530	WATER	0.1			95	6.30	7.0	5.9	8.4	
87/02/09	1350	WATER	0.1			122	6.40	7.0	7.0	11.6	
87/03/11	1350	WATER	0.1			95	6.10	7.0	20.0	10.2	
87/04/01	1400	WATER	0.1	3.90	160	88	6.40	12.0	16.0	8.6	
87/05/07	1310	WATER	0.1	2.21	67	118	6.80	16.0	10.0	9.1	
87/06/24	1530	WATER	0.1	.77	8	139	6.90	21.5	8.0	7.4	
87/07/22	1530	WATER	0.1	.50	4	143		24.0	6.0	6.9	
87/08/31	1320	WATER	0.1	.47	4	153	6.40	20.5	30.0	7.2	
87/09/24	1400	WATER	0.1	1.48	32	115	6.20	19.0	8.0	7.8	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/23	1540	WATER	0.1	16	2	130	2.40	.030	.300	.030	.010K
86/11/13	1425	WATER	0.1	26	1K	93					
86/12/16	1400	WATER	0.1	17	14	120					
87/01/20	1530	WATER	0.1	6	32	140	2.40	.040	.500	.160	.030
87/02/09	1350	WATER	0.1	6	11	68					
87/03/11	1350	WATER	0.1	5	21	54					
87/04/01	1400	WATER	0.1	5	19	100	1.60	.120	1.200	.080	.010K
87/05/07	1310	WATER	0.1	6	5	99					
87/06/24	1530	WATER	0.1	11	7	110					
87/07/22	1530	WATER	0.1		5	120	2.40	.020	.300	.040	.010K
87/08/31	1320	WATER	0.1	10	40	150					
87/09/24	1400	WATER	0.1	7	4	150					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/23	1540	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/01/20	1530	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	12
87/04/01	1400	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	25
87/07/22	1530	WATER	0.1	10K	10K	25K	15	50K	.2K	50K	110

PAMLICO RIVER BASIN

02084148 CHICOD CREEK AT SECONDARY ROAD 1565 NEAR GRIMESLAND, NC

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

DRAINAGE AREA.--19 mi^2 .

PERIOD OF RECORD.--November 1975 to March 1987 (discontinued).

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

WATER QUALITY DATA, OCTOBER 1986 TO MARCH 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)
DEC												
16...	1500	1.4	--	--	--	4.2	--	--	--	--	--	--
JAN												
02...	1130	91	95	8.0	170	13	760	8.6	73	26	19	6.8
14...	1450	5.9	--	--	--	2.1	--	--	--	--	--	--

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	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)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
DEC												
16...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
02...	2.3	5.3	26	0.5	4.6	22	1.1	<0.10	7.1	57	54	0.08
14...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)
DEC											
16...	--	--	--	--	--	--	--	--	--	--	--
JAN											
02...	14	1.57	0.030	1.60	1.60	0.190	0.140	1	<1	3	1
14...	--	--	--	--	--	--	--	--	--	--	--

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
DEC											
16...	--	--	--	--	--	--	--	--	--	14	0.05
JAN											
02...	1600	280	<5	<5	<0.10	<0.1	<10	--	14	38	9.4
14...	--	--	--	--	--	--	--	--	--	4	0.06

PAMLICO RIVER BASIN

02084158 COW SWAMP NEAR GRIMESLAND, NC

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

DRAINAGE AREA.--17 mi^2.

PERIOD OF RECORD.--November 1987 to March 1987 (discontinued).

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

WATER QUALITY DATA, OCTOBER 1986 TO MARCH 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)
OCT										
20...	1610	0.58	--	--	--	3.2	--	--	--	--
DEC										
16...	1545	3.0	--	--	--	--	--	--	--	--
JAN										
02...	1400	103	120	8.5	210	--	760	9.0	77	37
14...	1500	11	--	--	--	1.0	--	--	--	--

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	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)
OCT										
20...	--	--	--	--	--	--	--	--	--	--
DEC										
16...	--	--	--	--	--	--	--	--	--	--
JAN										
02...	24	11	2.3	4.5	18	0.3	5.6	27	14	0.10
14...	--	--	--	--	--	--	--	--	--	--

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
OCT										
20...	--	--	--	--	--	--	--	--	--	--
DEC										
16...	--	--	--	--	--	--	--	--	--	--
JAN										
02...	5.7	88	78	0.12	24	2.25	0.050	2.30	2.20	2.2
14...	--	--	--	--	--	--	--	--	--	--

DATE	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
OCT										
20...	--	--	--	--	--	--	--	--	--	--
DEC										
16...	--	--	--	--	--	--	--	--	--	--
JAN										
02...	2.2	4.5	20	0.470	0.240	2	1	4	3	2000
14...	--	--	--	--	--	--	--	--	--	--

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT										
20...	--	--	--	--	--	--	--	--	11	0.02
DEC										
16...	--	--	--	--	--	--	--	--	6	0.05
JAN										
02...	230	<5	<5	<0.10	<0.1	<10	9	14	65	18
14...	--	--	--	--	--	--	--	--	3	0.09

PAMLICO RIVER BASIN

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, NC

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

DRAINAGE AREA.--45 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1975 to March 1987 (discontinued).

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

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--11 years (water years 1976-86), 48.6 ft^3/s, 14.66 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,660 ft^3/s Sept. 14, 1984, gage height, 12.48 ft; no flow at times during most years.

EXTREMES FOR CURRENT PERIOD (October to March).--Peak discharges greater than base discharge of 300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 2	1230	362	8.22	Mar. 1	2030	954	9.64
Jan. 20	0130	579	8.81	Mar. 28	0800	345	8.17
Jan. 22	2300	*1380	*10.42				

No flow Oct. 6-9.

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER 1986 TO MARCH 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.59	1.6	3.2	47	77	610						
2	.82	2.0	4.9	283	66	580						
3	.70	2.6	7.1	163	61	240						
4	.46	3.1	5.3	86	56	141						
5	.13	3.2	3.9	59	50	101						
6	.00	3.7	3.3	45	43	82						
7	.00	4.2	3.0	34	43	70						
8	.00	2.4	2.9	27	45	62						
9	.00	1.9	2.9	22	42	69						
10	.59	1.8	3.0	27	35	142						
11	1.6	1.8	4.2	39	31	105						
12	1.5	2.2	7.2	35	29	85						
13	1.5	3.2	11	29	26	78						
14	1.7	2.9	7.4	23	23	68						
15	2.0	3.4	5.5	20	24	60						
16	1.6	5.6	4.6	18	25	56						
17	1.3	4.1	4.0	30	120	54						
18	1.1	3.7	3.9	63	221	47						
19	.90	3.1	4.5	305	142	46						
20	.82	2.5	4.1	451	99	75						
21	.71	2.6	3.7	196	80	82						
22	.43	2.4	3.5	621	71	69						
23	.45	2.2	3.4	942	107	58						
24	.52	2.7	26	331	123	50						
25	.73	5.9	110	180	92	42						
26	1.1	4.7	79	188	74	36						
27	1.2	3.7	47	172	75	59						
28	1.2	3.3	30	123	209	288						
29	1.1	3.1	20	99	---	202						
30	1.5	3.1	14	88	---	128						
31	1.7	---	12	86	---	137						
TOTAL	27.95	92.7	444.5	4832	2089	3922						
MEAN	.90	3.09	14.3	156	74.6	127						
MAX	2.0	5.9	110	942	221	610						
MIN	.00	1.6	2.9	18	23	36						
CFSM	.02	.07	.32	3.46	1.66	2.81						
IN.	.02	.08	.37	3.99	1.73	3.24						

PAMLICO RIVER BASIN

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1975 to March 1987 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1975 to April 1987 (discontinued).
WATER TEMPERATURE: November 1975 to April 1987 (discontinued).
SUSPENDED-SEDIMENT DISCHARGE: November 1975 to April 1987 (discontinued).

INSTRUMENTATION.--Water-quality monitor and sediment pumping sampler November 1975 to Febuary 1987.

REMARKS.--Station operated to define the effects of channelization on stream quantity and quality in the Chicod Creek basin. Interruptions in the daily record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, >508 microsiemens July 6, Aug. 14, 1985; minimum, 30 microsiemens May 5, 1978.
WATER TEMPERATURE: Maximum, 32.0°C June 15, 16, 1981; minimum, 0.0°C Dec. 20, 1975, Jan. 10, 11, 18-25, 1976, Jan. 5, 6, 9, 11, 1981, Jan. 20, 1983, Jan. 22, 1984, Jan. 21, 22, 23, 24, 27, 1985, Jan. 29, 1986.
SEDIMENT CONCENTRATION: Maximum daily mean, 662 mg/L May 5, 1978; minimum daily mean, 0 mg/L during periods of no flow.
SEDIMENT LOAD: Maximum daily, 3,650 tons May 5, 1978; minimum daily, 0.0 tons during periods of no flow.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 482 microsiemens Nov. 30; minimum recorded, 71 microsiemens Jan. 23.
WATER TEMPERATURE: Maximum recorded, 21.7°C Oct. 10; minimum recorded, 1.6°C Feb. 18.
SEDIMENT CONCENTRATION: Maximum daily mean, 303 mg/L Aug. 8; minimum daily mean, 1 mg/L Oct. 11,12.
SEDIMENT LOAD: Maximum daily, 59 tons Aug. 8; minimum daily, 0.0 tons June 3,4,5,11-14.

WATER QUALITY DATA, OCTOBER 1986 TO MARCH 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT										
21...	1500	0.44	242	6.91	10.0	11	769	7.0	61	--
DEC										
17...	1200	4.6	364	--	8.0	47	768	6.0	50	180
JAN										
02...	1800	322	175	--	8.0	280	760	10.5	89	--
23...	1345	858	75	5.80	5.5	170	757	10.4	83	K3300

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT										
21...	--	95	13	32	3.6	15	23	0.7	9.4	21
DEC										
17...	260	83	0	26	4.3	14	22	0.7	18	37
JAN										
02...	--	33	16	9.7	2.1	5.0	20	0.4	7.6	24
23...	K3600	16	1	4.5	1.2	3.3	24	0.4	5.4	13

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT										
21...	16	0.20	6.8	186	160	0.25	0.22	2.89	0.010	2.90
DEC										
17...	25	0.20	11	196	190	0.27	2.4	3.41	0.090	3.50
JAN										
02...	9.6	0.10	6.2	83	75	0.11	72	1.75	0.050	1.80
23...	6.1	<0.10	4.0	60	47	0.08	139	1.08	0.020	1.10

PAMLICO RIVER BASIN

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, NC--Continued

WATER QUALITY DATA, OCTOBER 1986 TO MARCH 1987

DATE	NITROGEN, NO2+NO3 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)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT										
21...	2.80	0.80	0.60	3.7	16	0.430	0.390	<1	1	6
DEC										
17...	3.50	16	9.0	20	86	0.940	0.880	<1	<1	14
JAN										
02...	1.80	2.5	2.2	4.3	19	0.570	0.340	1	1	7
23...	1.00	2.6	2.4	3.7	16	0.560	0.240	<1	<1	14

DATE	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT										
21...	5	320	120	8	<5	<0.10	<0.1	300	13	6.9
DEC										
17...	3	420	230	14	<5	<0.10	<0.1	30	9	9.1
JAN										
02...	1	2000	290	<5	<5	<0.10	0.3	20	16	15
23...	2	790	180	10	<5	<0.10	<0.1	40	16	13

PAMLICO RIVER BASIN

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, NC--Continued

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG C, OCTOBER 1986 TO MARCH 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	284	252	268	437	389	416	455	396	437	227	156	206
2	298	260	277	438	379	413	467	408	443	158	104	122
3	288	245	268	433	369	406	459	361	424	122	105	113
4	294	254	274	436	344	397	432	394	419	132	105	118
5	294	241	272	437	378	403	429	374	403	141	120	133
6	299	206	260	456	394	429	451	362	411	145	108	129
7	306	258	281	---	---	---	415	356	399	170	119	142
8	311	235	273	---	---	---	419	365	395	185	146	167
9	312	269	295	---	---	---	429	361	396	186	147	161
10	315	275	298	---	---	---	444	375	403	205	148	180
11	320	267	297	---	---	---	405	356	382	209	174	193
12	305	269	296	---	---	---	416	350	392	206	185	196
13	316	251	277	---	---	---	412	343	376	199	175	184
14	319	262	307	---	---	---	426	338	375	185	156	173
15	316	252	290	434	344	392	408	317	378	204	150	166
16	299	246	262	480	371	403	411	309	377	214	166	188
17	298	228	264	459	373	413	346	289	315	194	157	177
18	293	234	271	453	406	429	335	266	300	185	132	161
19	294	231	259	458	376	413	316	266	294	167	100	130
20	322	216	251	477	381	422	314	261	294	112	91	100
21	271	209	244	460	397	419	311	258	281	121	99	108
22	289	233	268	475	357	414	294	247	274	127	81	99
23	324	270	293	465	392	434	274	249	262	267	71	104
24	347	291	314	473	365	437	309	208	272	370	169	283
25	343	291	326	457	384	426	211	149	180	440	98	209
26	373	330	355	462	404	430	179	157	172	---	---	---
27	389	344	372	456	398	417	187	172	181	---	---	---
28	383	332	359	441	365	405	192	173	184	---	---	---
29	391	316	358	454	356	401	197	176	188	---	---	---
30	426	324	391	482	377	431	214	159	187	---	---	---
31	446	362	411	---	---	---	222	183	200	---	---	---
MONTH	446	206	298	---	---	---	467	149	322	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	136	96	123						
2	---	---	---	110	93	100						
3	---	---	---	116	96	110						
4	---	---	---	113	103	110						
5	116	99	107	109	71	96						
6	113	105	109	104	84	93						
7	119	100	110	101	87	95						
8	118	96	106	118	96	109						
9	104	88	97	104	89	99						
10	98	88	93	105	90	98						
11	103	91	97	104	99	102						
12	108	98	103	119	91	103						
13	221	103	147	127	98	111						
14	212	102	160	125	99	111						
15	209	147	179	127	98	112						
16	203	138	162	129	106	117						
17	177	106	133	129	112	121						
18	120	89	104	145	123	130						
19	137	101	124	157	143	147						
20	136	108	128	167	153	158						
21	147	106	129	164	136	150						
22	142	110	131	163	146	152						
23	128	92	111	164	145	159						
24	---	---	---	140	108	123						
25	---	---	---	138	103	118						
26	---	---	---	138	118	128						
27	135	90	109	137	114	125						
28	138	126	133	113	95	103						
29	---	---	---	114	96	103						
30	---	---	---	136	104	114						
31	---	---	---	150	131	138						
MONTH	---	---	---	167	71	118						

PAMLICO RIVER BASIN

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, NC--Continued

TEMPERATURE, WATER, DEGREES CENTIGRADE, OCTOBER 1986 TO MARCH 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	20.4	19.5	20.0	14.6	12.8	14.1	12.8	11.2	12.1	7.9	5.6	6.7
2	21.3	19.8	20.5	15.0	13.6	14.4	13.5	11.8	12.4	8.0	6.0	7.0
3	21.1	19.1	20.2	15.5	14.3	15.0	14.2	12.6	13.7	7.1	5.0	5.9
4	21.7	19.0	20.4	15.1	13.0	13.8	14.1	11.7	12.9	5.2	3.5	4.5
5	21.2	20.1	20.9	14.0	12.9	13.4	11.8	9.4	10.6	5.5	3.1	4.7
6	21.2	19.6	20.4	14.8	13.3	14.2	10.0	7.8	8.8	5.0	2.4	3.7
7	20.9	18.9	19.7	15.5	13.7	14.8	8.6	6.7	7.7	6.8	2.7	4.5
8	19.3	16.6	17.7	15.7	14.3	15.1	8.4	7.2	7.9	6.9	4.5	6.3
9	18.2	17.0	17.7	16.8	14.9	15.8	10.8	8.1	9.1	5.6	3.8	4.7
10	18.7	17.2	17.9	17.0	15.6	16.4	13.3	10.3	11.6	7.5	4.0	5.6
11	17.6	16.3	16.8	16.2	14.4	15.2	13.6	12.4	13.1	8.0	5.9	7.0
12	16.6	15.7	16.3	15.0	13.8	14.5	12.5	10.4	11.6	6.6	5.1	6.1
13	16.9	15.6	16.2	14.4	12.5	13.6	11.2	8.7	9.9	6.4	4.8	5.6
14	19.0	16.5	18.2	12.0	8.7	10.3	9.3	6.9	7.7	7.6	3.8	5.5
15	19.1	16.0	18.1	9.7	8.4	8.8	8.0	5.6	7.1	9.6	6.3	7.7
16	16.0	14.0	15.1	10.1	8.4	9.3	8.3	6.4	7.5	10.3	7.6	9.2
17	14.4	12.8	13.6	11.6	8.7	10.1	8.9	6.1	7.5	9.2	7.7	8.5
18	13.5	11.7	12.8	11.7	10.2	11.1	10.2	7.4	8.7	8.2	6.8	7.5
19	12.9	10.8	11.7	12.3	10.1	11.4	9.9	7.6	8.6	10.0	7.3	8.4
20	11.8	9.3	10.6	11.5	9.4	10.8	8.1	6.0	7.6	10.1	6.7	8.5
21	10.7	9.3	10.0	11.3	10.1	10.7	7.8	6.0	7.0	9.2	6.6	8.0
22	10.7	9.0	9.9	11.1	9.0	10.1	6.4	5.1	6.0	8.9	6.9	7.7
23	11.0	9.2	10.3	10.3	7.9	9.4	6.1	4.5	5.4	8.1	5.0	6.9
24	12.4	10.4	11.4	10.8	8.8	9.9	10.5	5.4	7.9	7.0	2.6	5.6
25	12.8	11.0	12.0	12.7	10.6	11.6	11.1	10.0	10.5	7.6	4.9	6.2
26	14.2	12.3	13.4	13.2	11.2	12.3	10.5	9.7	10.2	6.6	4.5	5.7
27	15.3	14.3	14.8	14.2	12.9	13.4	10.0	8.3	9.3	4.6	2.7	3.9
28	15.0	13.3	14.2	14.1	12.9	13.4	9.0	7.5	8.4	4.0	2.3	3.1
29	14.4	12.3	13.4	13.7	12.0	12.8	8.1	6.6	7.3	4.2	2.0	3.1
30	14.8	13.1	13.9	13.6	11.7	12.8	7.5	6.0	6.6	7.8	3.9	5.5
31	14.6	13.0	14.1	---	---	---	7.2	5.3	6.4	7.9	5.9	6.8
MONTH	21.7	9.0	15.6	17.0	7.9	12.6	14.2	4.5	9.07	10.3	2.0	6.13

TEMPERATURE, WATER, DEGREES CENTIGRADE, OCTOBER 1986 TO MARCH 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	7.1	4.1	5.4	10.4	6.0	7.3						
2	8.1	5.7	6.9	10.9	6.7	9.2						
3	10.0	7.1	8.5	10.8	9.0	10.1						
4	9.9	7.9	8.8	13.3	10.0	12.0						
5	---	---	---	15.0	4.4	12.2						
6	---	---	---	7.9	5.4	6.6						
7	---	---	---	9.1	5.8	7.7						
8	---	---	---	9.6	7.6	8.7						
9	---	---	---	8.5	5.3	7.3						
10	---	---	---	8.8	6.1	7.7						
11	---	---	---	9.9	8.1	8.9						
12	---	---	---	12.0	9.2	10.8						
13	---	---	---	10.2	7.4	8.8						
14	---	---	---	9.6	6.4	8.2						
15	6.4	2.9	4.6	9.4	6.1	7.9						
16	3.6	2.0	2.6	9.6	7.2	8.7						
17	4.3	2.2	3.5	9.4	7.4	8.6						
18	4.5	1.6	3.3	11.1	8.7	9.7						
19	5.9	2.8	4.8	11.8	9.9	11.2						
20	5.4	2.7	4.3	9.7	5.9	7.7						
21	6.3	3.6	4.6	6.0	5.2	5.5						
22	7.4	4.4	6.3	5.9	4.9	5.4						
23	6.5	4.2	5.1	6.3	5.6	5.9						
24	---	---	---	5.6	4.4	5.1						
25	---	---	---	5.2	3.7	4.6						
26	---	---	---	6.7	5.3	5.9						
27	6.3	4.7	5.6	8.2	6.8	7.2						
28	6.0	3.5	4.5	8.6	5.1	6.3						
29	---	---	---	7.2	5.2	6.1						
30	---	---	---	8.7	6.4	7.4						
31	---	---	---	10.6	8.7	9.6						
MONTH	---	---	---	15.0	3.7	8.01						

PAMLICO RIVER BASIN

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, NC--Continued

SUSPENDED-SEDIMENT, OCTOBER 1986 TO APRIL 1987

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	36	.08	4	.01	5	13	8	5.0	7	1.3	82	140
2	67	.22	7	.02	5	.05	110	64	7	1.1	54	86
3	12	.03	5	.02	7	.11	38	16	7	1.0	14	4.6
4	6	.01	4	.02	9	.10	15	3.4	6	.81	44	16
5	10	.00	5	.03	10	.09	6	.87	6	.68	10	2.7
6	22	.00	5	.04	9	.06	5	.51	6	.58	10	2.1
7	16	.00	5	.04	6	.03	6	.45	7	.66	8	1.4
8	5	.00	6	.03	5	.03	4	.24	7	.70	5	.77
9	9	.00	7	.02	4	.02	4	.16	10	.92	27	4.7
10	11	.02	7	.02	3	.02	6	.34	9	.70	38	15
11	10	.05	7	.02	6	.06	8	.69	5	.34	13	3.7
12	7	.03	8	.03	6	.10	6	.45	5	.31	7	1.5
13	8	.03	6	.04	11	.30	7	.42	5	.27	7	1.4
14	13	.06	7	.03	14	.24	6	.37	5	.23	5	.85
15	9	.05	12	.08	13	.16	7	.25	6	.28	6	.89
16	7	.03	13	.15	13	.14	7	.25	27	2.6	10	1.4
17	7	.03	12	.10	11	.10	7	.43	37	8.4	8	1.0
18	4	.01	9	.07	5	.04	12	2.1	24	12	8	.86
19	3	.01	7	.04	6	.06	32	28	8	2.6	8	.84
20	3	.01	5	.02	8	.07	35	47	10	2.6	10	1.9
21	2	.00	3	.01	8	.07	18	9.7	10	2.1	10	2.1
22	3	.00	2	.01	6	.04	77	140	22	3.9	9	1.6
23	4	.00	5	.02	5	.03	56	140	26	7.4	6	.86
24	3	.00	5	.03	14	1.6	16	16	19	6.3	7	.79
25	2	.00	5	.06	110	32	12	5.7	9	2.2	10	.95
26	6	.00	10	.10	98	23	17	8.6	6	1.1	10	.81
27	8	.01	8	.07	37	4.2	15	7.0	19	4.3	40	7.8
28	5	.00	6	.04	9	.63	16	5.3	48	25	73	54
29	12	.01	5	.03	5	.22	17	4.5	---	---	28	15
30	12	.02	3	11	8	.26	6	1.4	---	---	14	4.8
31	4	.01	---	---	12	.32	5	1.1	---	---	14	5.2
TOTAL	---	0.72	---	12.20	---	77.15	---	509.86	---	90.38	---	381.52

PAMLICO RIVER BASIN

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/16	1050	WATER	0.1	5.59	2	420	7.60	15.0	7.2	2.2	
86/11/18	1245	WATER	0.1			365	7.40	12.0		3.2	
86/12/03	1400	WATER	0.1			303	7.20	14.5		3.2	
87/01/23	1045	WATER	0.1			70	7.10	5.0	7.1	10.1	
87/02/18	1250	WATER	0.1			99	6.80	4.0		10.8	
87/03/09	1400	WATER	0.1			122	6.50	14.0		7.6	
87/04/15	1145	WATER	0.1	6.26	17	162	6.80	15.0	8.0	4.5	
87/05/14	1335	WATER	0.1			241	7.10	17.5		.7	
87/06/11	1045	WATER									400
87/06/11	1220	WATER	0.1			202	7.30	19.0		.1	
87/07/21	1030	WATER	0.1			114	6.80	23.0	16.0	3.7	
87/08/26	1230	WATER	0.1			170	6.50	22.0		1.7	
87/09/21	1155	WATER	0.1			117	6.20	22.0		4.8	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/16	1050	WATER	0.1	194	1	200	2.50	21.000	25.000	2.400	1.700
86/11/18	1245	WATER	0.1	136							
86/12/03	1400	WATER	0.1	108							
87/01/23	1045	WATER	0.1	18	12	110					
87/02/18	1250	WATER	0.1	19							
87/03/09	1400	WATER	0.1	19							
87/04/15	1145	WATER	0.1	43	7	110					
87/05/14	1335	WATER	0.1	89							
87/06/11	1220	WATER	0.1	76							
87/07/21	1030	WATER	0.1	21	8	110					
87/08/26	1230	WATER	0.1	31							
87/09/21	1155	WATER	0.1	15							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/16	1050	WATER	0.1	10K	10K	25K	30	50K	.2K	50K	13
87/01/23	1045	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/04/15	1145	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/21	1030	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	24

PAMLICO RIVER BASIN

02084164 JUNIPER BRANCH NEAR SIMPSON, NC

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

DRAINAGE AREA.--7.5 mi^2.

PERIOD OF RECORD.--November 1975 to March 1987 (discontinued).

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

WATER QUALITY DATA, OCTOBER 1986 TO MARCH 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)
OCT										
20...	0815	0.66	--	--	--	2.2	--	--	--	--
DEC										
17...	0815	2.6	--	--	--	--	--	--	--	--
JAN										
02...	0945	29	165	8.5	45	--	760	9.2	79	52
14...	1430	5.8	--	--	--	1.6	--	--	--	--

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	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)
OCT										
20...	--	--	--	--	--	--	--	--	--	--
DEC										
17...	--	--	--	--	--	--	--	--	--	--
JAN										
02...	43	15	3.5	6.7	20	0.4	4.5	33	11	0.10
14...	--	--	--	--	--	--	--	--	--	--

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
OCT										
20...	--	--	--	--	--	--	--	--	--	--
DEC										
17...	--	--	--	--	--	--	--	--	--	--
JAN										
02...	6.9	109	86	0.15	8.6	4.58	0.020	4.60	4.60	1.4
14...	--	--	--	--	--	--	--	--	--	--

DATE	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
OCT										
20...	--	--	--	--	--	--	--	--	--	--
DEC										
17...	--	--	--	--	--	--	--	--	--	--
JAN										
02...	1.3	6.0	27	0.230	0.050	1	<1	3	<1	1200
14...	--	--	--	--	--	--	--	--	--	--

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT										
20...	--	--	--	--	--	--	--	--	8	0.01
DEC										
17...	--	--	--	--	--	--	--	--	3	0.02
JAN										
02...	9	<5	<5	<0.10	<0.1	<10	--	11	43	3.4
14...	--	--	--	--	--	--	--	--	4	0.06

PAMLICO RIVER BASIN

0208423100 FLAT SWAMP NEAR ROBERSONVILLE, NC

LOCATION.--Lat 35°46'54", long 77°15'26", Martin County, Hydrologic Unit 03020103, on right bank 5 ft downstream from bridge on Secondary Road 1157, 2.7 mi south of Robersonville.

DRAINAGE AREA.--21.3 mi^2.

PERIOD OF RECORD.--July 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 39 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Infrequent regulation caused by industrial withdrawal and discharge upstream from gage.

EXTREMES FOR CURRENT PERIOD.--July to September 1986: Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug. 12	1300	*270	*7.20				

Minimum discharge, 0.72 ft^3/s, July 20; gage height 2.09 ft.

Water Year 1987

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 20	1515	*582	*8.92	Mar. 2	0845	405	8.09
Jan. 23	0930	565	8.89				

Minimum discharge 0.67 ft^3/s, June 28, July 5; minimum gage height 2.19 ft, Oct. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, JULY 1986 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	e200	1.8	13
2	---	---	---	---	---	---	---	---	---	e60	1.1	11
3	---	---	---	---	---	---	---	---	---	e25	25	9.1
4	---	---	---	---	---	---	---	---	---	e17	33	8.0
5	---	---	---	---	---	---	---	---	---	e9.0	6.1	7.2
6	---	---	---	---	---	---	---	---	---	e6.4	3.9	6.3
7	---	---	---	---	---	---	---	---	---	e6.2	3.5	5.6
8	---	---	---	---	---	---	---	---	---	e6.0	2.6	5.4
9	---	---	---	---	---	---	---	---	---	e6.2	1.6	5.3
10	---	---	---	---	---	---	---	---	---	e7.2	37	5.0
11	---	---	---	---	---	---	---	---	---	e8.2	120	4.6
12	---	---	---	---	---	---	---	---	---	e2.4	243	21
13	---	---	---	---	---	---	---	---	---	e1.7	92	52
14	---	---	---	---	---	---	---	---	---	e1.8	30	13
15	---	---	---	---	---	---	---	---	---	1.8	17	9.3
16	---	---	---	---	---	---	---	---	---	1.8	11	7.4
17	---	---	---	---	---	---	---	---	---	1.8	8.6	6.1
18	---	---	---	---	---	---	---	---	---	1.8	7.9	5.2
19	---	---	---	---	---	---	---	---	---	1.1	115	5.0
20	---	---	---	---	---	---	---	---	---	.99	83	4.5
21	---	---	---	---	---	---	---	---	---	6.5	113	3.7
22	---	---	---	---	---	---	---	---	---	29	42	4.2
23	---	---	---	---	---	---	---	---	---	5.5	26	4.2
24	---	---	---	---	---	---	---	---	---	5.5	17	4.0
25	---	---	---	---	---	---	---	---	---	4.4	13	3.6
26	---	---	---	---	---	---	---	---	---	2.0	9.6	3.4
27	---	---	---	---	---	---	---	---	---	2.1	13	2.6
28	---	---	---	---	---	---	---	---	---	9.7	148	2.3
29	---	---	---	---	---	---	---	---	---	2.6	73	3.1
30	---	---	---	---	---	---	---	---	---	2.0	26	3.1
31	---	---	---	---	---	---	---	---	---	1.8	17	---
TOTAL	---	---	---	---	---	---	---	---	---	437.49	1340.7	238.2
MEAN	---	---	---	---	---	---	---	---	---	14.1	43.2	7.94
MAX	---	---	---	---	---	---	---	---	---	200	243	52
MIN	---	---	---	---	---	---	---	---	---	.99	1.1	2.3
CFSM	---	---	---	---	---	---	---	---	---	.66	2.03	.37
IN.	---	---	---	---	---	---	---	---	---	.76	2.34	.42

e Estimated

PAMLICO RIVER BASIN

0208423100 FLAT SWAMP NEAR ROBERSONVILLE, NC--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	1.5	4.5	144	36	261	26	17	e2.6	1.5	7.7	16
2	2.8	1.1	7.8	113	33	369	21	14	e2.5	1.5	2.1	3.8
3	2.6	2.0	17	49	32	142	20	18	e2.7	1.6	2.3	3.0
4	1.9	2.1	9.3	34	28	62	31	16	e3.0	.93	2.4	2.9
5	1.7	2.0	6.7	30	25	45	26	15	e4.0	.75	3.1	205
6	2.0	2.1	5.1	25	24	36	22	13	e2.5	1.2	3.3	146
7	2.4	2.0	4.5	23	25	31	20	10	e2.1	1.7	3.1	22
8	2.3	1.4	4.8	21	23	28	18	7.8	e2.1	1.6	2.0	19
9	2.3	1.5	4.7	19	21	29	16	e7.2	e2.0	1.7	1.6	13
10	2.7	2.6	5.4	24	19	52	15	e7.0	e1.9	1.6	2.1	11
11	2.0	2.1	7.0	32	18	44	13	e6.6	e1.9	39	2.2	9.8
12	1.6	5.1	16	27	18	38	12	e6.3	e2.0	19	2.3	84
13	2.8	3.8	22	23	17	35	13	e6.0	1.3	44	2.3	191
14	3.4	2.5	13	20	16	28	12	e5.7	1.8	5.6	2.3	47
15	2.5	4.3	11	19	17	25	21	e5.5	2.1	3.7	24	19
16	2.1	4.3	9.6	19	19	24	206	e5.2	1.9	3.3	9.9	12
17	1.4	6.0	8.6	20	75	25	338	e5.2	4.6	3.0	3.4	9.7
18	1.1	7.6	8.5	101	92	23	224	e5.0	1.9	2.1	2.9	8.1
19	1.0	3.9	8.7	336	59	31	82	e5.0	2.0	1.7	5.9	5.9
20	1.6	3.0	6.6	519	43	51	54	e5.0	1.8	2.2	8.8	56
21	1.6	4.0	5.8	268	35	37	42	e4.8	1.1	2.2	3.3	21
22	1.6	2.7	5.9	310	37	29	33	e4.6	1.7	1.7	2.8	12
23	1.5	2.3	5.9	527	151	24	27	e4.4	1.6	2.1	2.0	8.4
24	1.5	3.2	100	278	76	22	66	e4.3	1.6	2.1	2.3	7.1
25	1.2	3.0	105	97	50	20	211	e4.3	1.5	1.4	2.4	6.0
26	5.2	3.7	40	187	38	18	79	e4.4	1.7	1.1	2.4	4.4
27	2.9	3.5	28	100	45	18	46	e3.8	1.1	1.9	2.1	3.6
28	1.8	2.6	23	66	116	27	33	e3.4	.76	2.0	2.4	3.8
29	1.7	2.4	20	52	---	22	26	e3.1	1.3	2.1	1.7	3.6
30	1.7	2.1	18	48	---	22	21	e2.9	1.4	2.1	1.5	7.4
31	1.9	---	16	44	---	30	---	e2.8	---	19	18	---
TOTAL	65.8	90.4	548.4	3575	1188	1648	1774	223.3	60.46	175.38	134.6	961.5
MEAN	2.12	3.01	17.7	115	42.4	53.2	59.1	7.20	2.02	5.66	4.34	32.0
MAX	5.2	7.6	105	527	151	369	338	18	4.6	44	24	205
MIN	1.0	1.1	4.5	19	16	18	12	2.8	.76	.75	1.5	2.9
CFSM	.10	.14	.83	5.41	1.99	2.50	2.78	.34	.09	.27	.20	1.50
IN.	.11	.16	.96	6.24	2.07	2.88	3.10	.39	.11	.31	.24	1.68

CAL YR 1986 TOTAL 2720.97 MEAN 14.8 MAX 243 MIN .99 CFSM .69 IN. 4.75
WTR YR 1987 TOTAL 10444.74 MEAN 28.6 MAX 527 MIN .75 CFSM 1.34 IN. 18.2

e Estimated

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.

WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Records good. Runoff affected by ditches and canals above station. Several measurements of water temperature were made during the year.

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

AVERAGE DISCHARGE.--22 years, 36.9 ft^3/s, 19.27 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,070 ft^3/s Oct. 1, 1971, gage height, 13.24 ft; no flow at times many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 322 ft^3/s Mar. 2, gage height, 8.36 ft; minimum .01 ft^3/s Oct. 9, 10, gage height, 3.31 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.19	.11	5.9	20	60	170	94	39	2.4	.24	.25	33
2	.17	.14	7.7	49	52	310	79	30	1.8	.30	.42	28
3	.15	.13	8.1	77	46	230	66	24	1.6	.31	.44	24
4	.13	.11	7.7	82	41	161	63	20	6.3	.34	.76	19
5	.11	.11	8.4	66	36	119	60	19	4.5	.27	6.6	21
6	.07	.12	8.6	54	31	94	52	17	4.5	.25	8.7	20
7	.04	.12	8.3	45	31	78	45	15	3.3	.35	17	22
8	.03	.10	7.8	38	32	66	39	14	2.1	.48	32	22
9	.02	.09	7.5	32	29	57	34	13	1.3	.35	30	18
10	.05	.08	7.1	29	26	50	29	10	.95	.30	30	17
11	.09	.09	7.4	27	24	43	25	8.9	.69	.25	23	18
12	.07	.13	9.3	25	22	40	23	7.1	.55	.21	17	18
13	.05	.13	12	24	20	40	20	6.7	1.0	.18	16	17
14	.05	.13	13	22	18	37	18	8.0	7.7	.37	15	17
15	.06	.17	17	20	17	32	19	14	9.8	1.4	31	18
16	.05	.26	17	18	18	29	74	15	8.2	2.3	61	17
17	.05	.79	16	24	43	27	139	11	6.4	2.8	105	14
18	.08	2.0	15	29	63	25	122	8.2	4.0	2.3	71	11
19	.13	2.2	14	41	65	26	95	6.4	2.8	1.5	50	9.2
20	.15	2.0	13	53	59	31	79	6.2	2.2	1.0	107	14
21	.15	2.8	13	61	51	31	65	5.4	1.4	.76	155	12
22	.13	3.1	12	105	45	28	54	5.3	.97	.61	105	12
23	.12	3.1	11	203	49	26	45	5.6	.81	.47	65	11
24	.11	3.3	12	183	47	23	78	5.4	.75	.40	43	8.5
25	.11	3.7	13	134	42	21	184	5.6	.62	.33	30	6.7
26	.12	4.3	12	124	37	20	131	5.8	.36	.25	23	5.3
27	.12	4.7	11	116	40	31	111	5.5	.31	.22	17	4.4
28	.12	4.9	11	100	70	100	86	4.7	.25	.24	13	3.7
29	.12	5.0	11	84	---	114	67	5.5	.19	.22	11	3.0
30	.11	5.3	11	74	---	101	51	3.9	.16	.18	16	2.7
31	.11	---	10	68	---	104	---	2.9	---	.14	24	---
TOTAL	3.06	49.21	337.8	2027	1114	2264	2047	348.1	77.91	19.32	1124.17	446.5
MEAN	.10	1.64	10.9	65.4	39.8	73.0	68.2	11.2	2.60	.62	36.3	14.9
MAX	.19	5.3	17	203	70	310	184	39	9.8	2.8	155	33
MIN	.02	.08	5.9	18	17	20	18	2.9	.16	.14	.25	2.7

CAL YR 1986 TOTAL 5950.23 MEAN 16.3 MAX 293 MIN .00
WTR YR 1987 TOTAL 9858.00 MEAN 27.0 MAX 310 MIN .02

PAMLICO RIVER BASIN

02084540 DURHAM CREEK AT EDWARD, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/16	0930	WATER	0.1	3.43	0	58	5.00	17.0	6.0	.2	250
87/01/23	0930	WATER	0.1	7.71	202	69	5.60	6.0	8.5	9.0	
87/04/15	1300	WATER	0.1	4.57	17	132	4.60	15.0	2.0	5.2	
87/07/21	0920	WATER	0.1	3.70	1	53	4.90	22.0	8.0	1.0	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/16	0930	WATER	0.1	3	6	130	.02	.050	.600	.150	.030
87/01/23	0930	WATER	0.1	2	2	1400	.08	.010	.300	.040	.020
87/04/15	1300	WATER	0.1	1	6	54	.01K	.010	.400	.030	.010
87/07/21	0920	WATER	0.1	1	9	130	.05	.210	1.100	.250	.030

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/16	0930	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10
87/01/23	0930	WATER	0.1	10K	10K	25K	10K	50K	.02K	50K	10K
87/04/15	1300	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/21	0920	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	58

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.

WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Records good. Several measurements of water temperature were made during the year.

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

AVERAGE DISCHARGE.--10 years, 31.3 ft^3/s, 14.77 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 409 ft^3/s Nov. 6, 1977; maximum gage height, 4.73 ft Jan. 22, 1987; no flow at times during most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 226 ft^3/s Jan. 22, gage height, 4.73 ft; minimum, 0.03 ft^3/s July 10, 11, 12-14, gage height, 0.13 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	.41	1.2	37	103	98	139	45	.99	.08	1.4	.60
2	3.8	.41	2.4	89	91	130	127	40	.97	.07	1.8	.63
3	3.5	.41	7.8	91	82	124	114	39	.81	.07	.61	.54
4	3.3	.37	9.1	83	73	112	104	35	1.0	.07	.44	.42
5	3.0	.38	7.6	72	64	100	95	31	1.3	.07	.95	33
6	2.7	.38	6.6	62	58	89	86	27	.99	.07	16	67
7	2.3	.45	5.8	55	54	80	77	24	.86	.07	7.2	46
8	2.0	.41	5.6	49	50	71	67	21	.70	.06	4.6	55
9	1.8	.46	5.3	45	46	64	59	18	.62	.04	3.2	48
10	1.7	.48	5.0	43	43	59	53	16	.53	.04	2.5	42
11	1.7	.41	5.0	48	39	55	49	14	.45	.08	2.0	35
12	1.6	.44	6.7	47	36	52	45	12	.39	.05	1.6	29
13	1.5	.56	13	44	34	50	42	11	.34	.03	1.2	52
14	1.4	.59	14	40	31	48	38	9.5	.41	.12	.98	89
15	1.3	.73	13	37	29	45	36	8.8	.44	3.2	1.5	71
16	1.2	1.1	12	34	28	42	84	7.8	.31	5.1	2.0	54
17	.93	1.4	11	34	47	40	139	7.2	3.0	3.8	1.5	43
18	.86	2.1	10	46	67	37	138	6.3	2.5	3.3	.91	34
19	.83	1.8	9.5	107	67	36	132	5.5	1.5	3.0	1.3	27
20	.76	1.6	8.9	142	62	43	122	5.1	1.5	2.6	9.2	28
21	.76	1.6	8.3	137	57	44	111	4.8	.93	1.9	6.2	36
22	.71	1.6	7.8	179	53	42	100	4.6	1.4	1.2	4.0	30
23	.66	1.4	7.3	217	65	39	88	4.1	1.3	.71	2.8	23
24	.66	1.3	12	201	70	36	78	3.6	.78	.59	1.9	19
25	.64	1.4	50	187	65	33	80	3.1	.52	.57	3.9	16
26	.57	1.4	49	186	61	30	79	2.6	.41	.50	1.8	13
27	.57	1.5	43	172	57	50	72	2.3	.38	.57	1.2	11
28	.49	1.4	37	155	65	155	64	2.1	.30	.53	2.4	9.8
29	.46	1.2	32	141	---	156	56	1.9	.22	.57	.96	8.2
30	.41	1.2	30	129	---	151	50	1.5	.14	.57	.65	8.1
31	.41	---	27	117	---	148	---	1.2	---	.49	.57	---
TOTAL	46.52	28.89	462.9	3026	1597	2259	2524	415.0	25.99	30.12	87.27	929.29
MEAN	1.50	.96	14.9	97.6	57.0	72.9	84.1	13.4	.87	.97	2.82	31.0
MAX	4.0	2.1	50	217	103	156	139	45	3.0	5.1	16	89
MIN	.41	.37	1.2	34	28	30	36	1.2	.14	.03	.44	.42
CFSM	.07	.04	.65	4.24	2.48	3.17	3.66	.58	.04	.04	.12	1.35
IN.	.08	.04	.75	4.89	2.58	3.65	4.08	.67	.04	.05	.14	1.50

CAL YR 1986 TOTAL 6691.64 MEAN 18.3 MAX 127 MIN .37 CFSM .80 IN. 10.8
WTR YR 1987 TOTAL 11431.87 MEAN 31.3 MAX 217 MIN .03 CFSM 1.36 IN. 18.5

PAMLICO RIVER BASIN

02084557 VAN SWAMP NEAR HOKE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/20	1340	WATER	0.1	.24	1	68	4.10	12.0	24.0	6.1	210
86/11/25	1245	WATER	0.1	.30	1	139	4.40	12.0		6.2	
86/12/09	1115	WATER	0.1	.54	5	143	4.00	10.0		9.0	
87/01/06	1310	WATER	0.1	2.57	61	158	3.70	9.0	4.8	7.1	
87/02/11	1300	WATER	0.1	1.85	39	163	3.70	7.0		9.4	
87/03/24	1500	WATER	0.1	1.72	35	154	3.70	11.0		9.2	
87/04/30	1450	WATER	0.1	2.21	50	112	3.60	16.0	4.0	6.2	
87/05/26	1130	WATER	0.1	.37	3	148	3.90	22.0			
87/06/25	1400	WATER	0.1	.21	0	62	5.50	23.0		2.6	
87/07/29	1455	WATER	0.1	.22	1	85	4.80	28.0	24.0	3.9	
87/09/28	1400	WATER	0.1	.73	10	134	3.20	19.0		6.2	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/20	1340	WATER	0.1		3	110	.03	.400	1.300	.040	.010K
87/01/06	1310	WATER	0.1		1	99	1.90	.100	.800	.010	.010K
87/04/30	1450	WATER	0.1		4	88	.29	.030	.600	.010	.010K
87/06/25	1400	WATER	0.1	3							
87/07/29	1455	WATER	0.1	1	84	150	.04	.800	1.700	.090	.010
87/09/28	1400	WATER	0.1	0							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/20	1340	WATER	0.1	10K	10K	25K	23	50K	.2K	50K	10K

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.

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 0.9 ft^3/s by Orange-Alamance Water System, Inc. and 1.7 ft^3/s for municipal supply for town of Hillsborough, part of which is returned below station as treated effluent. Several measurements of water temperatures were made during the year.

AVERAGE DISCHARGE.--46 years, 61.1 ft^3/s, 12.57 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft^3/s Sept. 18, 1945, gage height, 20.01 ft; minimum, 0.01 ft^3/s July 10, 1986, gage height, 0.87 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	1800	1,950	11.24	Mar. 1	0800	*4,060	*16.11
Jan. 19	1530	2,060	11.63				

Minimum discharge, 0.03 ft^3/s July 2, gage height, 0.93 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	.29	3.5	87	145	3060	66	35	9.2	.10	1.4	.47
2	.42	.34	18	166	173	537	46	32	16	.61	.75	.34
3	.41	.26	68	77	195	240	54	30	10	2.6	.44	.25
4	.38	.17	27	49	143	132	146	27	8.8	53	.22	.24
5	.37	.25	13	40	117	97	86	27	8.3	13	.23	2.4
6	.32	.34	9.0	50	90	77	63	25	7.6	6.7	.62	5.4
7	.19	4.7	6.6	42	48	67	51	24	6.4	3.2	9.1	4.9
8	.17	2.4	5.0	18	42	64	45	25	4.8	1.3	2.0	318
9	.25	.97	4.6	16	35	69	40	23	3.8	.64	1.3	43
10	.45	.77	6.7	16	29	81	37	21	2.9	.34	.98	44
11	.43	.74	61	16	28	65	34	19	2.3	.21	.74	75
12	.70	3.4	74	14	26	54	36	17	2.6	39	.68	13
13	.97	2.0	31	13	24	50	49	31	3.0	52	.68	6.0
14	6.6	.77	18	12	23	45	41	43	3.4	12	.58	2.8
15	.83	5.9	13	11	24	43	266	27	3.0	5.1	.96	.72
16	.36	3.2	10	11	26	42	488	23	2.4	2.7	.79	.87
17	.22	1.4	8.8	13	45	41	264	19	5.9	.89	.49	1.5
18	.17	.84	8.2	68	40	39	183	16	7.5	.55	.20	1.9
19	.25	.70	7.7	963	40	69	139	18	6.7	.39	.21	1.5
20	.25	2.5	7.3	333	51	84	97	138	6.0	.23	.18	1.8
21	.17	3.0	6.2	118	84	60	74	40	4.6	.1	.22	9.4
22	.14	1.8	5.7	134	138	49	62	25	3.3	.13	.35	1.8
23	.17	3.4	5.3	137	460	43	53	21	2.0	.15	.42	1.3
24	.14	2.2	782	85	302	39	54	18	1.6	.32	.40	1.3
25	.62	1.3	258	74	165	37	170	18	.76	.41	.20	1.1
26	2.7	2.3	92	76	131	36	96	21	.84	.50	.16	1.2
27	.54	40	52	56	122	35	65	16	.74	.39	.21	1.2
28	.25	15	37	45	898	38	53	14	1.0	.26	.44	.97
29	.27	7.7	28	40	---	35	44	14	.89	.47	.24	.64
30	.19	5.1	24	67	---	37	39	12	.37	.28	.27	1.2
31	.19	---	20	166	---	76	---	11	---	.93	.77	---
TOTAL	19.52	113.74	1710.6	3013	3644	5441	2941	830	136.70	198.50	26.23	544.20
MEAN	.63	3.79	55.2	97.2	130	176	98.0	26.8	4.56	6.40	.85	18.1
MAX	6.6	40	782	963	898	3060	488	138	16	53	9.1	318
MIN	.14	.17	3.5	11	23	35	34	11	.37	.10	.16	.24
CFSM	.01	.06	.83	1.46	1.96	2.64	1.47	.40	.07	.10	.01	.27
IN.	.01	.06	.96	1.69	2.04	3.04	1.65	.46	.08	.11	.01	.30

CAL YR 1986 TOTAL 7341.32 MEAN 20.1 MAX 782 MIN .02 CFSM .30 IN. 4.11
WTR YR 1987 TOTAL 18618.29 MEAN 51.0 MAX 3060 MIN .10 CFSM .77 IN. 10.4

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.

WATER-DISCHARGE RECORDS

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. Satellite data transmitter at station.

REMARKS.--No estimated daily discharges. Records fair. Some regulation during periods of low flow caused by mill 600 ft upstream.

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

AVERAGE DISCHARGE.--24 years, 128 ft^3/s, 12.33 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,620 ft^3/s Apr. 26, 1978, gage height, 19.65 ft; minimum, 0.06 ft^3/s Aug. 14, 15, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	1800	2,890	9.24	Mar. 1	0900	*7,250	*16.65
Jan. 19	1600	3,680	10.79				

Minimum discharge, 0.86 ft^3/s Nov. 10; minimum gage height, 0.85 ft, Aug. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	3.8	14	231	367	5930	161	91	22	4.9	2.6	22
2	5.5	3.9	35	537	371	1240	112	81	22	6.4	5.0	4.5
3	6.2	4.0	155	223	443	609	136	76	27	20	6.0	2.3
4	6.5	3.8	98	124	319	368	441	69	22	220	4.2	2.1
5	6.0	2.1	54	91	235	258	260	69	19	88	4.1	4.6
6	5.9	2.9	36	80	185	203	170	65	17	47	3.0	19
7	6.2	12	26	83	128	171	135	63	15	27	2.1	31
8	5.2	15	20	65	101	159	115	61	12	16	12	703
9	5.1	6.2	17	45	84	193	100	59	9.9	12	7.9	216
10	5.6	1.3	20	45	71	230	92	54	7.9	8.2	3.2	61
11	5.4	3.5	105	48	66	177	83	51	6.3	7.3	2.1	176
12	5.3	13	240	42	65	145	86	46	5.9	6.8	1.6	66
13	5.3	13	109	37	67	130	104	43	5.3	123	1.3	39
14	19	12	64	34	67	118	100	78	5.6	70	1.2	21
15	23	19	46	33	67	108	703	67	6.2	36	1.3	13
16	12	25	38	32	70	106	1500	61	6.8	19	1.6	8.2
17	7.5	19	32	36	96	102	828	48	7.4	13	1.7	5.5
18	6.0	13	29	202	103	96	488	42	6.9	9.4	1.7	3.9
19	5.0	8.3	26	2160	105	170	385	39	12	6.4	1.9	12
20	3.8	11	22	955	133	239	265	154	12	5.2	1.7	7.7
21	3.6	13	27	355	226	164	196	87	8.8	4.3	1.8	8.5
22	3.8	20	22	567	417	131	158	53	7.6	3.7	1.6	20
23	3.5	15	21	513	1130	112	133	43	10	3.2	1.4	10
24	4.0	9.2	1150	270	882	100	188	38	9.5	2.7	1.2	4.0
25	4.8	7.0	866	209	517	92	488	34	4.6	2.7	1.3	2.2
26	10	7.9	277	206	403	89	314	33	3.8	2.7	1.7	2.6
27	4.8	37	142	146	368	101	186	36	4.3	2.9	1.9	3.1
28	7.0	60	96	116	1740	113	143	31	3.2	2.5	2.2	3.1
29	4.5	33	73	100	---	92	119	28	2.9	2.2	2.4	3.5
30	4.2	19	61	135	---	98	103	27	3.2	2.0	2.4	5.0
31	3.9	---	53	427	---	127	---	24	---	2.0	28	---
TOTAL	204.0	412.9	3974	8147	8826	11971	8292	1751	306.1	776.5	112.1	1479.8
MEAN	6.58	13.8	128	263	315	386	276	56.5	10.2	25.0	3.62	49.3
MAX	23	60	1150	2160	1740	5930	1500	154	27	220	28	703
MIN	3.5	1.3	14	32	65	89	83	24	2.9	2.0	1.2	2.1
CFSM	.05	.10	.91	1.86	2.24	2.74	1.96	.40	.07	.18	.03	.35
IN.	.06	.11	1.05	2.15	2.33	3.16	2.19	.46	.08	.20	.03	.39

CAL YR 1986 TOTAL 20846.7 MEAN 57.1 MAX 1210 MIN 1.1 CFSM .41 IN. 5.50
WTR YR 1987 TOTAL 46252.1 MEAN 127 MAX 5930 MIN 1.2 CFSM .90 IN. 12.2

NEUSE RIVER BASIN

02085070 ENO RIVER NEAR DURHAM, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/24	1040	WATER	0.1	1.73	4	128	6.90	13.0		7.6	110
86/11/13	1050	WATER	0.1	1.62	8	118	7.00	11.0		8.8	
86/12/10	1145	WATER	0.1	1.56	20	82	6.60	10.0		11.4	
87/01/28	1230	WATER	0.1	2.28	111	50	7.00	2.0		12.0	
87/03/03	1200	WATER	0.1			41	6.40	9.0	27.0	11.6	
87/03/03	1230	WATER	0.1	3.77	602						
87/03/16	1420	WATER	0.1	2.22	107	51		8.0		11.8	
87/04/07	1240	WATER	0.1	2.34	135	110	5.70	10.0		10.5	
87/05/26	1200	WATER	0.1	1.77	31	80		22.0	13.0	7.8	
87/06/24	0955	WATER	0.1	1.52	14	140		24.0	7.1	5.6	
87/08/25	1120	WATER	0.1	.87	1						
87/09/23	1340	WATER	0.1	1.55	10	95	7.40	22.0	34.0	8.4	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/24	1040	WATER	0.1	52	11	160	.02	.030	.700	.060	.020
86/11/13	1050	WATER	0.1	56			.09	.020	.500	.120	.060
86/12/10	1145	WATER	0.1	18			.29	.030	.300	.110	.050
87/01/28	1230	WATER	0.1				.66	.020	.200	.050	.020
87/03/03	1200	WATER	0.1		17	86	.38	.030	.300	.070	.010K
87/03/16	1420	WATER	0.1				.39	.010	.300	.050	.010K
87/04/07	1240	WATER	0.1	8			.22	.010	.400	.050	.010
87/05/26	1200	WATER	0.1		10	76	.59	.060	.300	.090	.040
87/06/24	0955	WATER	0.1				.17	.040	.300	.110	.040
87/09/23	1340	WATER	0.1	23			.25	.040	.500	.120	.030

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/03/03	1200	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/26	1200	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

NEUSE RIVER BASIN

02085079 ENO RIVER NEAR WEAVER, NC

LOCATION.--Lat36°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 mi^2.

PERIOD OF RECORD.--Water years 1983 to June 1987 (discontinued).

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 the chemical-quality characteristics of inflow into the Falls Lake.

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, OCTOBER 1986 TO JUNE 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT												
28...	1115	6.8	245	6.30	16.0	17	758	5.6	57	46	15	11
NOV												
24...	1000	10	210	7.40	10.0	48	757	10.8	96	46	0	11
JAN												
08...	1000	66	93	7.70	4.0	--	757	--	--	--	--	--
FEB												
24...	0945	910	65	6.70	4.5	110	757	14.3	111	16	2	3.6
MAR												
25...	1115	91	90	7.70	11.0	27	755	13.3	122	27	3	6.5
APR												
16...	1230	1420	58	7.10	14.0	130	740	9.8	98	18	4	4.4
MAY												
18...	1045	42	110	7.30	21.0	12	762	10.2	114	32	0	7.6

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	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)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
OCT												
28...	4.6	25	51	2	4.3	25	17	0.30	10	154	120	0.21
NOV												
24...	4.6	20	46	1	4.2	24	17	0.10	10	136	120	0.18
JAN												
08...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
24...	1.6	4.0	33	0.5	1.4	13	4.9	<0.10	7.4	48	44	0.06
MAR												
25...	2.5	9.5	42	0.8	1.8	9.8	7.3	<0.10	5.6	42	57	0.06
APR												
16...	1.8	3.9	30	0.4	1.4	--	3.9	0.10	10	50	--	--
MAY												
18...	3.1	8.7	36	0.7	1.6	5.0	7.0	<0.10	10	70	65	0.09

NEUSE RIVER BASIN

02085079 ENO RIVER NEAR WEAVER, NC--Continued

WATER QUALITY DATA, OCTOBER 1986 TO JUNE 1987

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
OCT											
28...	2.8	1.25	0.050	1.30	1.20	0.170	0.080	0.10	0.83	0.82	1.0
NOV											
24...	3.7	0.670	0.030	0.700	--	0.160	--	--	0.94	--	1.1
JAN											
08...	--	0.590	0.010	0.600	--	0.150	--	--	0.35	--	0.50
FEB											
24...	118	0.380	0.020	0.400	--	0.070	--	--	1.3	--	1.4
MAR											
25...	10	0.090	0.010	0.100	--	0.030	--	--	0.27	--	0.30
APR											
16...	--	0.180	0.020	0.200	--	0.080	--	--	1.8	--	1.9
MAY											
18...	7.9	0.370	0.030	0.400	--	0.240	--	--	0.66	--	0.90

DATE	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)
OCT											
28...	0.90	2.3	10	2.50	1.20	1.30	1.20	3.7	<1	<1	<10
NOV											
24...	--	1.8	8.0	0.900	--	0.820	--	--	--	--	--
JAN											
08...	--	1.1	4.9	0.090	--	0.100	--	--	<1	<1	<10
FEB											
24...	--	1.8	8.0	0.110	--	0.060	--	--	--	--	--
MAR											
25...	--	0.40	1.8	0.050	--	0.030	--	--	<1	<1	<10
APR											
16...	--	2.1	9.3	0.080	--	0.050	--	--	<1	<1	<10
MAY											
18...	--	1.3	5.8	0.480	--	0.110	--	--	--	--	--

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)	NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	LENE BLUE ACTIVE SUB-STANCE (MG/L)	SEDI-MENT, SUS-PENDED (MG/L)	MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT											
28...	6	530	10	70	<0.10	<1	--	6.2	0.07	--	--
NOV											
24...	--	--	--	--	--	--	--	5.9	--	5	0.13
JAN											
08...	7	1000	<5	40	<0.10	<1	<10	6.7	--	13	2.3
FEB											
24...	--	--	--	--	--	--	--	8.0	--	88	216
MAR											
25...	6	530	<5	40	<0.10	<1	10	3.5	--	10	2.5
APR											
16...	10	4900	13	290	0.10	<1	20	11	--	161	617
MAY											
18...	--	--	--	--	--	--	--	10	--	16	1.8

NEUSE RIVER BASIN

02085220 LITTLE RIVER NEAR ORANGE FACTORY, NC

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

DRAINAGE AREA.--80.4 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1930, 1954-59, 1961. September 1961 to September 1987 (discontinued).

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

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

REMARKS.--Records good except during the period June 1 through August 28 which are fair.

AVERAGE DISCHARGE.--26 years, 73.2 ft^3/s, 12.36 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,070 ft^3/s Oct. 25, 1971, gage height, 12.56 ft from high-water mark in well; minimum, 0.01 ft^3/s Sept. 3-7, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--A field estimate of 0.03 ft^3/s was made on Sept. 18, 19, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	1730	1,940	5.29	Mar. 1	0830	*5,220	*9.18
Jan. 19	1600	2,370	5.89				

Minimum daily discharge, 0.16 ft^3/s Aug. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.1	5.9	124	208	3880	66	53	30	5.2	3.0	.38
2	.93	1.4	12	265	235	463	58	36	30	5.4	2.2	.43
3	.89	1.3	129	108	245	213	62	44	32	6.7	1.7	.37
4	.91	1.5	56	70	176	148	221	34	36	59	1.4	.30
5	.76	2.4	23	53	114	115	116	41	31	33	1.6	.38
6	.68	1.3	14	42	87	96	76	24	29	14	1.4	.78
7	.62	1.6	12	38	72	82	60	24	29	10	e1.0	.88
8	.60	2.2	9.6	33	69	77	58	27	26	8.2	e.68	108
9	.66	3.9	7.7	30	67	98	58	32	23	6.7	e.46	64
10	.57	2.6	9.1	31	63	145	58	23	21	5.6	e.37	12
11	.66	3.0	114	33	58	103	58	18	18	4.8	e.28	5.4
12	.85	6.3	164	30	57	78	59	18	18	5.8	.22	4.5
13	.61	7.4	64	28	55	69	71	29	18	11	.31	4.8
14	1.4	4.6	31	26	55	62	58	65	18	11	.29	3.0
15	.90	8.7	20	27	59	62	498	38	18	6.7	.29	2.6
16	.74	15	16	28	63	62	915	23	17	4.8	.30	1.5
17	.69	10	14	33	66	61	320	20	20	4.0	.22	1.6
18	.66	8.0	12	96	67	60	197	14	21	3.5	.19	3.0
19	.61	5.0	11	1350	66	111	162	20	18	2.8	.20	2.9
20	.60	4.4	10	450	66	137	116	125	16	2.6	.18	1.8
21	.62	6.0	8.5	162	103	86	91	51	15	2.5	.28	1.8
22	.69	7.4	7.5	174	185	66	74	42	11	2.1	.53	1.2
23	.66	9.1	7.4	201	735	60	60	35	11	2.1	.32	1.2
24	.50	6.9	770	128	439	60	79	33	10	1.9	.24	1.1
25	.59	5.2	594	107	238	62	166	32	10	1.7	.18	.81
26	1.0	5.7	136	107	208	62	108	31	9.4	1.5	.17	.82
27	.88	76	81	80	173	62	76	25	9.5	1.3	.17	.74
28	1.0	31	70	70	1180	61	59	25	7.9	1.2	.20	.72
29	.95	13	55	63	---	62	55	29	6.7	2.2	.18	.63
30	.95	8.5	47	88	---	61	55	26	5.8	1.5	.16	.76
31	.95	---	42	230	---	63	---	23	---	1.9	.38	---
TOTAL	24.33	260.5	2552.7	4305	5209	6827	4110	1060	565.3	230.7	19.10	228.40
MEAN	.78	8.68	82.3	139	186	220	137	34.2	18.8	7.44	.62	7.61
MAX	1.4	76	770	1350	1180	3880	915	125	36	59	3.0	108
MIN	.50	1.1	5.9	26	55	60	55	14	5.8	1.2	.16	.30
CFSM	.01	.11	1.02	1.73	2.31	2.74	1.70	.43	.23	.09	.01	.09
IN.	.01	.12	1.18	1.99	2.41	3.16	1.90	.49	.26	.11	.01	.11

CAL YR 1986 TOTAL 12329.70 MEAN 33.8 MAX 770 MIN .45 CFSM .42 IN. 5.70
WTR YR 1987 TOTAL 25391.89 MEAN 69.6 MAX 3880 MIN .16 CFSM .87 IN. 11.7

e Estimated

NEUSE RIVER BASIN

02085220 LITTLE RIVER NEAR ORANGE FACTORY, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962-63, 1972-73, 1977-79, 1985 to June 1987 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1984 to September 1985.
WATER TEMPERATURE: October 1984 to September 1985.

INSTRUMENTATION.--Water-quality monitor from October 1984 to September 1985.

REMARKS.--Station operated to define the chemical-quality charactistics of inflow into the Falls Lake.

COOPERATION.--Chemcial 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, 123 microsiemens July 22, 1985; minimum, 37 microsiemens Aug. 18, 1985.
WATER TEMPERATURE: Maximum, 29.5°C July 21, Aug. 14, 1985; minimum, 0.0°C on several days during January, 1985.

WATER QUALITY DATA, OCTOBER 1986 TO JUNE 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
OCT 28...	1215	1.1	114	6.00	18.0	7	758	8.8	93	40	10
NOV 24...	1130	7.5	110	7.50	11.0	38	757	10.6	97	36	0
JAN 08...	1045	33	75	7.60	6.0	--	754	--	--	--	--
FEB 24...	1015	381	48	6.80	3.5	110	760	14.3	108	13	0
MAR 25...	1215	62	70	8.10	11.0	32	751	14.8	136	21	0
APR 16...	1325	862	48	7.50	14.0	140	740	9.6	96	16	4
MAY 18...	1145	15	75	7.50	23.0	28	762	--	--	26	0

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	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)
OCT 28...	9.5	3.9	5.4	21	0.4	3.5	12	6.5	0.10	5.9	68
NOV 24...	8.4	3.6	5.0	21	0.4	3.2	8.8	6.2	<0.10	12	78
JAN 08...	--	--	--	--	--	--	--	--	--	--	--
FEB 24...	3.0	1.4	2.6	27	0.3	1.5	--	2.9	<0.10	6.7	31
MAR 25...	5.1	2.1	4.5	30	0.4	1.0	6.8	4.4	<0.10	9.6	--
APR 16...	3.7	1.6	2.8	25	0.3	1.6	10	2.7	0.10	8.6	50
MAY 18...	6.1	2.5	4.8	28	0.4	0.90	<5.0	4.0	<0.10	14	57

NEUSE RIVER BASIN

02085220 LITTLE RIVER NEAR ORANGE FACTORY, NC--Continued

WATER QUALITY DATA, OCTOBER 1986 TO JUNE 1987

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)
OCT											
28...	65	0.09	0.20	--	<0.010	<0.100	<0.100	<0.010	<0.010	--	0.90
NOV											
24...	72	0.11	1.6	--	<0.010	<0.100	--	<0.010	--	--	0.40
JAN											
08...	--	--	--	0.690	0.010	0.700	--	0.030	--	0.37	0.40
FEB											
24...	--	--	--	0.380	0.020	0.400	--	0.080	--	2.3	2.4
MAR											
25...	--	--	--	--	<0.010	0.200	--	<0.010	--	--	0.30
APR											
16...	38	0.07	116	0.180	0.020	0.200	--	0.110	--	0.89	1.0
MAY											
18...	--	--	--	--	<0.010	0.400	--	0.030	--	0.37	0.40

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)
OCT											
28...	0.70	--	--	<0.010	0.020	<0.010	0.010	0.03	<1	<1	<10
NOV											
24...	--	--	--	0.050	--	0.010	--	--	--	--	--
JAN											
08...	--	1.1	4.9	0.010	--	0.020	--	--	<1	<1	<10
FEB											
24...	--	2.8	12	0.090	--	0.050	--	--	--	--	--
MAR											
25...	--	0.50	2.2	0.030	--	0.010	--	--	<1	<1	<10
APR											
16...	--	1.2	5.3	0.160	--	0.050	--	--	<1	<1	<10
MAY											
18...	--	0.80	3.5	0.040	--	0.020	--	--	--	--	--

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)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT											
28...	3	550	<5	190	0.10	<1	--	4.7	0.02	12	0.04
NOV											
24...	--	--	--	--	--	--	--	4.7	--	2	0.04
JAN											
08...	9	890	<5	50	<0.10	<1	<10	5.8	--	8	0.71
FEB											
24...	--	--	--	--	--	--	--	8.5	--	62	64
MAR											
25...	6	480	<5	20	<0.10	<1	<10	3.2	--	5	0.84
APR											
16...	5	2700	<5	160	0.10	<1	<10	13	--	80	186
MAY											
18...	--	--	--	--	--	--	--	10	--	--	--

NEUSE RIVER BASIN

02085220 LITTLE RIVER NEAR ORANGE FACTORY, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/09	1400	WATER	0.1	.36	1	112	6.40	21.0		5.1	800
86/11/13	1030	WATER	0.1	.65	7	75	6.90	9.0	9.7	9.5	
86/12/10	1130	WATER	0.1	.66	9	71	6.80	12.0	18.0	10.8	
87/01/28	1215	WATER	0.1	1.18	69	42	7.00	2.0	21.0	11.7	
87/03/03	1200	WATER	0.1	1.82	212	36	6.30	9.0	29.0	11.9	
87/03/16	1345	WATER	0.1	1.19	62	45		7.0	10.0		
87/04/07	1220	WATER	0.1	1.20	58	60	5.90	8.0	14.0	10.6	
87/05/26	1130	WATER	0.1	1.09	30	79		21.0	14.0	8.2	
87/06/24	1510	WATER	0.1	.91	10	100		26.0	5.0	5.5	
87/08/25	1230	WATER	0.1	.52	0						
87/09/23	1420	WATER	0.1	.50	1	72	7.35	25.0	12.0	10.6	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/09	1400	WATER	0.1	67	15	110					
86/11/13	1030	WATER	0.1	51			.01	.010	.200	.020	.010K
86/12/10	1130	WATER	0.1	17			.33	.020	.400	.040	.010K
87/01/28	1215	WATER	0.1				.81	.050	.200	.040	.010K
87/03/03	1200	WATER	0.1		9	73	.51	.090	.400	.060	.010
87/03/16	1345	WATER	0.1				.60	.010	.400	.030	.010K
87/04/07	1220	WATER	0.1	12			.26	.010K	.300	.020	.010K
87/05/26	1130	WATER	0.1		9	77	.47	.020	.300	.040	.010
87/06/24	1510	WATER	0.1				.06	.020	.400	.110	.110
87/09/23	1420	WATER	0.1	20			.01	.010	.300	.030	.010K

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/03/03	1200	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/26	1130	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

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, except for October 23 through December 10 which are fair due to beaver activity. Prior to December 1962, some diurnal fluctuation and infrequent regulation at low flow caused by small mill 5 mi upstream. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--62 years, 143 ft^3/s, 13.03 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 20,000 ft^3/s July 26, 1938 (gage height, not determined), computed on basis of records for nearby stations; minimum, 0.23 ft^3/s Sept. 26, 28, 29, Oct. 1, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 19	1730	5,610	7.52	Mar. 1	1200	*10,700	*9.89

Minimum discharge, 0.92 ft^3/s Oct. 10, 11, 12, minimum gage height, 0.82 ft, Aug. 30, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	14	8.6	247	491	8550	191	89	60	14	5.2	2.9
2	3.1	15	20	941	615	1390	111	80	520	14	4.0	2.6
3	2.6	14	278	263	693	540	94	74	128	133	5.1	2.7
4	2.3	13	70	156	491	343	464	69	71	951	5.6	2.6
5	1.9	14	28	113	282	253	243	65	58	148	5.4	3.0
6	1.7	15	18	86	202	204	164	64	48	74	5.1	3.7
7	1.7	16	13	74	174	180	132	62	39	51	5.2	5.8
8	1.3	38	12	69	149	165	112	60	35	39	6.8	227
9	1.4	33	11	63	118	197	96	56	31	32	18	124
10	1.1	21	26	61	95	955	86	53	27	27	10	51
11	1.0	17	405	65	86	372	80	50	25	25	6.5	42
12	.94	17	449	60	81	235	78	47	24	28	4.9	20
13	1.1	26	163	53	77	192	81	46	23	28	4.4	15
14	4.3	29	90	48	73	164	80	51	26	35	4.0	23
15	14	25	69	47	73	143	815	52	26	25	3.9	17
16	12	47	59	46	76	134	1650	49	25	20	4.1	9.7
17	5.9	38	51	47	105	143	817	44	124	17	4.9	7.2
18	3.9	26	48	145	121	123	684	43	38	15	4.9	5.5
19	2.7	21	45	3040	106	293	646	45	28	13	5.0	4.1
20	2.4	19	42	1190	126	373	338	500	24	12	5.2	4.0
21	2.0	24	38	375	208	209	238	130	23	11	5.7	5.1
22	1.9	36	35	325	407	164	191	77	21	10	8.3	4.6
23	1.7	27	32	390	1850	133	160	62	22	9.4	7.4	4.4
24	2.3	21	1500	252	1270	115	152	55	71	8.6	5.0	4.1
25	2.7	18	1420	204	717	104	388	49	40	8.4	3.9	3.6
26	6.2	18	311	211	746	98	377	70	29	8.0	3.5	2.9
27	48	123	179	165	537	92	198	55	34	8.2	3.3	2.6
28	22	31	124	132	1880	93	151	48	33	7.1	2.9	2.4
29	13	16	92	110	---	89	122	43	22	6.2	2.4	2.4
30	9.3	12	75	134	---	88	103	39	17	5.8	2.0	3.2
31	9.7	---	67	571	---	149	---	36	---	5.9	3.0	---
TOTAL	188.14	784	5778.6	9683	11849	16283	9042	2263	1692	1799.6	165.6	608.1
MEAN	6.07	26.1	186	312	423	525	301	73.0	56.4	58.1	5.34	20.3
MAX	48	123	1500	3040	1880	8550	1650	500	520	961	18	227
MIN	.94	12	8.6	46	73	88	78	36	17	5.8	2.0	2.4
CFSM	.04	.18	1.25	2.10	2.84	3.53	2.02	.49	.38	.39	.04	.14
IN.	.05	.20	1.44	2.42	2.96	4.07	2.26	.56	.42	.45	.05	.15

CAL YR 1986 TOTAL 24265.49 MEAN 66.5 MAX 1610 MIN .94 CFSM .45 IN. 6.06
WTR YR 1987 TOTAL 60135.85 MEAN 165 MAX 8550 MIN .94 CFSM 1.11 IN. 15.0

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 current year.

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. Satellite data transmitter at station.

REMARKS.--Records good. Flow regulated by Lake Michie (Station 02086490). An average of 32.7 ft^3/s was diverted above station for Durham municipal water supply. About 12.4 ft^3/s of treated effluent was returned to tributaries downstream and about 16.7 ft^3/s was diverted to Cape Fear River basin.

AVERAGE DISCHARGE.--42 years (water years 1928-59, 1962-66, 1983-87), 151 ft^3/s, 12.21 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,700 ft^3/s July 26, 1938, gage height, 19.50 ft; no flow September 3-14, 1938 (result of construction work upstream) and Sept. 26-30, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,800 ft^3/s Mar. 1, gage height, 15.86 ft; minimum, 0.01 ft^3/s Aug. 26, 27, 28, Sept. 15, 25, minimum gage height, 0.40 ft Aug. 28, 29; minimum daily, .02 ft^3/s, Aug 23-28, Sept. 15, 16, 19, 22-29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.21	.19	9.2	129	611	9860	200	91	.37	.12	.12	.04
2	.24	.18	6.4	1150	679	2380	167	75	346	.14	.10	.03
3	.42	e.20	6.8	400	806	858	119	54	200	.21	.09	.03
4	.10	e.18	3.4	199	598	488	395	69	106	666	.09	.03
5	.10	e.16	6.7	136	347	323	366	62	73	246	1.5	.05
6	.11	e.14	.29	98	236	239	215	47	69	87	.14	.06
7	.15	e.13	.29	79	183	198	159	53	69	72	.09	.07
8	.15	e.21	6.9	54	165	175	128	61	24	72	.12	.13
9	.19	e.64	7.0	61	132	194	111	61	.19	24	.10	.03
10	.19	e.21	6.1	58	108	958	92	60	.18	.15	.07	.04
11	.19	e.13	18	57	94	567	78	61	.16	.15	.07	.04
12	.23	e.11	13	57	86	309	73	31	2.1	.15	.07	.04
13	.24	e.11	.19	57	80	223	78	.19	.19	.15	.06	.04
14	.45	e.11	.19	57	74	186	81	.19	.19	.15	.05	.03
15	.19	e.11	9.3	57	64	164	692	.19	.19	.15	.04	.02
16	.20	e.26	12	57	64	152	2190	.19	.20	.14	.04	.02
17	.74	e1.6	13	57	81	142	1160	.15	43	.11	.04	.03
18	.40	e.20	8.1	57	101	129	773	43	28	.11	.05	.03
19	.43	e.13	7.8	2860	100	209	819	53	.18	.11	.04	.02
20	.43	e.11	.04	2140	105	479	446	661	.15	.11	.04	.03
21	.43	e.11	.04	529	170	267	299	242	.15	.11	.03	.03
22	.43	.09	36	456	446	185	219	107	.15	.11	.04	.02
23	.43	.09	63	542	1890	149	176	69	.15	.11	.02	.02
24	.45	.44	829	351	1740	136	176	67	.15	.10	.02	.02
25	.45	.13	2270	232	889	115	398	46	.15	.09	.02	.02
26	.45	.13	456	254	919	101	463	33	.15	.07	.02	.02
27	.39	.20	231	212	674	91	265	53	.15	.07	.02	.02
28	.42	2.6	147	162	1660	90	176	67	.14	.07	.02	.02
29	.40	.11	106	135	---	88	134	23	.13	.09	.03	.02
30	.37	.11	82	128	---	88	121	.19	.12	.09	.03	.04
31	.29	---	64	571	---	118	---	.19	---	.11	.09	---
TOTAL	9.87	9.12	4418.74	11392	13102	19661	10769	2190.29	963.54	1169.97	3.26	1.04
MEAN	.32	.30	143	367	468	634	359	70.7	32.1	37.7	.11	.03
MAX	.74	2.6	2270	2860	1890	9860	2190	661	346	666	1.5	.13
MIN	.10	.09	.04	54	64	88	73	.15	.12	.07	.02	.02

CAL YR 1986 TOTAL 17749.33 MEAN 48.6 MAX 2270 MIN .04
WTR YR 1987 TOTAL 63689.41 MEAN 174 MAX 9860 MIN .02

e Estimated

NEUSE RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956, 1983 to June 1987 (discontinued).

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 the chemical-quality characteristics of inflow into the Falls Lake.

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, OCTOBER 1986 TO JUNE 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT												
28...	1315	0.43	98	6.00	20.0	13	758	7.4	82	28	17	6.9
NOV												
24...	1340	0.09	85	6.90	15.0	33	754	7.8	78	29	0	7.5
JAN												
08...	1250	39	65	7.00	7.0	--	755	--	--	--	--	--
FEB												
24...	1230	1540	63	6.70	5.0	55	760	12.5	98	16	1	3.6
MAR												
25...	1315	112	52	7.30	--	84	753	12.4	--	13	2	3.0
APR												
16...	1415	2180	59	7.80	13.5	55	740	10.4	103	18	2	4.1
MAY												
18...	1315	69	60	6.70	16.5	60	762	8.7	89	18	1	4.2

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	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)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT											
28...	2.5	4.8	25	0.4	2.6	6.1	4.9	<0.10	7.0	61	42
NOV											
24...	2.6	5.3	26	0.4	2.3	9.7	5.5	<0.10	8.4	73	65
JAN											
08...	--	--	--	--	--	--	--	--	--	--	--
FEB											
24...	1.6	4.3	35	0.5	1.4	12	5.7	<0.10	9.6	54	47
MAR											
25...	1.4	3.0	30	0.4	1.5	11	3.8	<0.10	7.9	39	38
APR											
16...	1.8	4.3	33	0.5	1.4	9.1	4.3	0.10	9.3	43	44
MAY											
18...	1.8	3.9	30	0.4	1.2	5.0	4.0	<0.10	10	53	40

NEUSE RIVER BASIN

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

WATER QUALITY DATA, OCTOBER 1986 TO JUNE 1987

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)
OCT											
28...	0.08	0.07	--	<0.010	0.200	0.140	0.030	0.040	0.05	1.9	0.76
NOV											
24...	0.10	0.02	--	<0.010	0.200	--	0.090	--	--	0.91	--
JAN											
08...	--	--	0.380	0.020	0.400	--	0.130	--	--	0.57	--
FEB											
24...	0.07	225	0.490	0.010	0.500	--	0.090	--	--	0.91	--
MAR											
25...	0.05	12	0.490	0.010	0.500	--	0.060	--	--	0.34	--
APR											
16...	0.06	253	0.190	0.010	0.200	--	0.080	--	--	1.1	--
MAY											
18...	0.07	9.8	0.190	0.010	0.200	--	0.130	--	--	0.77	--

DATE	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)	PHOS-PHORUS, TOTAL (MG/L AS P)	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)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)
OCT											
28...	1.9	0.80	2.1	9.3	0.010	0.040	<0.010	<0.010	<1	<1	<10
NOV											
24...	1.0	--	1.2	5.3	0.220	--	0.020	--	--	--	--
JAN											
08...	0.70	--	1.1	4.9	0.060	--	0.040	--	<1	<1	<10
FEB											
24...	1.0	--	1.5	6.6	0.060	--	0.060	--	--	--	--
MAR											
25...	0.40	--	0.90	4.0	0.060	--	0.050	--	<1	<1	10
APR											
16...	1.2	--	1.4	6.2	0.040	--	0.010	--	<1	<1	10
MAY											
18...	0.90	--	1.1	4.9	0.030	--	0.020	--	--	--	--

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)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT											
28...	8	480	<5	170	<0.10	<1	--	6.5	0.03	5	0.01
NOV											
24...	--	--	--	--	--	--	--	4.8	--	1	0.00
JAN											
08...	10	1800	<5	50	<0.10	<1	<10	12	--	17	1.8
FEB											
24...	--	--	--	--	--	--	--	5.8	--	9	37
MAR											
25...	4	920	<5	70	<0.10	<1	<10	5.8	--	13	3.9
APR											
16...	4	810	<5	90	0.20	<1	<10	5.7	--	20	118
MAY											
18...	--	--	--	--	--	--	--	17	--	6	1.1

NEUSE RIVER BASIN

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.

WATER-DISCHARGE RECORDS

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 October 1-31, November 1-5, July 9-31, August 1-31, September 1-30 which are poor due to beaver dams below gage. Some diurnal fluctuation at low flow. The town of Butner diverted an average of 2.7 ft^3/s for municipal water supply upstream of station and returned an average of 2.3 ft^3/s as treated effluent upstream of station. An average of 1.7 ft^3/s was diverted above station for Durham municipal water supply.

AVERAGE DISCHARGE.--5 years, 45.4 ft^3/s, 14.34 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,210 ft^3/s Mar. 6, 1984, gage height, 7.59 ft; minimum. 0.96 ft^3/s Oct. 7, 1984; minimum gage height, 1.72 ft Oct. 18, 1982.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 19	1800	1,790	7.09	Apr. 15	2145	1,390	6.86
Mar. 1	1015	*2,040	*7.20	May 20	0615	1,540	6.96

Minimum discharge, 2.0 ft^3/s Oct. 6; minimum gage height, 2.05 ft, June 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	4.6	9.9	126	75	1520	35	19	57	5.7	5.2	e7.0
2	3.0	4.4	14	358	74	326	28	16	63	6.3	5.9	e5.0
3	2.9	4.2	16	61	80	103	27	15	21	7.2	5.1	e4.5
4	2.6	4.4	8.3	32	50	59	44	15	118	11	8.4	e4.3
5	2.4	3.8	6.4	25	37	44	38	13	33	5.5	6.3	e5.0
6	2.5	10	5.2	18	30	38	31	11	16	5.5	5.4	e10
7	2.9	5.6	4.5	15	27	35	27	11	11	5.5	5.6	e11
8	2.9	7.2	4.7	14	25	33	25	11	8.4	5.6	5.4	e23
9	6.2	3.5	4.5	11	25	41	22	9.9	6.7	5.8	5.1	5.6
10	4.1	3.6	4.0	12	19	300	19	9.0	5.8	5.2	5.0	7.0
11	3.0	3.7	22	14	17	86	18	8.7	4.8	5.6	4.9	6.9
12	3.1	7.3	16	13	18	49	19	8.7	3.9	5.2	5.0	5.9
13	3.1	6.6	8.4	12	18	41	25	8.7	3.4	5.5	4.9	10
14	6.3	4.5	5.7	10	17	36	21	9.9	3.3	5.5	4.8	5.8
15	3.7	7.7	5.2	8.9	18	34	496	8.1	3.6	5.3	5.0	5.1
16	3.8	7.6	4.6	8.7	20	34	902	9.0	4.2	5.5	5.0	e5.0
17	3.8	4.9	4.4	11	34	33	392	7.7	103	5.2	4.5	e4.7
18	3.8	4.3	4.3	102	30	31	134	7.4	24	5.1	4.8	e4.5
19	3.8	4.2	4.2	963	30	69	81	28	13	5.3	4.9	e4.3
20	3.8	5.0	3.9	425	36	75	51	785	9.0	5.6	5.0	e4.1
21	3.6	8.1	3.5	83	55	45	39	68	7.1	6.0	5.3	e15
22	3.7	5.2	3.7	345	121	37	32	28	6.5	5.8	5.5	e6.0
23	4.0	4.2	3.9	275	580	33	28	19	6.1	5.7	4.9	e5.4
24	4.4	4.2	253	73	379	29	50	14	6.5	5.6	4.9	e4.9
25	4.4	4.7	380	57	168	27	137	12	6.2	5.2	4.2	e4.8
26	5.4	5.0	60	57	134	26	52	10	6.1	5.0	5.0	e4.7
27	4.0	5.1	32	37	113	28	33	9.4	6.3	5.1	e7.7	e5.1
28	3.7	12	23	31	506	44	28	8.6	5.6	5.2	e4.7	e5.3
29	4.4	9.9	18	27	---	33	23	7.4	5.5	5.5	e4.1	e21
30	4.8	9.9	15	39	---	33	21	6.6	5.6	5.3	e4.0	e9.7
31	4.8	---	12	112	---	43	---	5.9	---	5.9	e17	---
TOTAL	118.0	175.4	960.3	3375.6	2736	3365	2878	1200.0	573.6	177.4	173.5	220.6
MEAN	3.81	5.85	31.0	109	97.7	109	95.9	38.7	19.1	5.72	5.60	7.35
MAX	6.3	12	380	963	580	1520	902	785	118	11	17	23
MIN	2.4	3.5	3.5	8.7	17	26	18	5.9	3.3	5.0	4.0	4.1
CFSM	.09	.14	.72	2.53	2.27	2.52	2.23	.90	.44	.13	.13	.17
IN.	.10	.15	.83	2.92	2.37	2.91	2.49	1.04	.50	.15	.15	.19

CAL YR 1986 TOTAL 5151.9 MEAN 14.1 MAX 380 MIN 1.5 CFSM .33 IN. 4.46
WTR YR 1987 TOTAL 15953.3 MEAN 43.7 MAX 1520 MIN 2.4 CFSM 1.02 IN. 13.8

e Estimated

NEUSE RIVER BASIN

02086624 KNAP OF REEDS CREEK NEAR BUTNER, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1983 to June 1987 (discontinued).

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 the chemical-quality characteristics of inflow into the Falls Lake.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, >1,100 microsiemens Aug. 25, 30, 31, 1984; minimum, 39 microsiemens Mar. 7, 1984.
WATER TEMPERATURE: Maximum, 31.5°C Aug. 15, 1985; minimum, 1.0°C Jan. 21, 29, Feb. 9, 1985.

WATER QUALITY DATA, OCTOBER 1986 TO JUNE 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT												
28...	1405	4.2	800	6.20	21.0	8	758	4.8	54	65	0	19
NOV												
24...	1430	6.6	440	6.80	17.0	33	755	8.4	88	61	13	17
JAN												
08...	1330	14	215	6.90	8.5	--	755	--	--	--	--	--
FEB												
24...	1330	311	77	6.80	5.0	60	760	12.1	95	19	3	4.4
MAR												
25...	1400	27	160	7.00	12.0	55	753	12.1	114	26	7	6.3
APR												
16...	1445	942	55	7.50	15.0	80	740	8.0	82	16	4	3.9
MAY												
18...	1500	7.3	300	6.90	22.0	32	762	7.5	86	45	12	12

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	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)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
OCT												
28...	4.2	110	76	6	8.7	96	84	2.1	11	420	400	0.57
NOV												
24...	4.4	57	64	3	6.3	52	56	1.4	10	291	230	0.40
JAN												
08...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
24...	1.9	5.6	37	0.6	1.7	13	6.2	0.10	7.9	53	51	0.07
MAR												
25...	2.5	17	56	1	2.0	21	15	0.30	8.4	89	84	0.12
APR												
16...	1.6	4.2	33	0.5	1.5	11	3.9	0.10	8.9	49	42	0.07
MAY												
18...	3.6	42	65	3	4.1	25	38	0.60	11	188	160	0.26

NEUSE RIVER BASIN

02086624 KNAP OF REEDS CREEK NEAR BUTNER, NC--Continued

WATER QUALITY DATA, OCTOBER 1986 TO JUNE 1987

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
OCT											
28...	4.8	--	<0.010	3.90	3.50	1.40	1.10	1.4	3.4	2.0	4.8
NOV											
24...	5.2	5.98	0.020	6.00	--	0.560	--	--	9.4	--	10
JAN											
08...	--	--	<0.010	1.90	--	0.340	--	--	1.3	--	1.6
FEB											
24...	45	0.390	0.010	0.400	--	0.330	--	--	1.8	--	2.1
MAR											
25...	6.5	--	<0.010	1.40	--	0.090	--	--	0.81	--	0.90
APR											
16...	125	0.090	0.010	0.100	--	0.100	--	--	2.0	--	2.1
MAY											
18...	3.7	4.59	0.010	4.60	--	0.210	--	--	2.5	--	2.7

DATE	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)
OCT											
28...	3.1	8.7	39	7.70	8.00	6.70	6.10	19	2	<1	<10
NOV											
24...	--	16	71	6.30	--	5.00	--	--	--	--	--
JAN											
08...	--	3.5	15	0.850	--	0.740	--	--	<1	<1	<10
FEB											
24...	--	2.5	11	0.320	--	0.220	--	--	--	--	--
MAR											
25...	--	2.3	10	0.950	--	0.780	--	--	<1	<1	<10
APR											
16...	--	2.2	9.7	0.160	--	0.080	--	--	<1	<1	30
MAY											
18...	--	7.3	32	3.10	--	2.80	--	--	--	--	--

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)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT											
28...	130	490	9	140	<0.10	<1	--	16	0.18	27	0.31
NOV											
24...	--	--	--	--	--	--	--	28	--	53	0.94
JAN											
08...	30	830	<5	120	<0.10	<1	20	11	--	9	0.34
FEB											
24...	--	--	--	--	--	--	--	8.4	--	16	13
MAR											
25...	35	530	<5	80	<0.10	<1	10	10	--	11	0.80
APR											
16...	11	1100	5	80	0.20	<1	<10	10	--	27	69
MAY											
18...	--	--	--	--	--	--	--	29	--	15	0.30

NEUSE RIVER BASIN

02086624 KNAP OF REEDS CREEK NEAR BUTNER, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/24	0935	WATER	0.1	2.75	4	555	6.70	16.0		5.4	20
86/11/13	1150	WATER	0.1	2.46	6	282	6.60	13.0		5.2	
86/12/10	1000	WATER	0.1	2.24	4	400	6.30	15.0		6.5	10K
87/01/28	1100	WATER	0.1	3.23	30	84	6.90	3.0		10.2	10K
87/03/03	1130	WATER	0.1	4.37	100	50	6.30	8.0	19.0	11.8	10K
87/03/16	1000	WATER	0.1	3.13	33	96		8.0		11.8	10K
87/04/07	0915	WATER	0.1	3.00	28	125	5.80	10.0		10.2	
87/05/07	1000	WATER	0.1	2.48	11	185		17.0	11.0	6.4	
87/07/01	0915	WATER	0.1	2.31	6	215		24.0		4.1	
87/08/25	0840	WATER	0.1	2.28	4						
87/09/23	0940	WATER	0.1	.00	5	204	6.95	20.0		5.8	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/24	0935	WATER	0.1	105	24	470	2.50	2.400	4.700	5.900	4.800
86/11/13	1150	WATER	0.1	66			1.10	1.600	2.900	3.000	2.400
86/12/10	1000	WATER	0.1	55			.03	4.500	6.000	6.600	6.000
87/01/28	1100	WATER	0.1		12	130	.78	.220	.600	.500	.300
87/03/03	1130	WATER	0.1		8	90	.48	.090	.400	.240	.140
87/03/16	1000	WATER	0.1		5	110	.48	.410	.800	.630	.510
87/04/07	0915	WATER	0.1	10			.35	.210	.800	.680	.560
87/05/07	1000	WATER	0.1		14	170	1.80	.160	1.000	1.300	1.200
87/07/01	0915	WATER	0.1				1.50	.330	1.200	1.600	1.500
87/09/23	0940	WATER	0.1	31			1.60	.090	.800	1.400	1.100

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/24	0935	WATER	0.1		10K	25K	130	50K		50K	91
86/11/13	1150	WATER	0.1	10K	10K	25K	72	50K	.2K	50K	44
86/12/10	1000	WATER	0.1	10K	10K	25K	89	50K	.2K	50K	71
87/01/28	1100	WATER	0.1	10K	10K	25K	12	50K	.2K	50K	10
87/03/03	1130	WATER	0.1	10K	10K	25K	11	50K	.2K	50K	10K
87/03/16	1000	WATER	0.1	10K	10K	25K	14	50K	.2K	50K	12
87/04/07	0915	WATER	0.1	10K	10K	25K	24	50K	.2K	50K	10K
87/05/07	1000	WATER	0.1	10K	10K	25K	31	50K	.2K	50K	16
87/07/01	0915	WATER	0.1	10K	10K			50K	.2K	50K	25
87/09/23	0940	WATER	0.1	10K	10K	25K	57	50K	.2K	50K	24

NEUSE RIVER BASIN

02086849 ELLERBE CREEK NEAR GORMAN, NC

LOCATION.--Lat 36°03'33", long 78°49'58", Durham County, Hydrologic Unit 03020201, on left bank 10 ft upstream of bridge on Secondary Road 1636, 1.6 mi northwest of Gorman, and 3 mi upstream from mouth.

DRAINAGE AREA.--21.9 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--Elevation of gage 1987.

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

REMARKS.--Records good. An average of 32.7 ft^3/s was diverted from Flat River for Durham municipal water supply, of which an average of 10.2 ft^3/s was returned as treated effluent upstream from station.

AVERAGE DISCHARGE.--5 years, 44.3 ft^3/s, 27.47 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,830 ft^3/s Aug. 20, 1986, gage height 12.10 ft; minimum, 1.9 ft^3/s Oct. 9, 17, 1983; minimum gage height, 0.75 ft, June 22, July 6, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	1800	1,120	6.30	Apr. 15	1545	1,230	6.75
Jan. 22	1030	1,480	7.71	Apr. 16	0600	*1,560	*8.01
Feb. 28	1800	1,370	7.30	Sept. 8	0915	1,120	6.29

Minimum discharge, 2.9 ft^3/s Oct. 19; minimum gage height, 0.79 ft, Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	8.6	17	223	27	799	29	14	32	11	30	38
2	9.5	11	61	114	37	e95	25	14	17	13	9.3	14
3	11	10	48	35	36	e45	53	17	11	14	11	13
4	11	12	12	23	24	e30	84	14	19	37	16	13
5	9.0	12	8.7	20	21	e25	30	16	14	9.2	16	22
6	12	12	6.8	18	21	e20	26	18	10	11	12	75
7	14	56	5.4	18	20	e18	22	17	8.5	12	25	80
8	13	20	5.8	17	18	e19	19	20	10	20	12	310
9	14	8.3	8.1	16	18	e22	19	15	11	15	9.3	27
10	17	10	20	25	19	77	18	14	11	12	11	47
11	14	11	79	18	17	33	20	16	11	13	12	41
12	14	58	27	16	21	27	33	19	12	53	11	48
13	16	15	14	16	19	25	48	22	10	22	11	50
14	34	7.6	9.0	15	17	22	20	19	9.0	13	12	18
15	9.5	58	8.2	15	19	19	483	20	11	12	21	15
16	7.3	18	8.5	16	18	23	523	20	12	13	12	14
17	7.3	8.3	7.9	25	29	21	109	9.0	23	13	11	14
18	6.1	8.0	9.9	273	52	19	98	11	13	10	12	14
19	5.5	7.4	8.1	470	75	85	61	14	12	8.9	14	12
20	6.9	24	6.9	78	93	40	33	48	10	10	11	12
21	7.3	28	5.5	41	114	26	22	14	8.4	18	17	36
22	8.1	8.3	6.5	557	178	21	20	13	10	13	13	14
23	7.7	5.5	7.1	159	324	20	17	12	22	12	8.6	13
24	9.0	6.5	346	148	108	19	147	10	24	12	9.4	13
25	8.1	7.2	87	144	67	18	114	11	11	11	10	12
26	58	6.8	31	97	50	17	33	13	19	9.5	11	10
27	9.5	6.8	22	59	117	74	22	13	27	12	11	9.4
28	8.6	6.1	17	e35	667	119	19	15	8.5	13	12	11
29	9.0	7.0	16	e33	---	31	16	13	10	19	11	12
30	8.6	6.6	15	e50	---	55	15	11	14	14	8.8	64
31	10	---	13	44	---	60	---	9.2	---	16	140	---
TOTAL	383.6	464.0	937.4	2818	2226	1924	2178	491.2	420.4	471.6	530.4	1071.4
MEAN	12.4	15.5	30.2	90.9	79.5	62.1	72.6	15.8	14.0	15.2	17.1	35.7
MAX	58	58	346	557	667	799	523	48	32	53	140	310
MIN	5.5	5.5	5.4	15	17	17	15	9.0	8.4	8.9	8.6	9.4
CFSM	.57	.71	1.38	4.15	3.63	2.83	3.32	.72	.64	.69	.78	1.63
IN.	.65	.79	1.59	4.79	3.78	3.27	3.70	.83	.71	.80	.90	1.82

CAL YR 1986 TOTAL 9870.8 MEAN 27.0 MAX 1260 MIN 5.4 CFSM 1.23 IN. 16.8
WTR YR 1987 TOTAL 13916.0 MEAN 38.1 MAX 799 MIN 5.4 CFSM 1.74 IN. 23.6

e Estimated

NEUSE RIVER BASIN

02086849 ELLERBE CREEK NEAR GORMAN, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1983 to June 1987 (discontinued).

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 the chemical-quality characteristics of inflow into the Falls Lake.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 858 microsiemens Jan. 30, 1985; minimum, 24 microsiemens May 20, 1983.
WATER TEMPERATURE: Maximum, 33.5°C June 21, 1985; minimum, 0.0°C Jan. 21, 22, 1985.

WATER QUALITY DATA, OCTOBER 1986 TO JUNE 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT												
28...	0930	4.0	490	6.60	17.5	--	758	4.3	45	46	0	12
NOV												
24...	0830	4.8	435	7.30	12.5	38	757	6.4	61	46	0	12
JAN												
08...	0855	12	340	7.40	8.0	--	757	--	--	--	--	--
FEB												
24...	0915	95	100	6.40	3.0	66	762	14.6	108	23	4	5.9
MAR												
25...	1030	13	455	7.20	12.0	23	754	9.2	86	61	0	16
APR												
16...	1100	480	83	6.50	14.0	200	741	8.9	89	25	8	6.7
MAY												
18...	0945	5.8	630	7.70	21.0	25	762	4.4	49	62	0	16

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	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)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
OCT												
28...	3.8	55	67	4	9.9	37	40	0.60	11	266	220	0.36
NOV												
24...	4.0	49	64	3	9.8	42	40	0.20	11	273	200	0.37
JAN												
08...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
24...	2.0	6.9	37	0.6	1.7	19	7.8	0.10	7.9	81	63	0.11
MAR												
25...	5.2	41	55	2	8.0	37	31	0.90	12	224	220	0.30
APR												
16...	2.1	5.2	29	0.5	2.3	12	4.4	0.20	7.7	69	51	0.09
MAY												
18...	5.3	79	70	5	9.1	34	37	0.60	15	311	310	0.42

NEUSE RIVER BASIN

02086849 ELLERBE CREEK NEAR GORMAN, NC--Continued

WATER QUALITY DATA, OCTOBER 1986 TO JUNE 1987

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	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-PHORUS, ORTHO, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)
OCT												
28...	2.9	2.89	0.710	3.60	11.0	4.0	15	19	82	5.30	4.80	1
NOV												
24...	3.5	9.70	1.30	11.0	7.20	4.8	12	23	100	5.30	5.30	--
JAN												
08...	--	0.730	0.170	0.900	11.0	0.0	9.0	9.9	44	4.00	2.00	<1
FEB												
24...	21	0.270	0.030	0.300	0.870	3.5	4.4	4.7	21	0.210	0.190	--
MAR												
25...	7.9	0.260	0.140	0.400	12.0	4.0	16	16	73	3.40	1.70	<1
APR												
16...	89	0.260	0.040	0.300	0.450	0.35	0.80	1.1	4.9	0.270	0.130	1
MAY												
18...	4.9	0.250	0.650	0.900	20.0	2.0	22	23	100	5.40	4.60	--

DATE	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	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)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT												
28...	<1	<10	15	400	<5	160	0.30	<1	--	15	11	0.12
NOV												
24...	--	--	--	--	--	--	--	--	--	13	5	0.06
JAN												
08...	<1	<10	10	560	<5	180	<0.10	<1	40	14	17	0.55
FEB												
24...	--	--	--	--	--	--	--	--	--	9.0	20	5.1
MAR												
25...	<1	<10	9	620	<5	230	<0.10	<1	50	15	12	0.42
APR												
16...	<1	10	15	4900	22	220	0.10	<1	50	14	267	346
MAY												
18...	--	--	--	--	--	--	--	--	--	30	4	0.06

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.

WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Records fair except those for periods Oct. 16 - Dec. 24, June 8-July 8, July 11 - July 31, and Aug. 11 - 31 which are poor due to beaver dams below gage. Slight diurnal fluctuation at low flow. An average of 34.7 ft^3/s was diverted from the Neuse River basin for Durham municipal water supply, of which 1.3 ft^3/s was diverted to the Cape Fear River basin. An average of 0.6 ft^3/s was returned as treated effluent upstream from station.

AVERAGE DISCHARGE.--5 years, 11.9 ft^3/s, 16.00 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,720 ft^3/s Aug. 20, 1986, gage height, 9.26 ft; no flow for parts of several days during Aug., Sept., 1984, Oct. 1985, May, Sept., 1986, June, July 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 1	2130	330	6.35	Feb. 23	0145	318	6.30
Jan. 19	1615	368	6.50	Feb. 28	2115	532	7.04
Jan. 22	1645	667	7.41	Apr. 15	1845	*850	*7.85

Minimum discharge, no flow parts of June 10 and July 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.47	.74	.69	112	5.0	355	15	2.5	.92	.38	29	3.3
2	.45	.85	8.8	85	6.5	43	7.5	2.4	1.3	.41	1.5	1.0
3	.40	.74	12	15	10	22	6.6	2.4	.78	.45	.81	.78
4	.44	.67	2.9	5.6	5.2	9.6	30	2.1	.67	.51	.65	.62
5	.42	.66	2.4	4.2	3.9	6.4	10	1.9	.84	.46	.62	1.3
6	.49	.65	2.1	3.0	3.9	5.5	6.8	1.8	.74	.55	.60	3.6
7	.50	.75	1.6	2.9	3.8	5.1	5.1	1.6	.64	.76	.67	12
8	.43	.60	1.5	2.4	3.4	5.5	4.3	1.5	.59	5.7	.71	65
9	.40	.83	1.6	2.2	3.1	10	3.9	1.4	.34	2.2	.67	4.3
10	.36	.79	2.7	3.1	2.6	38	3.4	1.2	.24	.49	.61	2.3
11	.49	.83	17	3.5	2.7	12	3.3	1.0	.44	.45	.54	4.4
12	.42	1.8	8.0	2.4	2.9	7.5	5.4	.95	.43	.33	.41	41
13	.43	.99	3.3	1.9	2.8	6.1	14	.89	.49	.31	.69	70
14	.55	.67	2.3	1.8	2.9	5.1	4.7	.96	.45	.32	.57	4.8
15	.53	4.2	1.9	1.8	3.1	4.6	297	.99	.38	.33	.60	2.3
16	.44	1.5	1.9	1.7	3.3	4.9	315	1.5	.30	.33	.55	1.7
17	.38	.66	1.8	2.4	5.6	4.6	42	.76	.33	.41	.59	1.3
18	.45	.68	1.9	90	11	4.1	34	.80	.54	.47	.61	1.1
19	.43	.84	1.8	245	20	25	19	.84	.61	.40	.60	.95
20	.34	1.8	1.7	56	31	20	9.5	5.2	.66	.38	.53	.70
21	.39	4.5	1.7	18	49	8.6	6.2	1.6	.40	.29	.54	2.0
22	.37	2.4	1.6	283	85	6.0	5.0	1.2	.45	.44	.58	1.4
23	.39	1.4	1.6	72	217	4.9	4.2	1.0	.51	.61	.48	.89
24	.39	1.0	112	21	69	5.9	37	.88	.55	.54	.38	.75
25	.51	1.0	44	18	39	4.5	48	1.1	.58	.31	.43	.73
26	2.5	.97	8.4	33	31	4.7	14	1.2	.54	.63	.46	.91
27	.68	1.0	4.2	12	68	9.9	6.1	.70	.41	.61	.47	.91
28	.42	.81	3.2	9.2	308	59	4.3	.56	.48	.53	.41	.79
29	.56	.70	2.7	7.6	---	12	3.4	.42	.41	3.2	.45	.79
30	.49	.66	2.6	12	---	17	2.8	.31	.39	1.2	.44	4.8
31	.50	---	2.2	10	---	45	---	.32	---	26	16	---
TOTAL	16.02	35.69	262.09	1137.7	998.7	771.5	967.5	41.98	16.41	50.00	62.17	236.42
MEAN	.52	1.19	8.45	36.7	35.7	24.9	32.2	1.35	.55	1.61	2.01	7.88
MAX	2.5	4.5	112	283	308	355	315	5.2	1.3	26	29	70
MIN	.34	.60	.69	1.7	2.6	4.1	2.8	.31	.24	.29	.38	.62
CFSM	.05	.12	.84	3.63	3.53	2.46	3.19	.13	.05	.16	.20	.78
IN.	.06	.13	.97	4.19	3.68	2.84	3.56	.15	.06	.18	.23	.87

CAL YR 1986 TOTAL 2307.20 MEAN 6.32 MAX 515 MIN .20 CFSM .63 IN. 8.50
WTR YR 1987 TOTAL 4596.10 MEAN 12.6 MAX 355 MIN .24 CFSM 1.25 IN. 16.9

NEUSE RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1983 to June 1987 (discontinued).

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 the chemical-quality characteristics of inflow into the Falls Lake.

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 recorded, ≥1200 microsiemens Mar. 19, Apr. 10, 1985; minimum recorded, ≤26 microsiemens Apr. 4, 5, 1984.
WATER TEMPERATURE: Maximum, 27.0°C Aug. 11, 1983; minimum, 0.0°C Feb. 7, 8, 9, 1984.

WATER QUALITY DATA, OCTOBER 1986 TO JUNE 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT												
28...	0820	0.26	375	6.30	16.5	45	758	2.6	27	54	11	14
NOV												
24...	0745	0.43	340	7.10	12.0	53	757	5.1	48	54	0	14
JAN												
08...	0745	2.0	220	6.90	5.0	--	755	--	--	--	--	--
FEB												
24...	0815	63	83	7.50	2.0	110	760	12.9	94	22	2	5.7
MAR												
25...	0830	2.8	205	6.80	10.0	55	754	11.5	103	45	4	11
APR												
16...	1030	492	47	7.00	13.0	200	741	8.5	83	14	3	3.6
MAY												
18...	0845	1.6	405	7.50	19.0	24	762	2.1	23	70	0	18

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	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)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT											
28...	4.7	41	58	3	7.8	31	29	0.50	13	230	180
NOV											
24...	4.6	40	58	2	6.5	35	28	0.10	14	228	200
JAN											
08...	--	--	--	--	--	--	--	--	--	--	--
FEB											
24...	2.0	6.9	38	0.7	1.9	15	6.1	0.10	8.5	61	58
MAR											
25...	4.2	19	46	1	2.8	25	16	0.20	9.5	119	110
APR											
16...	1.2	3.2	30	0.4	1.8	11	2.6	0.10	5.8	52	36
MAY											
18...	6.0	45	56	2	5.6	35	31	0.30	17	216	220

NEUSE RIVER BASIN

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

WATER QUALITY DATA, OCTOBER 1986 TO JUNE 1987

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)
OCT											
28...	0.31	0.16	5.75	0.450	6.20	5.20	1.80	1.50	1.9	2.3	2.3
NOV											
24...	0.31	0.26	1.02	0.080	1.10	--	3.00	--	--	1.8	--
JAN											
08...	--	--	0.920	0.180	1.10	--	0.650	--	--	0.55	--
FEB											
24...	0.08	10	0.380	0.020	0.400	--	0.070	--	--	1.1	--
MAR											
25...	0.16	0.90	0.070	0.030	0.100	--	2.20	--	--	7.2	--
APR											
16...	0.07	69	0.060	0.040	0.100	--	0.090	--	--	1.2	--
MAY											
18...	0.29	0.93	0.080	0.120	0.200	--	7.30	--	--	4.7	--

DATE	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)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)
OCT											
28...	4.1	3.8	10	46	3.50	3.40	2.80	8.6	1	<1	<10
NOV											
24...	4.8	--	5.9	26	3.10	2.70	--	--	--	--	--
JAN											
08...	1.2	--	2.3	10	0.330	0.250	--	--	<1	<1	<10
FEB											
24...	1.2	--	1.6	7.1	0.130	0.080	--	--	--	--	--
MAR											
25...	9.4	--	9.5	42	0.270	0.200	--	--	<1	<1	<10
APR											
16...	1.3	--	1.4	6.2	0.160	0.090	--	--	1	<1	<10
MAY											
18...	12	--	12	54	1.60	1.50	--	--	--	--	--

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)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT											
28...	9	1400	<5	120	<0.10	<1	--	9.5	0.14	66	0.05
NOV											
24...	--	--	--	--	--	--	--	--	--	15	0.02
JAN											
08...	7	840	<5	110	<0.10	<1	10	9.7	--	9	0.05
FEB											
24...	--	--	--	--	--	--	--	9.1	--	27	4.6
MAR											
25...	6	960	<5	130	<0.10	<1	10	8.3	--	19	0.14
APR											
16...	12	4300	11	140	0.20	<1	10	14	--	177	235
MAY											
18...	--	--	--	--	--	--	--	40	--	17	0.07

NEUSE RIVER BASIN

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/24	1135	WATER	0.1	1.60	0	362	6.50	16.0		3.3	40
86/11/13	0900	WATER	0.1	1.96	1	149	6.50	11.0		2.4	
86/12/10	0900	WATER	0.1	1.74	2	232	6.60	13.0		5.7	
87/01/27	0930	WATER	0.1			105	6.70	2.0		10.8	
87/01/28	0930	WATER	0.1	1.90	8						
87/02/26	1200	WATER	0.1			72		5.0	11.0	11.2	
87/03/03	1000	WATER	0.1	2.18	22	72	6.30	8.0	32.0	11.8	
87/03/16	0900	WATER	0.1	1.73	5	120		9.0		12.4	
87/04/07	0815	WATER	0.1	1.76	5	122	8.60	8.0		11.8	
87/05/07	0900	WATER	0.1	1.59	2	258		15.0	11.0	8.2	
87/08/25	0940	WATER	0.1	1.76	0						
87/09/23	1120	WATER	0.1	1.50	1	462	7.15	20.0		7.0	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/24	1135	WATER	0.1	42	8	360	17.00	.450	1.500	6.500	6.200
86/11/13	0900	WATER	0.1	62			2.80	.460	.800	1.800	1.300
86/12/10	0900	WATER	0.1	52			7.10	1.700	3.300	2.800	2.500
87/01/27	0930	WATER	0.1				.32	.650	1.200	.170	.070
87/02/26	1200	WATER	0.1		14	120	1.10	.050	.400	.380	.170
87/03/03	1000	WATER	0.1		13	140	.44	.330	.600	.180	.070
87/03/16	0900	WATER	0.1				.17	1.300	1.600	.160	.060
87/04/07	0815	WATER	0.1	131			.12	1.200	1.400	.680	.590
87/05/07	0900	WATER	0.1		14	200	.40	6.200	6.200	1.800	1.600
87/09/23	1120	WATER	0.1	39			19.00	.170	1.200	.420	.290

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/02/26	1200	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/03/03	1000	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/07	0900	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	15

NEUSE RIVER BASIN

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.

WATER-DISCHARGE RECORDS

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. Satellite data transmitter at station.

REMARKS.--Records good. Flow regulated by Falls 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 50.4 ft^3/s, 1.2 mi upstream from station for municipal water supply, most of which was returned downstream as treated effluent. The city of Durham diverted from the Neuse River basin an average of 1.3 ft^3/s to the Cape Fear River basin for municipal water supply for the city of Chapel Hill. See diversions for municipal water supply for cities of Durham and Butner (stations 02086500 and 02086624).

AVERAGE DISCHARGE.--17 years, 790 ft^3/s adjusted for storage since October 1986, 13.90 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft^3/s July 17, 1975, gage height, 25.21 ft; minimum, 4.6 ft^3/s Sept. 24, 1980, gage height, 2.13 ft.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,850 ft^3/s Mar. 6, gage height, 18.21 ft; minimum, 21 ft^3/s Oct. 22, gage height, 1.98 ft; minimum daily, 65 ft^3/s Feb. 12-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	168	102	73	78	3780	555	455	509	138	266	220	161
2	168	102	73	225	3830	596	456	509	139	129	220	138
3	190	102	73	979	4170	3420	452	515	138	132	198	160
4	204	109	73	1730	4150	5640	424	398	137	133	185	162
5	204	111	73	1610	4140	6410	426	318	135	133	185	162
6	205	111	73	590	2930	6810	425	274	135	134	186	163
7	206	111	73	256	1140	6790	424	239	135	135	189	163
8	206	111	73	255	1130	6720	424	206	135	135	188	166
9	207	113	73	256	995	6240	423	186	135	153	188	165
10	209	114	73	256	568	5540	429	188	135	163	188	165
11	210	113	73	256	178	5360	421	188	135	162	188	165
12	208	114	73	257	65	5210	423	171	137	162	188	166
13	208	112	73	256	65	4440	422	152	137	162	188	167
14	211	114	73	256	65	3680	422	152	137	161	209	165
15	212	116	73	256	65	3270	451	152	137	160	222	165
16	212	115	72	256	66	3010	e312	152	117	160	221	165
17	212	114	71	259	205	2990	940	152	106	160	221	165
18	213	114	71	265	515	2050	2690	152	107	160	199	167
19	214	114	71	337	514	980	3590	154	107	157	185	167
20	214	113	71	287	881	976	3610	284	107	152	185	167
21	214	112	71	1390	1600	981	3600	1380	107	157	188	166
22	280	112	71	2600	1610	976	3580	1250	107	161	188	165
23	189	112	71	386	2090	970	3540	446	108	186	194	165
24	191	93	73	1400	2350	723	3450	332	107	209	197	165
25	193	73	73	2550	2570	506	3170	228	107	220	197	165
26	199	72	74	2860	3190	507	3090	145	107	220	197	165
27	200	72	74	3250	3120	506	3080	132	108	220	208	165
28	201	73	74	4260	1480	510	2370	135	109	220	220	200
29	202	73	74	4160	---	484	1230	135	107	221	220	223
30	201	73	74	4030	---	449	752	135	219	220	220	184
31	146	---	74	3900	---	453	---	137	---	220	220	---
TOTAL	6297	3090	2254	39706	47462	87752	45481	9506	3775	5363	6202	5027
MEAN	203	103	72.7	1281	1695	2831	1516	307	126	173	200	168
MAX	280	116	74	4260	4170	6810	3610	1380	219	266	222	223
MIN	146	72	71	78	65	449	312	132	106	129	185	138
(†)	-258	-64	+509	+604	+212	-527	+59	-44	-93	-200	-283	-7

CAL YR 1986 TOTAL 93614 MEAN 256 MAX 3370 MIN 68 MEAN‡ -- CFSM‡ -- IN‡ --
WTR YR 1987 TOTAL 261915 MEAN 718 MAX 6810 MIN 65 MEAN‡ 709 CFSM‡ 0.92 IN‡ 12.49

e Estimated

† Change in contents, equivalent in cubic feet per second, in Falls Lake Reservoir.
‡ Adjusted for change in contents.

NEUSE RIVER BASIN

02087183 NEUSE RIVER NEAR FALLS, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954, 1961-1973, 1979 to June 1987 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1960 to September 1967, October 1978 to September 1984.
WATER TEMPERATURE: October 1953 to September 1954, November 1960 to September 1967, October 1978 to September 1984.

REMARKS.--Station operated to define the chemical-quality characteristics of outflow from the Falls Lake. Daily records of specific conductance for period November 1960 to September 1964 are available in the district office in Raleigh, NC. For water years 1954, 1961-73, data were published as Neuse River at Falls (station 02087182).

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 355 microsiemens Sept. 22, 1966; minimum daily, 37 microsiemens Aug. 4, 1961.
WATER TEMPERATURE: Maximum daily, 32.0°C Aug. 7, 16, 1980; minimum daily, 0.0°C on many days during winter months of 1960-62.

WATER QUALITY DATA, OCTOBER 1986 TO JUNE 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT												
28...	1620	202	120	6.10	18.0	65	758	8.3	88	31	0	7.5
NOV												
24...	1545	74	105	7.30	13.0	23	755	12.4	119	29	0	6.9
JAN												
08...	1445	259	105	7.80	8.5	--	755	--	--	--	--	--
FEB												
24...	1500	2340	72	6.90	5.0	68	761	14.2	111	19	3	4.3
MAR												
25...	1600	505	58	7.50	9.0	74	754	15.2	133	16	6	3.8
APR												
16...	1600	449	58	7.40	13.0	65	740	12.2	119	16	3	3.8
MAY												
18...	1700	152	70	6.90	19.0	55	762	12.8	138	21	0	5.0

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	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)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
OCT											
28...	3.0	7.9	33	0.6	2.9	14	7.6	0.20	4.8	77	73
NOV											
24...	2.8	8.5	36	0.7	2.9	8.6	7.7	0.20	3.8	71	66
JAN											
08...	--	--	--	--	--	--	--	--	--	--	--
FEB											
24...	1.9	4.9	34	0.5	2.0	12	6.0	<0.10	6.4	50	47
MAR											
25...	1.6	3.7	31	0.4	1.6	12	5.8	0.10	6.1	39	41
APR											
16...	1.7	3.7	30	0.4	1.8	8.9	3.6	<0.10	6.3	41	38
MAY											
18...	2.0	4.6	30	0.5	1.8	<5.0	4.0	<0.10	7.1	56	--

NEUSE RIVER BASIN

02087183 NEUSE RIVER NEAR FALLS, NC--Continued

WATER QUALITY DATA, OCTOBER 1986 TO JUNE 1987

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)
OCT											
28...	0.10	42	--	<0.010	<0.100	<0.100	0.690	0.510	0.66	0.51	0.89
NOV											
24...	0.10	14	--	<0.010	0.100	--	0.420	--	--	0.58	--
JAN											
08...	--	--	--	<0.010	0.300	--	0.220	--	--	0.78	--
FEB											
24...	0.07	316	0.380	0.020	0.400	--	0.070	--	--	1.3	--
MAR											
25...	0.05	53	0.190	0.010	0.200	--	0.060	--	--	0.64	--
APR											
16...	0.06	50	--	<0.010	0.100	--	0.130	--	--	4.0	--
MAY											
18...	--	--	0.080	0.020	0.100	--	0.250	--	--	1.0	--

DATE	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)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)
OCT											
28...	1.2	1.4	--	--	0.020	<0.010	0.040	0.12	<1	<1	<10
NOV											
24...	1.0	--	1.1	4.9	0.020	0.010	--	--	--	--	--
JAN											
08...	1.0	--	1.3	5.8	0.020	<0.010	--	--	<1	<1	<10
FEB											
24...	1.4	--	1.8	8.0	0.070	0.030	--	--	--	--	--
MAR											
25...	0.70	--	0.90	4.0	0.060	0.020	--	--	<1	<1	<10
APR											
16...	4.1	--	4.2	19	0.020	<0.010	--	--	<1	<1	20
MAY											
18...	1.3	--	1.4	6.2	0.030	0.010	--	--	--	--	--

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)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT											
28...	3	2800	9	2200	<0.10	<1	--	7.8	0.03	11	6.0
NOV											
24...	--	--	--	--	--	--	--	6.1	--	6	1.2
JAN											
08...	9	370	<5	220	<0.10	<1	<10	8.7	--	7	4.9
FEB											
24...	--	--	--	--	--	--	--	9.0	--	15	95
MAR											
25...	9	980	<5	160	<0.10	<1	10	7.2	--	17	23
APR											
16...	4	490	<5	220	0.20	<1	<10	5.9	--	9	11
MAY											
18...	--	--	--	--	--	--	--	17	--	6	2.5

NEUSE RIVER BASIN

02087183 NEUSE RIVER NEAR FALLS, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/10	0950	WATER	0.1	3.04	210	88	6.50	21.0		7.6	60
86/11/03	0900	WATER	0.1			90	6.80	16.0		8.1	
86/11/03	0950	WATER	0.1	2.56	102						
86/12/01	0910	WATER	0.1	2.40	73						
87/01/05	0915	WATER	0.1	8.95	1886	82	7.10	6.0		13.4	
87/02/09	1030	WATER	0.1	6.23	969	48	6.90	4.0	35.0	12.4	
87/03/12	1100	WATER	0.1	15.85	5324	40		8.0		12.6	
87/04/27	0650	WATER	0.1	11.68	3058	62		15.0		10.6	
87/05/06	0800	WATER	0.1	3.59	317	54		16.0	10.0	7.1	
87/07/08	0830	WATER	0.1	2.74	135	70	7.40	29.0		6.0	
87/09/29	1850	WATER	0.1	3.08	224	72	6.55	24.0		7.6	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/10	0950	WATER	0.1	42	4	72	.02	.130	.500	.020	.010
86/11/03	0900	WATER	0.1	45			.03	.540	.800	.020	.010K
87/01/05	0915	WATER	0.1	29			.36	.210	.600	.030	.010K
87/02/09	1030	WATER	0.1	5	7	100	.35	.120	.500	.090	.020
87/03/12	1100	WATER	0.1				.30	.080	.300	.080	.010
87/04/27	0650	WATER	0.1				.09	.110	.500	.050	.010K
87/05/06	0800	WATER	0.1		6	44	.09	.190	.500	.050	.010K
87/07/08	0830	WATER	0.1				.02	.040	.300	.030	.010
87/09/29	1850	WATER	0.1	25							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/10	0950	WATER	0.1		10K	25K	10K	50K		50K	10K
87/02/09	1030	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	11
87/05/06	0800	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

NEUSE RIVER BASIN

0208721055 PERRY CREEK AT SECONDARY ROAD 2012 NEAR MILLBROOK, NC

LOCATION.--Lat 35°52'30", long 78°35'48", Wake County, Hydrologic Unit 03020201, on right bank at downstream side of bridge on Secondary Road 2012, 1.8 mi northeast of Millbrook.

DRAINAGE AREA.-- 2.43 mi^2.

PERIOD OF RECORD.--March 1986 to current year.

GAGE.--Water-stage recorder. Datum of gage is 275 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 625 ft^3/s Aug. 20, 1986, gage height, 6.87 ft; minimum, 0.01 ft^3/s May 14-17, 1986, gage height, 0.99 ft.

EXTREMES FOR CURRENT PERIOD.--Peak discharges greater than base discharge of 90 ft^3/s and maximum (*) :

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 22	1100	160	3.69	Apr. 15	1130	139	3.48
Feb. 28	1516	*164	*3.73	June 23	2015	149	3.58

Minimum discharge, 0.34 ft^3/s, Oct. 15, 16, 17, 23; minimum gage height, 1.28 ft, Aug. 24, 25, 27-31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.50	.55	1.3	14	1.1	38	1.7	1.7	1.1	1.3	1.1	1.3
2	.51	.55	2.5	2.2	1.2	2.7	1.7	1.6	1.0	1.3	1.1	.93
3	.49	.60	1.5	1.4	1.3	2.0	1.9	1.5	1.0	1.5	1.1	.88
4	.46	.71	.63	1.2	1.1	1.7	2.2	1.6	1.4	1.5	1.1	.89
5	.52	.76	.54	2.2	1.2	1.6	1.7	1.6	1.1	1.4	1.1	1.5
6	.47	.70	.47	5.0	1.2	1.6	1.8	1.6	.95	1.4	1.1	3.4
7	.46	.64	.48	4.3	1.2	1.5	1.8	1.5	.94	1.3	1.7	2.4
8	.46	.75	.48	2.1	1.3	1.8	1.7	1.4	.92	1.3	1.2	5.4
9	.53	1.2	.51	.47	1.5	2.1	1.7	1.4	.85	1.2	1.1	2.0
10	.58	.76	.62	.58	1.2	8.5	1.7	1.5	.76	1.2	1.1	3.6
11	.56	.82	3.5	.48	1.2	1.9	1.7	1.4	.77	1.2	1.1	1.6
12	.55	2.0	1.7	.46	1.3	1.7	2.0	1.3	.76	1.2	.99	6.3
13	.51	.67	2.6	.45	1.2	1.7	2.3	1.5	.83	1.3	.94	12
14	.56	.44	2.2	.45	1.2	1.6	1.6	1.4	.83	1.3	.94	1.9
15	.42	1.7	1.9	.47	1.4	1.6	42	1.4	.76	1.3	1.5	1.5
16	.34	.86	2.0	.50	1.9	1.6	23	1.4	1.0	1.2	1.2	1.3
17	.38	.52	2.0	.58	2.0	1.6	3.7	1.3	1.2	1.2	1.0	1.2
18	.39	.46	2.0	2.4	1.9	1.6	3.7	1.3	1.6	1.2	1.0	1.1
19	.42	.52	2.3	14	2.0	3.0	2.5	3.2	1.0	1.2	1.2	1.3
20	.40	.83	2.0	1.2	2.3	2.0	2.2	5.0	.89	1.2	1.1	2.1
21	.42	.97	1.4	.72	2.5	1.8	2.1	1.6	.86	1.1	1.0	2.2
22	.41	.56	1.4	40	14	1.7	2.0	1.5	.84	1.1	1.1	1.4
23	.37	.53	1.4	2.8	19	1.7	1.9	1.5	14	1.1	.95	1.1
24	.41	.56	8.0	1.6	3.1	1.6	3.6	1.5	3.5	1.1	.87	1.0
25	.59	.60	1.7	1.7	2.2	1.6	2.6	1.5	2.0	1.1	.84	1.0
26	1.9	.64	1.4	1.8	1.9	1.5	1.9	1.5	1.8	1.1	.87	1.0
27	.59	.64	1.3	1.3	14	2.3	1.8	1.3	1.7	1.1	.83	1.0
28	.48	.59	1.3	1.2	56	5.6	1.8	1.3	1.6	1.1	.83	.94
29	.47	.58	1.3	1.2	---	1.9	1.7	1.1	1.5	2.0	.83	.94
30	.46	.71	1.3	1.2	---	2.0	1.7	1.1	1.4	1.3	.82	2.7
31	.49	---	1.2	1.2	---	2.1	---	1.1	---	1.1	1.9	---
TOTAL	16.10	22.42	52.93	109.16	141.4	103.6	123.7	49.6	48.86	38.9	33.51	65.88
MEAN	.52	.75	1.71	3.52	5.05	3.34	4.12	1.60	1.63	1.25	1.08	2.20
MAX	1.9	2.0	8.0	40	56	38	42	5.0	14	2.0	1.9	12
MIN	.34	.44	.47	.45	1.1	1.5	1.6	1.1	.76	1.1	.82	.88
CFSM	.21	.31	.70	1.45	2.08	1.38	1.70	.66	.67	.52	.44	.90
IN.	.25	.34	.81	1.67	2.16	1.59	1.89	.76	.75	.60	.51	1.01

CAL YR 1986 TOTAL 549.00 MEAN 1.79 MAX 111 MIN .01 CFSM .74 IN. 8.40
WTR YR 1987 TOTAL 806.05 MEAN 2.21 MAX 56 MIN .34 CFSM .91 IN. 12.3

NEUSE RIVER BASIN

0208721290 PERRY CREEK TRIBUTARY AT NEUSE, NC

LOCATION.--Lat 35°53'47", long 73°34'46", Wake County, Hydrologic Unit 03020201, on right bank 300 ft downstream from culvert at Camp Durant, 0.6 mi west of Neuse.

DRAINAGE AREA.-- 1.07 mi^2.

PERIOD OF RECORD.--October 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 250 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 264 ft^3/s Aug. 20, 1986, gage height, 3.53 ft from rating curve extended above 56 ft^3/s; minimum, 0.03 ft^3/s Aug. 27-29, 1987; minimum gage height, 1.09 ft July 18-20, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 75 ft^3/s and maximum (*) :

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 22	1158	*79	*2.85	No other peaks above base discharge.			

Minimum discharge, 0.03 ft^3/s, Aug. 27, 28, 29; minimum gage height, 1.14 ft, Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.17	.22	.27	4.0	.84	24	.94	.73	.37	.28	.11	.09
2	.16	.28	.65	2.4	.91	3.2	.94	.71	.39	.31	.10	.05
3	.16	.29	.62	1.2	.88	1.9	1.1	.70	.33	.35	.09	.05
4	.16	.15	.31	.93	.79	1.6	1.1	.68	.43	.32	.08	.05
5	.13	.16	.27	.79	.76	1.4	.94	.66	.34	.28	.08	.13
6	.11	.17	.24	.69	.76	1.2	.91	.65	.29	.25	.07	.79
7	.11	.18	.24	.68	.74	1.1	.85	.62	.25	.22	.17	.59
8	.14	.20	.24	.61	.68	1.3	.85	.60	.23	.24	.10	.94
9	.17	.24	.24	.61	.68	1.4	.83	.55	.21	.24	.08	.20
10	.20	.28	.38	.74	.73	4.0	.76	.52	.21	.19	.24	.20
11	.20	.35	1.1	.64	.65	1.7	.76	.43	.23	.19	.11	.12
12	.18	.75	.81	.56	.63	1.5	.89	.42	.23	.19	.07	.51
13	.14	.22	.55	.53	.61	1.3	.96	.46	.26	.20	.06	1.5
14	.17	.16	.41	.53	.63	1.2	.76	.51	.26	.18	.06	.24
15	.13	.49	.40	.53	.64	1.1	12	.50	.23	.19	.12	.15
16	.13	.27	.35	.53	.74	1.1	13	.50	.26	.18	.10	.12
17	.12	.20	.33	.63	.93	1.0	3.2	.43	.40	.15	.08	.11
18	.12	.20	.38	1.8	.90	1.0	2.8	.40	.46	.15	.06	.10
19	.12	.17	.33	9.6	.93	1.7	2.0	.79	.30	.13	.20	.12
20	.11	.27	.32	2.5	.98	1.4	1.6	1.4	.25	.12	.08	.22
21	.10	.24	.28	1.5	1.2	1.2	1.4	.67	.23	.11	.07	.32
22	.09	.17	.28	18	2.5	1.0	1.2	.59	.23	.11	.07	.11
23	.08	.17	.29	3.2	6.6	.94	1.1	.55	1.5	.11	.06	.09
24	.09	.17	2.0	1.7	3.0	.92	1.9	.49	.91	.10	.05	.08
25	.15	.20	1.3	1.5	2.2	.85	1.7	.53	.60	.10	.05	.08
26	.73	.19	.81	1.3	1.9	.85	1.3	.53	.48	.10	.05	.08
27	.18	.21	.62	1.1	4.0	.95	1.1	.51	.42	.10	.05	.08
28	.14	.20	.53	1.0	18	1.7	.99	.53	.34	.09	.04	.06
29	.16	.20	.46	.97	---	1.1	.89	.48	.29	.31	.04	.06
30	.17	.23	.46	.99	---	1.2	.84	.44	.28	.13	.04	.36
31	.18	---	.39	.89	---	1.2	---	.37	---	.11	.26	---
TOTAL	5.00	7.23	15.86	62.65	54.81	66.01	59.61	17.95	11.21	5.73	2.84	7.60
MEAN	.16	.24	.51	2.02	1.96	2.13	1.99	.58	.37	.18	.09	.25
MAX	.73	.75	2.0	18	18	24	13	1.4	1.5	.35	.26	1.5
MIN	.08	.15	.24	.53	.61	.85	.76	.37	.21	.09	.04	.05
CFSM	.15	.23	.48	1.89	1.83	1.99	1.86	.54	.35	.17	.09	.24
IN.	.17	.25	.55	2.18	1.91	2.29	2.07	.62	.39	.20	.10	.26

CAL YR 1986 TOTAL 190.41 MEAN .52 MAX 32 MIN .04 CFSM .49 IN. 6.62
WTR YR 1987 TOTAL 316.49 MEAN .87 MAX 24 MIN .04 CFSM .81 IN. 11.0

NEUSE RIVER BASIN

0208732810 MARSH CREEK AT SECONDARY ROAD 2030 AT MILLBROOK, NC

LOCATION.--Lat 35°51'13", long 78°36'12", Wake County, Hydrologic Unit 03020201, on left bank at upstream side of culvert on Secondary Road 2030, 0.3 mi northeast of Millbrook.

DRAINAGE AREA.--1.44 mi^2.

PERIOD OF RECORD.--March 1986 to current year.

GAGE.--Water-stage recorder. Datum of gage is 288 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 562 ft^3/s Aug. 20, 1986, gage height 8.32 ft; minimum, 0.06 ft^3/s Oct 21, 22, 1986, minimum gage height, 1.11 ft Aug. 11, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft^3/s and maximum (*) :

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 22	1015	154	5.81	May 19	1809	160	5.88
Mar. 28	0019	162	5.91	June 23	2030	*199	*6.31

Minimum discharge 0.06 ft^3/s Oct. 21, 22; minimum gage height, 1.16 ft, Oct. 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	.49	.72	27	.66	26	1.2	.83	.45	.51	.37	.40
2	.25	.47	7.8	3.3	.66	2.7	1.3	.73	.54	.56	.36	.26
3	.27	.46	1.2	1.3	.66	1.6	4.3	.73	.41	.99	.58	.27
4	.22	.43	.43	1.1	.66	1.3	1.8	.73	7.3	.49	.36	.25
5	.29	.49	.40	.96	.66	1.2	1.2	.71	.82	.46	.34	3.0
6	.32	.43	.40	.88	.63	1.1	1.2	.71	.64	.45	.33	6.3
7	.34	.43	.40	.83	.61	1.1	1.1	.70	.60	.51	4.4	2.8
8	.19	.46	.44	.78	.61	3.3	1.1	.73	.58	.52	.37	9.3
9	.40	.49	.47	.75	.65	3.3	1.1	.67	.56	.41	.34	.44
10	1.3	.50	1.0	2.4	.66	13	1.1	.65	.54	.41	.33	4.1
11	1.5	.72	10	.78	e.61	1.5	1.4	.64	.52	.42	.31	.40
12	.63	3.7	1.8	.70	e.61	1.3	4.0	.62	.49	.42	.30	7.0
13	.34	.47	.55	.70	e.61	1.2	1.9	2.1	.62	.42	.29	9.4
14	.68	.42	.46	.71	.74	1.1	1.0	.65	.52	.41	.29	.77
15	.15	6.0	.46	.75	.72	1.1	33	.65	.50	.49	3.1	.60
16	.13	.44	.46	.85	.84	1.5	22	.66	1.2	.42	.33	.57
17	.27	.43	.44	2.0	1.8	1.1	5.0	.56	.73	.39	.30	.53
18	.11	.40	.50	15	4.1	1.1	5.9	.56	3.4	.38	.28	.52
19	.10	.42	.45	28	5.2	7.3	1.6	19	.51	.38	.49	2.2
20	.10	2.9	.43	3.0	5.5	1.3	1.2	6.3	.45	.44	.29	2.4
21	.09	.57	.43	1.5	4.6	1.1	1.1	.76	.52	.37	.28	2.7
22	.10	.40	.43	43	17	1.1	1.0	.63	.43	.37	.40	.47
23	.09	.40	.46	2.7	19	1.0	.94	.58	11	.39	.27	.42
24	.11	.45	19	1.1	3.5	1.0	8.5	.54	1.4	.37	.27	.42
25	2.0	.66	1.0	3.6	1.7	1.0	1.5	.52	.63	.38	.27	.40
26	8.9	.47	.54	.81	1.2	1.0	.97	.56	.80	.36	.28	.40
27	.55	.46	.50	.75	19	5.3	.90	.53	.59	.36	.27	.39
28	.47	.46	.46	.72	37	12	.87	.52	.49	.38	.26	.39
29	.48	.46	.46	.69	---	1.6	.86	.50	.49	5.8	.26	.39
30	.46	1.2	.43	.77	---	2.7	.84	.49	.50	.38	.27	3.6
31	.47	---	.36	1.1	---	2.7	---	.72	---	.39	7.2	---
TOTAL	21.64	26.08	52.88	148.53	130.19	103.6	109.88	45.28	38.23	19.03	23.79	61.09
MEAN	.70	.87	1.71	4.79	4.65	3.34	3.66	1.46	1.27	.61	.77	2.04
MAX	8.9	6.0	19	43	37	26	33	19	11	5.8	7.2	9.4
MIN	.09	.40	.36	.69	.61	1.0	.84	.49	.41	.36	.26	.25
CFSM	.48	.60	1.18	3.33	3.23	2.32	2.54	1.01	.88	.43	.53	1.41
IN.	.56	.67	1.37	3.84	3.36	2.68	2.84	1.17	.99	.49	.61	1.58

CAL YR 1986 TOTAL 513.79 MEAN 1.68 MAX 63 MIN .09 CFSM 1.17 IN. 13.3
WTR YR 1987 TOTAL 780.21 MEAN 2.14 MAX 43 MIN .09 CFSM 1.48 IN. 20.2

e Estimated

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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,320 ft^3/s May 29, 1985, gage height 10.54 ft; minimum, 0.61 ft^3/s Oct. 18-22, 24, 25, 1986, minimum gage height, 2.20 ft, Aug. 30, 1987.

EXTREMES FOR CURRENT PERIOD.--Peak discharges greater than base discharge of 350 ft^3/s (revised) and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 22	1215	*503	*8.77	Apr. 15	1500	404	8.03
Mar. 28	0030	355	7.55	May 20	0030	443	8.38

Minimum discharge, 0.61 ft^3/s Oct. 18-22, 24, 25; minimum gage height, 2.20 ft, Aug. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.1	2.9	103	4.4	110	5.4	3.9	4.1	1.8	1.5	8.6
2	1.1	1.1	18	23	6.2	16	4.7	3.8	4.2	3.5	1.3	2.5
3	1.1	1.2	9.0	5.0	6.1	8.9	8.0	3.7	3.5	5.2	2.4	1.9
4	1.0	1.1	2.4	3.3	4.6	6.6	9.1	3.4	31	3.3	1.4	1.8
5	.87	1.4	1.7	2.6	4.2	5.7	4.7	3.3	6.8	2.0	1.2	11
6	.84	1.2	1.5	2.4	4.0	5.3	4.2	3.2	3.0	1.6	1.1	24
7	.81	1.1	1.5	2.3	4.1	5.0	4.1	2.9	2.4	1.6	11	14
8	.85	1.2	1.7	2.3	4.1	13	3.9	3.4	2.2	1.6	2.3	29
9	1.3	1.1	1.8	2.1	3.7	13	3.8	2.7	2.2	1.2	1.4	5.6
10	2.3	1.4	3.1	7.0	3.6	59	3.8	2.8	2.0	1.2	1.5	12
11	2.0	1.4	35	3.7	3.8	8.9	4.2	2.7	1.8	3.0	1.3	3.5
12	1.5	7.8	9.1	2.3	3.8	6.2	7.9	2.6	1.9	1.9	1.1	12
13	1.1	2.3	4.3	2.0	3.5	5.5	9.0	13	2.2	13	1.0	38
14	2.1	1.4	2.6	1.9	3.7	5.1	4.0	5.1	2.2	2.8	.98	6.5
15	.93	16	2.4	1.9	4.6	4.9	169	3.0	2.0	1.9	6.5	3.1
16	.77	3.5	2.2	2.5	5.7	5.6	119	2.9	2.0	1.8	2.4	2.3
17	.76	2.2	2.1	6.2	11	4.7	22	2.4	2.8	1.8	1.6	2.1
18	.71	1.7	2.5	49	17	4.4	32	2.3	10	1.5	1.3	1.9
19	.65	1.5	2.4	124	22	22	11	89	3.8	1.4	2.3	3.9
20	.68	5.6	2.2	17	22	8.1	6.4	92	2.2	1.8	2.5	15
21	.67	3.8	2.1	6.1	22	5.0	5.0	8.6	2.5	1.5	1.4	17
22	.65	1.7	2.1	189	62	4.5	4.7	6.1	1.9	1.3	2.7	4.0
23	.74	1.6	2.3	22	80	4.3	4.1	5.3	17	1.2	1.2	2.5
24	.68	1.7	53	9.6	22	4.1	26	4.7	12	1.1	1.1	2.1
25	2.9	2.2	11	13	12	4.0	13	4.4	3.0	1.1	1.1	1.9
26	25	1.7	4.0	12	9.2	4.0	5.5	4.2	2.5	1.1	1.2	1.9
27	2.5	1.6	2.9	6.9	68	22	4.5	4.2	2.4	1.0	1.1	1.9
28	1.3	1.5	2.5	5.8	145	83	4.2	4.2	1.6	1.1	.98	1.9
29	1.1	1.6	2.2	5.2	---	8.4	4.3	4.2	1.5	7.7	1.0	1.9
30	1.1	2.5	2.3	5.3	---	8.8	4.2	3.9	1.5	1.7	.91	8.7
31	1.1	---	2.1	4.7	---	10	---	3.9	---	3.0	57	---
TOTAL	60.31	75.2	194.9	643.1	562.3	476.0	511.7	301.8	138.2	75.7	115.77	242.5
MEAN	1.95	2.51	6.29	20.7	20.1	15.4	17.1	9.74	4.61	2.44	3.73	8.08
MAX	25	16	53	189	145	110	169	92	31	13	57	38
MIN	.65	1.1	1.5	1.9	3.5	4.0	3.8	2.3	1.5	1.0	.91	1.8
CFSM	.28	.37	.92	3.03	2.94	2.24	2.49	1.42	.67	.36	.55	1.18
IN.	.33	.41	1.06	3.50	3.06	2.59	2.78	1.64	.75	.41	.63	1.32

CAL YR 1986 TOTAL 2442.45 MEAN 6.69 MAX 308 MIN .65 CFSM .98 IN. 13.3
WTR YR 1987 TOTAL 3397.45 MEAN 9.31 MAX 189 MIN .65 CFSM 1.36 IN. 18.5

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.

WATER-DISCHARGE RECORDS

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). 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 50.8 ft^3/s, most of which was returned as treated effluent upstream from station. Satellite data transmitter at station.

AVERAGE DISCHARGE.--60 years, 1,166 ft^3/s, 13.77 in/yr.

EXTREMES FOR PERIOD OF RECORD.--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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,790 ft^3/s Mar. 1, gage height, 12.74 ft; minimum, 124 ft^3/s Nov. 9; minimum gage height, 1.15 ft July 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	241	226	203	619	3940	8350	1510	1050	305	287	358	729
2	232	213	243	2810	3830	6530	1410	845	317	366	329	393
3	239	186	451	1530	3910	3150	1370	851	334	293	319	305
4	246	209	349	1870	4090	4330	1300	830	354	327	310	285
5	255	209	236	2160	4070	5280	1140	682	522	295	276	280
6	252	263	231	1590	4060	6030	1040	618	351	279	250	353
7	249	218	203	655	2400	6540	1010	545	283	266	352	609
8	251	265	200	472	1490	6750	985	499	300	253	408	804
9	255	145	203	451	1430	6890	956	472	291	251	295	783
10	267	250	208	447	1160	7250	937	402	284	269	282	561
11	275	238	342	501	649	6770	710	394	275	351	300	433
12	284	260	607	449	370	5830	667	387	276	413	285	365
13	278	292	419	445	305	5420	740	389	263	441	275	1180
14	283	286	293	406	302	4810	702	e600	295	497	266	1010
15	276	217	247	406	314	4060	2160	420	287	324	285	602
16	267	399	227	393	317	3570	7510	408	283	295	356	506
17	264	319	216	444	454	3360	6230	381	280	282	318	438
18	262	272	211	702	838	3280	4220	367	317	255	306	361
19	261	242	200	3820	1000	2060	4750	350	316	254	287	316
20	258	250	204	4800	1070	1820	4830	1340	286	267	306	424
21	262	292	207	1760	2000	1600	4650	1010	259	244	296	420
22	265	274	193	4970	2500	1490	4480	2040	259	247	304	404
23	332	242	186	7920	4580	1430	4360	1090	273	245	303	311
24	255	238	283	2920	5060	1420	4450	611	568	264	284	346
25	254	220	1150	2880	3800	920	4760	530	427	287	276	331
26	379	209	559	3440	3600	806	3930	409	312	290	275	274
27	484	204	349	3370	4110	864	3570	351	278	291	273	241
28	321	175	275	3690	6200	1990	3410	337	258	292	284	280
29	284	200	244	4190	---	1580	2510	349	240	330	288	296
30	276	189	242	4210	---	1510	1620	342	336	431	284	360
31	270	---	233	4090	---	1560	---	305	---	337	457	---
TOTAL	8577	7202	9414	68410	67849	117250	81917	19204	9429	9523	9487	14000
MEAN	277	240	304	2207	2423	3782	2731	619	314	307	306	467
MAX	484	399	1150	7920	6200	8350	7510	2040	568	497	457	1180
MIN	232	145	186	393	302	806	667	305	240	244	250	241

CAL YR 1986 TOTAL 182362 MEAN 500 MAX 6650 MIN 145
WTR YR 1987 TOTAL 422262 MEAN 1157 MAX 8350 MIN 145

e Estimated

NEUSE RIVER BASIN

02087500 NEUSE RIVER NEAR CLAYTON, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/22	1215	WATER	0.1	1.58	268	145	7.10	15.0		9.0	190
86/11/06	1150	WATER	0.1	1.57	264	178	6.80	18.0	6.8	7.4	
86/12/02	1230	WATER	0.1	1.45	217	198	6.20	13.0	8.4	8.3	
87/01/27	1230	WATER	0.1	6.42	3317	69	7.00	5.0	23.0	11.0	
87/02/24	1300	WATER	0.1			52	6.80	5.0	50.0	11.6	
87/02/24	1330	WATER	0.1	8.75	5163						
87/03/10	1315	WATER	0.1	11.27	7331	48		7.0	21.0	11.9	
87/04/09	1240	WATER	0.1	2.89	943	91	6.60	15.0	12.0	9.4	
87/05/27	1430	WATER	0.1	1.69	334	170		24.0	8.2	6.4	
87/07/07	1350	WATER	0.1	1.50	256	185		30.0	10.0	6.4	
87/08/28	1000	WATER	0.1	1.55	284						
87/09/30	1130	WATER	0.1	1.74	370	187	6.95	22.0	28.0	6.7	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/22	1215	WATER	0.1	41	10	140	2.50	.060	.400	1.100	1.000
86/11/06	1150	WATER	0.1	45	11	160	2.40	.110	.700	1.100	1.000
86/12/02	1230	WATER	0.1	33	6	160	4.00	1.800	3.200	1.500	1.400
87/01/27	1230	WATER	0.1		41	130	.48	.150	.600	.160	.040
87/02/24	1300	WATER	0.1		80	200	.50	.090	.600	.200	.040
87/03/10	1315	WATER	0.1		28	110	.38	.060	.400	.130	.040
87/04/09	1240	WATER	0.1	22	20	110	.66	.060	.300	.260	.200
87/05/27	1430	WATER	0.1		18	140	1.80	.020	.400	.770	.740
87/07/07	1350	WATER	0.1		20	140	1.70		.400	.890	.880
87/09/30	1130	WATER	0.1	32	49	180	1.40	.040	.400	.830	.680

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/02/24	1300	WATER	0.1	10K	10K	25K	10K	50K	.02K	50K	36
87/05/27	1430	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	23

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.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Diversions for municipal water supply for cities of Durham and Butner (station 02087183). Flow regulated by Falls Lake (station 02087182). The city of Raleigh diverted from Neuse River upstream from station an average of 50.8 ft^3/s, most of which was was returned as treated effluent upstream from station. The city of Smithfield diverted an average of 4.5 ft^3/s 0.2 mi upstream from station for municipal water supply, most of which was returned downstream as sewage effluent. Satellite data transmitter at station.

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

AVERAGE DISCHARGE.--15 years, 1,326 ft^3/s, 14.93 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,300 ft^3/s Feb. 5, 1973, 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.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,700 ft^3/s Mar. 2, gage height, 20.58 ft; minimum, 131 ft^3/s Nov. 10, gage height, 3.34 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	276	269	198	534	e4300	9560	1860	1240	340	271	421	808
2	258	228	250	2820	e4300	11400	1740	939	346	460	372	530
3	265	197	389	e1920	e4600	6900	1660	1050	356	328	393	337
4	264	199	445	e2100	e4800	6230	1640	969	372	340	421	310
5	275	208	299	e2700	e4800	6590	1500	819	514	343	336	290
6	274	232	246	e2200	e4900	6850	1400	709	416	311	303	337
7	270	239	235	e1300	e4100	7340	1160	641	326	296	438	557
8	269	240	205	e700	e2700	7820	1130	576	323	284	519	700
9	274	203	222	e590	e1950	8100	1090	553	317	275	368	982
10	286	172	214	e560	e1450	8400	1060	500	308	284	369	596
11	296	261	260	e660	1140	8630	912	484	297	351	451	e620
12	302	243	646	e560	771	8130	785	471	299	493	359	e880
13	307	279	592	e520	581	7340	808	496	291	459	319	e1300
14	314	321	410	e500	570	6620	815	681	312	527	303	e1100
15	297	260	319	e460	564	5530	1280	553	313	400	310	e740
16	286	342	287	e460	554	4560	6430	481	309	333	372	e580
17	279	371	263	e550	660	3930	9620	445	298	316	360	460
18	276	312	251	e1100	934	3670	8690	418	332	301	343	385
19	274	266	248	e4500	1350	3050	7420	401	336	273	328	328
20	267	267	228	e5400	1460	2270	6990	1060	317	299	335	338
21	269	273	254	e2200	1870	2020	6470	1060	298	272	333	424
22	274	312	225	e5000	2700	1840	5630	1710	279	270	330	428
23	326	271	222	e7400	4390	1750	5020	1470	298	269	342	317
24	296	257	318	e9100	6110	1710	4770	783	470	277	313	317
25	268	253	1100	e4700	5640	1460	5730	609	568	298	307	317
26	298	234	907	e3900	4260	1190	5380	518	371	313	297	288
27	559	218	523	e3800	5030	1210	4290	417	317	307	297	233
28	391	196	385	e4300	6510	1910	3680	387	296	312	293	243
29	317	199	331	e4600	---	2280	3030	386	273	353	306	255
30	294	196	308	e4500	---	1870	1900	369	327	440	301	324
31	288	---	301	e4400	---	1900	---	357	---	397	299	---
TOTAL	9189	7518	11081	84034	82994	152060	103890	21552	10219	10452	10838	15324
MEAN	296	251	357	2711	2964	4905	3463	695	341	337	350	511
MAX	559	371	1100	9100	6510	11400	9620	1710	568	527	519	1300
MIN	258	172	198	460	554	1190	785	357	273	269	293	233

CAL YR 1986 TOTAL 198473 MEAN 544 MAX 6120 MIN 172
WTR YR 1987 TOTAL 519151 MEAN 1422 MAX 11400 MIN 172

e Estimated

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.

WATER-DISCHARGE RECORDS

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.--Records good above 5 ft^3/s and fair below except those for estimated daily discharges which are poor.

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

AVERAGE DISCHARGE.--48 years, 88.5 ft^3/s, 14.39 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,510 ft^3/s Feb. 3, 1973, gage height, 13.42 ft, result of dam failure; no flow Oct. 11-13, 1954, July 13-28, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 20	0830	1,410	9.34	Mar. 1	1530	*2,030	*10.48
Jan. 23	0930	1,550	9.63	Apr. 17	0230	1,130	8.59

Minimum discharge, 0.03 ft^3/s Aug. 3, gage height, 0.72 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.68	2.1	14	103	74	1690	102	49	12	2.0	.10	.19
2	.58	2.4	17	455	65	1390	66	43	12	1.8	.06	.15
3	.53	2.7	43	492	84	654	54	37	11	6.3	.04	.12
4	.46	2.5	37	159	72	245	94	33	21	4.8	.05	.10
5	.48	2.4	23	98	55	150	104	33	33	4.6	.06	.09
6	.41	2.3	16	73	47	117	68	32	21	4.6	.05	.15
7	.37	2.6	12	62	44	97	52	30	14	3.6	4.8	.20
8	.38	2.5	11	56	43	95	45	29	11	2.9	30	.40
9	.47	2.2	10	48	37	145	40	27	8.6	2.4	6.8	5.8
10	.52	2.3	11	49	28	162	36	24	6.8	1.7	2.7	22
11	.60	2.6	23	64	26	134	34	21	5.7	2.6	1.6	42
12	.58	8.0	102	54	e25	92	34	18	5.1	11	.90	6.7
13	.52	14	84	43	e24	77	31	22	5.2	11	.63	153
14	.57	7.0	52	36	e23	67	28	30	5.8	13	.46	271
15	1.0	6.2	35	33	e30	59	263	32	6.9	8.4	.41	51
16	.83	13	29	32	e60	54	818	29	6.9	5.4	.48	18
17	.67	12	25	37	e150	50	1000	22	6.0	3.7	.42	8.5
18	.62	11	23	100	e200	46	766	18	5.1	3.0	.35	5.0
19	.61	11	24	599	e160	64	475	16	5.0	2.3	.54	3.6
20	.52	16	23	1280	e140	124	270	22	5.0	1.8	1.4	5.4
21	.51	15	20	785	e100	89	191	24	4.5	1.5	1.8	4.6
22	.43	15	17	615	e150	62	138	22	6.3	1.1	1.2	3.8
23	.37	14	17	1420	e550	49	109	21	5.4	.90	.84	3.5
24	.41	12	31	902	e400	42	130	19	7.3	.68	.64	2.7
25	.51	22	191	331	e340	38	259	17	5.8	.52	.95	2.0
26	.77	27	125	240	e248	38	184	27	4.8	.43	.84	1.7
27	1.3	20	66	183	278	37	119	23	5.5	.78	.59	1.5
28	1.8	17	48	134	647	160	87	20	3.9	.88	.45	1.3
29	1.8	13	e42	110	---	249	70	20	3.1	.31	.32	1.1
30	2.0	11	e38	99	---	116	59	16	2.3	.22	.26	2.1
31	2.5	---	e32	94	---	116	---	13	---	.15	.21	---
TOTAL	23.80	290.8	1241	8786	4100	6508	5726	789	256.0	104.37	59.95	617.70
MEAN	.77	9.69	40.0	283	146	210	191	25.5	8.53	3.37	1.93	20.6
MAX	2.5	27	191	1420	647	1690	1000	49	33	13	30	271
MIN	.37	2.1	10	32	23	37	28	13	2.3	.15	.04	.09
CFSM	.01	.12	.48	3.39	1.75	2.51	2.29	.30	.10	.04	.02	.25
IN.	.01	.13	.55	3.91	1.83	2.90	2.55	.35	.11	.05	.02	.28

CAL YR 1986 TOTAL 10724.87 MEAN 29.4 MAX 1050 MIN .00 CFSM .35 IN. 4.78
WTR YR 1987 TOTAL 28502.44 MEAN 78.1 MAX 1690 MIN .04 CFSM .94 IN. 12.7

e Estimated

NEUSE RIVER BASIN

02088000 MIDDLE CREEK NEAR CLAYTON, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/22	0905	WATER	0.1	1.14	0	65	6.90	9.0		5.1	20
86/11/06	1045	WATER	0.1	1.40	2						
86/12/02	1130	WATER	0.1	1.65	12	60	6.90	11.0		8.1	
87/01/27	1140	WATER	0.1	3.56	183	40	6.90	3.0		10.8	
87/02/24	1215	WATER	0.1	.00	400						
87/02/24	1230	WATER	0.1			35	6.00	4.0	28.0	11.3	
87/03/10	1230	WATER	0.1	3.64	164	40	6.30	8.0		11.0	
87/04/09	1150	WATER	0.1	2.25	40	52	6.00	14.0		9.4	
87/05/27	1345	WATER	0.1	1.74	23	68		23.0	7.8	6.4	
87/07/07	1425	WATER	0.1	1.30	4	90		27.0		4.4	
87/08/28	0830	WATER	0.1	1.09	0						
87/09/30	0950	WATER	0.1	1.48	2	65	7.05	20.0		6.0	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/22	0905	WATER	0.1	43	1	97	.04	.070	.500	.100	.010
86/12/02	1130	WATER	0.1	20							
87/02/24	1230	WATER	0.1		29	130	.43	.070	.500	.070	.010
87/03/10	1230	WATER	0.1	26							
87/04/09	1150	WATER	0.1	13							
87/05/27	1345	WATER	0.1		7	84	.20	.060	.500	.080	.010
87/09/30	0950	WATER	0.1	28							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/02/24	1230	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	43
87/05/27	1345	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

NEUSE RIVER BASIN

02088470 LITTLE RIVER NEAR KENLY, NC

LOCATION.--Lat 35°35'20", long 78°11'18", Johnston County, Hydrologic Unit 03020201, near left bank on downstream side of bridge on Secondary Road 1934, 0.7 mi downstream from Buffalo Creek, and 3.7 mi west of Kenly.

DRAINAGE AREA.--191 mi^2.

PERIOD OF RECORD.--July 1964 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 129.24 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those June to September, which are fair. Some diurnal fluctuation and some regulation during periods of low flow caused by mill 10 mi upstream.

AVERAGE DISCHARGE.--23 years, 187 ft^3/s, 13.30 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,030 ft^3/s Oct. 6, 1964, gage height, 16.30 ft; minimum, 0.18 ft^3/s Oct. 4, 5, 6, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 21	0530	2,170	14.46	Mar. 2	1300	3,080	15.07
Jan. 23	1800	2,530	14.59	Apr. 18	1000	*3,580	*15.51
Feb. 24	2000	1,180	12.18				

Minimum discharge, 0.68 ft^3/s July 21, gage height, 2.84 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	25	41	203	287	1970	402	218	34	20	8.4	20
2	12	28	51	749	258	3000	288	186	32	33	3.2	60
3	11	30	83	856	251	2650	231	707	31	15	2.9	21
4	10	40	101	730	239	2010	223	514	31	12	3.6	12
5	9.3	40	72	604	210	1220	223	245	34	21	5.5	8.4
6	8.5	29	62	428	192	679	209	197	55	20	7.9	13
7	6.7	19	56	262	185	420	189	160	55	23	9.9	21
8	6.0	24	51	199	175	333	170	129	45	17	12	31
9	5.9	29	50	171	159	317	148	112	35	16	10	52
10	6.0	32	50	167	142	497	137	96	29	14	13	53
11	7.6	43	58	215	128	732	133	83	24	15	14	30
12	8.4	40	105	195	125	819	126	74	20	34	17	22
13	8.4	51	190	157	119	881	118	68	19	53	14	41
14	13	54	156	133	115	703	116	77	17	31	7.2	78
15	27	43	121	119	115	439	250	76	17	29	4.8	90
16	21	51	96	114	124	326	1230	66	30	32	4.8	65
17	15	61	85	126	203	281	2500	61	26	14	4.1	43
18	12	64	75	247	337	254	3450	55	21	4.7	4.4	25
19	9.9	57	71	792	423	256	2930	49	23	5.9	7.2	19
20	8.3	49	71	1790	474	330	2110	63	32	7.5	11	16
21	19	40	66	2100	507	343	1230	116	32	.94	18	16
22	8.3	43	60	1910	543	316	787	132	30	5.9	22	26
23	3.2	40	62	2310	900	281	526	125	32	11	19	26
24	2.1	39	162	2380	1150	234	408	101	32	14	17	23
25	3.3	49	472	1950	1130	199	727	78	40	13	18	18
26	11	56	380	1430	1000	177	941	65	50	11	9.5	12
27	26	52	261	895	889	180	882	55	65	9.9	12	15
28	36	42	223	579	1030	331	658	44	45	7.6	13	14
29	30	43	167	429	---	369	442	43	33	11	12	13
30	31	42	132	358	---	404	292	40	25	15	12	17
31	32	---	112	327	---	468	---	37	---	14	13	---
TOTAL	420.9	1255	3742	22925	11410	21419	22076	4072	994	530.44	330.4	900.4
MEAN	13.6	41.8	121	740	407	691	736	131	33.1	17.1	10.7	30.0
MAX	36	64	472	2380	1150	3000	3450	707	65	53	22	90
MIN	2.1	19	41	114	115	177	116	37	17	.94	2.9	8.4
CFSM	.07	.22	.63	3.87	2.13	3.62	3.85	.69	.17	.09	.06	.16
IN.	.08	.24	.73	4.46	2.22	4.17	4.30	.79	.19	.10	.06	.18

CAL YR 1986 TOTAL 32350.23 MEAN 88.6 MAX 1010 MIN 2.1 CFSM .46 IN. 6.30
WTR YR 1987 TOTAL 90074.97 MEAN 247 MAX 3450 MIN .94 CFSM 1.29 IN. 17.5

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.

WATER-DISCHARGE RECORDS

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.--Records good except those for estimated daily discharges, which are poor. Slight diurnal fluctuation and occasional regulation for short periods, caused by mills above station.

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

AVERAGE DISCHARGE.--57 years, 251 ft^3/s, 14.70 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,150 ft^3/s Oct. 6, 1964, gage height, 13.94 ft; minimum, 0.08 ft^3/s June 1, 2, 16, 17, 1986, gage height 0.54 ft due to regulation from unknown source.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1919 reached a stage of 14.57 ft; September 1924, 14.90 ft; September 1928, 13.3 ft; October 1929, 13.47 ft; from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 23	1800	2,920	11.90	Mar. 2	2300	3,350	12.23
Feb. 24	1800	1,510	9.02	Apr. 19	0300	*3,540	*12.35

Minimum daily discharge, 2.6 ft^3/s July 21, due to regulation from unknown source.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	40	46	228	371	2190	579	280	39	e26	e10	e36
2	8.9	35	54	808	323	3040	413	227	36	e40	e5.0	e60
3	10	30	80	1020	313	3150	307	697	32	e30	e3.6	e70
4	10	37	120	888	296	2580	273	1010	33	e16	e5.0	e36
5	8.5	48	94	719	260	1980	275	538	34	e26	e7.0	e16
6	6.6	55	78	564	233	1100	253	319	51	e24	e10	e24
7	6.6	33	69	355	226	604	236	245	68	e26	e12	e36
8	5.7	16	65	255	221	454	209	189	61	e20	e14	e46
9	5.8	12	64	213	205	420	185	154	44	e18	e12	e60
10	8.7	8.1	62	207	179	627	168	129	31	e16	e14	e40
11	7.7	2.9	69	263	154	875	155	108	21	e26	e18	e30
12	5.8	42	119	259	142	902	148	96	15	e40	e20	e26
13	7.2	77	239	210	142	933	135	97	11	e60	e16	e50
14	11	84	221	169	131	876	128	119	15	e46	e12	e90
15	30	87	172	146	130	621	253	102	9.2	e36	e9.0	e100
16	45	88	134	132	142	437	1340	88	17	e40	e6.0	e70
17	30	91	114	147	256	363	2170	80	32	e26	e5.6	e50
18	18	83	105	276	495	319	3000	72	e25	e9.0	e7.0	e36
19	15	67	100	1010	638	319	3380	62	e30	e9.8	e10	e24
20	12	55	98	1890	699	428	2750	68	e34	e10	e16	e18
21	11	44	95	2390	719	461	2060	115	e33	e2.6	e20	e26
22	26	41	87	2650	756	408	1200	166	e32	e10	e26	e30
23	11	41	86	2870	1190	355	732	156	e36	e14	e20	e28
24	6.0	38	164	2810	1490	301	551	134	e40	e16	16	e24
25	7.5	48	613	2490	1450	246	693	102	e50	e14	13	e20
26	8.6	61	605	2090	1270	223	991	88	e60	e13	15	e16
27	14	66	377	1510	1130	209	999	71	e80	e12	e16	e18
28	55	49	297	841	1440	348	841	62	e70	e9.0	e18	e16
29	54	47	240	584	---	461	604	55	e40	e14	e14	e15
30	41	46	200	476	---	470	400	52	e30	e16	e16	e20
31	40	---	164	431	---	593	---	45	---	e14	e20	---
TOTAL	542.6	1472.0	5031	28901	15001	26293	25428	5726	1109.2	679.4	406.2	1131
MEAN	17.5	49.1	162	932	536	848	848	185	37.0	21.9	13.1	37.7
MAX	55	91	613	2870	1490	3150	3380	1010	80	60	26	100
MIN	5.7	2.9	46	132	130	209	128	45	9.2	2.6	3.6	15
CFSM	.08	.21	.70	4.02	2.31	3.66	3.65	.80	.16	.09	.06	.16
IN.	.09	.24	.81	4.63	2.41	4.22	4.08	.92	.18	.11	.07	.18

CAL YR 1986 TOTAL 40348.6 MEAN 111 MAX 1330 MIN .08 CFSM .48 IN. 6.47
WTR YR 1987 TOTAL 111720.4 MEAN 306 MAX 3380 MIN 2.6 CFSM 1.32 IN. 17.9

e Estimated

NEUSE RIVER BASIN

02088500 LITTLE RIVER NEAR PRINCETON, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/22	1100	WATER	0.1			58	7.10	11.0		8.4	290
86/11/06	0915	WATER	0.1	1.60	59	61	6.60	15.0		6.5	
86/12/02	1015	WATER	0.1	1.51	51	61	7.00	12.0		7.9	
87/01/27	1030	WATER	0.1	9.19	1561	30	6.50	3.0		11.2	
87/02/24	1030	WATER	0.1	8.99	1497	40	6.40	5.0	34.0	12.2	
87/03/10	1120	WATER	0.1	4.77	623	42		10.0		11.4	
87/04/09	1040	WATER	0.1	2.41	182	48	6.50	13.0		10.8	
87/05/27	1230	WATER	0.1	1.57	66	65		23.0	6.8	7.2	
87/07/08	1240	WATER	0.1	.00	20	75		28.0		4.8	
87/08/28	1140	WATER	0.1	.00	18						
87/09/30	1415	WATER	0.1	.00	20	68	6.80	21.0		6.1	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/22	1100	WATER	0.1	33	1	82	.50	.060	.400	.180	.070
86/11/06	0915	WATER	0.1	27			.16	.020	.300	.180	.070
86/12/02	1015	WATER	0.1	20			.22	.030	.500	.080	.160
87/01/27	1030	WATER	0.1				.51	.060	.300	.080	.010
87/02/24	1030	WATER	0.1		20	120	.53	.050	.500	.080	.020
87/03/10	1120	WATER	0.1				.46	.060	.300	.100	.030
87/04/09	1040	WATER	0.1	21			.27	.030	.300	.090	.020
87/05/27	1230	WATER	0.1		3	81	.50	.060	.400	.210	.070
87/07/08	1240	WATER	0.1				.28		.400	.180	.090
87/09/30	1415	WATER	0.1	22			.28	.020	.400	.200	.060

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/02/24	1030	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	13
87/05/27	1230	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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.

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). National Weather Service gage height telemeter at station.

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

AVERAGE DISCHARGE.--57 years, 2,487 ft^3/s, 14.08 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,700 ft^3/s Sept. 23, 1945; maximum gage height, 26.72 ft Sept. 23, 1945, site and datum then in use; minimum discharge, 76 ft^3/s Sept. 26, 1968.

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.

EXTREMES FOR CURRENT YEAR.-- Maximum discharge, 18,000 ft^3/s Mar. 6, gage height, 22.93 ft; minimum, 199 ft^3/s Nov. 12, gage height, 2.40 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	299	381	412	1200	9280	9930	4270	7220	666	366	444	324
2	302	364	435	1840	8220	11400	4120	5490	622	413	423	434
3	298	324	485	3620	7470	12800	3790	3350	581	394	413	695
4	282	284	538	4340	6940	15000	3390	2740	604	484	380	540
5	283	250	747	4850	6550	17200	3140	2750	580	414	417	420
6	284	239	770	4970	6220	17800	2950	2670	598	417	495	377
7	286	245	628	4690	5990	16800	2760	2070	688	398	873	355
8	282	270	536	3370	5870	15000	2570	1730	599	365	900	443
9	281	293	475	2160	5780	13100	2400	1540	523	347	760	692
10	297	280	441	1800	5040	11600	2270	1410	495	333	651	1060
11	303	252	469	1750	3630	10500	2150	1290	467	366	505	973
12	305	236	548	1790	2670	9970	2030	1190	443	362	504	812
13	311	312	822	1800	2090	9750	1820	1140	424	502	511	851
14	361	318	1300	1680	1710	9710	1730	1280	428	592	419	808
15	348	449	1260	1560	1570	9690	1970	1470	413	620	403	1430
16	336	564	1050	1440	1530	9510	3810	1480	413	647	377	1430
17	353	512	905	1440	1810	9070	5890	1280	408	513	371	1100
18	345	600	814	1580	2340	8500	7630	1140	394	434	412	850
19	322	619	739	3290	3070	7870	9530	1020	387	393	395	734
20	303	562	683	5200	3720	7230	11700	955	409	360	394	886
21	292	497	633	5990	4010	6580	13200	1130	413	327	374	592
22	283	454	602	7890	4230	5790	14100	1680	408	328	405	567
23	279	443	587	9070	4890	4440	13700	1890	394	304	377	572
24	285	458	945	10300	5420	3820	12700	2260	390	295	364	551
25	336	440	1320	11800	6050	3350	11400	1610	399	287	370	460
26	376	435	2180	13100	6800	3000	10100	1250	644	293	350	442
27	331	439	2670	14200	7610	2740	9110	1230	615	310	341	423
28	389	462	2080	14300	8590	3070	8570	937	467	320	330	381
29	531	457	1610	13500	---	3420	8240	820	423	336	326	331
30	417	420	1310	12300	---	4080	7870	743	388	327	323	352
31	356	---	1110	10700	---	4320	---	706	---	362	325	---
TOTAL	10056	11859	29104	177520	139100	277040	188910	57471	14683	12209	13932	19885
MEAN	324	395	939	5726	4968	8937	6297	1854	489	394	449	663
MAX	531	619	2670	14300	9280	17800	14100	7220	688	647	900	1430
MIN	279	236	412	1200	1530	2740	1730	706	387	287	323	324
CFSM	.14	.16	.39	2.39	2.07	3.73	2.62	.77	.20	.16	.19	.28
IN.	.16	.18	.45	2.75	2.16	4.30	2.93	.89	.23	.19	.22	.31

CAL YR 1986 TOTAL 322771 MEAN 884 MAX 5020 MIN 236 CFSM .37 IN. 5.01
WTR YR 1987 TOTAL 951769 MEAN 2608 MAX 17800 MIN 236 CFSM 1.09 IN. 14.8

NEUSE RIVER BASIN

02089000 NEUSE RIVER NEAR GOLDSBORO, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/21	1210	WATER	0.1	2.64	290	168	7.40	15.0	10.0	9.2	10
86/11/17	1215	WATER	0.1	3.31	504	154	7.20	11.0		9.2	
86/12/03	1140	WATER	0.1	3.26	484						
86/12/03	1140	WATER				136	7.10	13.0		8.9	
87/01/21	1220	WATER	0.1	13.95	6001	68	6.90	7.0	8.4	9.4	
87/02/17	1210	WATER	0.1	6.29	1799	119	6.90	5.0		11.4	
87/03/12	1200	WATER	0.1	18.65	9955	60	6.80	8.0		9.8	
87/04/21	1230	WATER	0.1	20.87	13294	59	6.50	16.0	34.0	6.0	
87/05/11	1215	WATER	0.1	5.22	1287	108	7.10	21.0			
87/06/08	1210	WATER	0.1	3.67	596	160	7.10	25.0		6.7	
87/07/14	1300	WATER	0.1	3.62	580	147	7.30	29.0	6.0	6.1	
87/08/20	1315	WATER	0.1	3.11	394						
87/08/20	1315	WATER	0.15			207		30.0			
87/09/08	1140	WATER	0.1	3.24	441	186		26.0		6.3	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/21	1210	WATER	0.1	39	6	35	1.40	.080	.400	.590	.470
86/11/17	1215	WATER	0.1	37	13	12	1.10	.090	.400	.570	.410
86/12/03	1140	WATER		32	12	95	.82	.070	.500	.400	.280
87/01/21	1220	WATER	0.1	12	73	160	.67	.060	.400	.270	.070
87/02/17	1210	WATER	0.1	16	12	430	.90	.080	.400	.160	.070
87/03/12	1200	WATER	0.1	13	19	29	.33	.010	.400	.080	.020
87/04/21	1230	WATER	0.1	9	10	96	.19	.030	.500	.130	.040
87/05/11	1215	WATER	0.1	22	16	127	.77	.020	.400	.250	.070
87/06/08	1210	WATER	0.1	31	17	160	.99	.050	.400	.410	.250
87/07/14	1300	WATER	0.1	28	17	51	.85	.040	.400	.520	.440
87/08/20	1315	WATER	0.15		11	120	1.10	.110	.500	.550	.450
87/09/08	1140	WATER	0.1		19	140	1.20	.080	.300	.540	.470

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/21	1210	WATER	0.1		10K	25K	10K	50K	.2K	50K	10K
87/01/21	1220	WATER	0.1		10K	25K	10K	50K	.2K	50K	14
87/04/21	1230	WATER	0.1		10K	25K	10K	50K	.2K	50K	10K
87/07/14	1300	WATER	0.1		10K	25K	10K	50K	.2K	50K	10K

NEUSE RIVER BASIN

02089500 NEUSE RIVER AT KINSTON, NC
(National stream-quality accounting network station)

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.

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).

AVERAGE DISCHARGE.--57 years, 2,856 ft^3/s, 14.41 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,000 ft^3/s Oct. 13, 1964; maximum gage height, 22.86 ft Oct. 13, 1964; minimum discharge, 124 ft^3/s Sept. 26, 1932, gage height, 1.29 ft, site and datum 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,600 ft^3/s Mar. 9, gage height 20.03 ft; minimum, 282 ft^3/s Oct. 7, gage height, 2.50 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	338	520	651	1710	14500	8500	4760	9570	876	483	420	359
2	333	533	668	2140	13500	9480	5020	8940	833	453	477	358
3	332	535	735	2480	12000	10900	5040	8270	795	486	506	382
4	323	482	758	3230	10500	11900	4870	6960	806	506	482	617
5	303	435	754	3690	9160	13000	4500	5240	860	551	453	621
6	289	394	886	4210	8200	14400	4060	3930	793	520	475	520
7	285	359	999	4650	7620	16300	3680	3450	752	490	645	475
8	289	371	917	4930	7160	17900	3370	2710	805	473	1140	450
9	289	372	802	4870	6800	18500	3100	2320	751	441	1320	482
10	312	391	725	3750	6530	18000	2880	2000	670	443	1020	650
11	366	390	689	2660	6330	16800	2700	1800	623	424	901	983
12	375	394	729	2290	5940	15100	2560	1620	593	521	688	1070
13	360	380	872	2120	4620	13600	2420	1530	570	570	571	977
14	405	438	1050	2090	3310	12300	2220	1850	613	524	578	979
15	450	488	1360	1990	2430	11400	2200	1920	635	631	600	913
16	428	614	1480	1880	2170	10900	3220	1890	582	644	575	1220
17	405	774	1360	1840	2230	10600	4190	1880	554	692	504	1440
18	408	755	1220	1880	2470	10400	5170	1660	542	619	451	1290
19	408	761	1120	2350	2770	10100	5880	1460	523	522	457	1040
20	390	818	1030	3360	3160	9620	6890	1320	506	466	497	974
21	366	798	955	4290	3590	9010	8600	1240	509	427	508	1320
22	348	740	889	5910	3970	8330	10400	1310	512	384	457	1180
23	343	683	840	7160	4340	7690	11700	1780	501	363	443	877
24	333	663	1190	7910	4690	6970	13400	2030	494	355	435	774
25	342	671	2120	8930	5100	5760	14900	2320	489	330	399	718
26	409	662	2280	10100	5510	4780	15300	2040	484	318	394	639
27	473	649	2430	11300	6050	4250	14500	1570	610	401	387	583
28	465	640	2820	12500	6870	3840	13200	1430	695	366	369	555
29	445	645	2740	13700	---	3830	11700	1200	589	356	357	521
30	565	667	2250	14600	---	4010	10400	1030	514	361	355	486
31	551	---	1830	14900	---	4350	---	934	---	379	357	---
TOTAL	11728	17022	39149	169420	171520	322520	202830	87204	19079	14499	17221	23453
MEAN	378	567	1263	5465	6126	10400	6761	2813	636	468	556	782
MAX	565	818	2820	14900	14500	18500	15300	9570	876	692	1320	1440
MIN	285	359	651	1710	2170	3830	2200	934	484	318	355	358
CFSM	.14	.21	.47	2.03	2.28	3.86	2.51	1.04	.24	.17	.21	.29
IN.	.16	.24	.54	2.34	2.37	4.46	2.80	1.21	.26	.20	.24	.32

CAL YR 1986 TOTAL 389349 MEAN 1067 MAX 4890 MIN 285 CFSM .40 IN. 5.38
WTR YR 1987 TOTAL 1095640 MEAN 3002 MAX 18500 MIN 285 CFSM 1.12 IN. 15.1

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 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV											
05...	0945	435	170	6.80	17.0	7.6	762	8.3	86	210	84
JAN											
08...	1030	4940	65	6.60	5.5	27	764	10.7	85	--	820
29...	1100	13700	60	6.50	3.0	35	769	10.6	78	110	390
MAY											
12...	1200	1620	105	7.20	21.0	17	769	7.6	85	K24	840
JUL											
23...	1030	363	138	6.40	29.0	5.5	762	6.6	86	80	470
SEP											
01...	0945	359	165	6.70	24.5	11	767	--	--	410	990

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WHOLE IT-FLD (MG/L)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
NOV											
05...	31	0	7.8	2.7	19	53	2	4.6	37	30	21
JAN											
08...	22	8	5.1	2.2	8.2	41	0.8	3.2	17	14	16
29...	14	7	3.2	1.4	4.4	35	0.5	2.9	7	6	17
MAY											
12...	24	4	5.9	2.3	10	44	0.9	2.6	27	22	17
JUL											
23...	25	0	5.5	2.7	17	56	2	3.6	34	28	21
SEP											
01...	28	0	6.4	2.8	26	63	2	4.1	39	32	30

NEUSE RIVER BASIN

02089500 NEUSE RIVER AT KINSTON, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRATE 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)
NOV											
05...	12	0.20	8.6	106	96	0.14	124	--	1.20	0.040	0.070
JAN											
08...	9.3	<0.10	7.9	66	61	0.09	880	--	0.770	0.080	0.060
29...	6.4	<0.10	6.0	55	46	0.08	2030	--	0.580	0.060	0.050
MAY											
12...	10	0.10	8.9	84	69	0.11	367	0.870	0.890	0.060	0.070
JUL											
23...	11	0.20	8.9	102	87	0.14	100	0.450	0.460	0.050	0.060
SEP											
01...	14	0.30	8.2	115	110	0.16	111	--	0.960	0.060	0.040

DATE	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)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)
NOV										
05...	0.09	0.86	0.90	0.460	0.360	0.350	1.1	70	<1	21
JAN										
08...	0.08	0.62	0.70	0.090	0.080	0.070	0.21	150	<1	25
29...	0.06	0.74	0.80	0.110	0.030	0.040	0.12	180	<1	23
MAY										
12...	0.09	0.54	0.60	0.100	0.130	0.130	0.40	--	--	--
JUL										
23...	0.08	0.95	1.0	0.300	0.300	0.260	0.80	--	--	--
SEP										
01...	0.05	4.6	4.7	0.420	0.380	0.320	0.98	50	1	25

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										
05...	<0.5	2	<1	<3	4	570	<5	12	49	0.1
JAN										
08...	<0.5	1	<1	<3	4	170	<5	8	39	<0.1
29...	<0.5	<1	<1	<3	5	170	<5	<4	55	<0.1
MAY										
12...	--	--	--	--	--	--	--	--	--	--
JUL										
23...	--	--	--	--	--	--	--	--	--	--
SEP										
01...	<0.5	<1	<1	<3	4	350	<5	23	51	<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. [2] FINER THAN .062 MM
NOV										
05...	<10	3	<1	<1	53	<6	15	18	21	95
JAN										
08...	<10	2	<1	<1	34	<6	18	32	427	90
29...	<10	1	<1	<1	21	<6	17	33	1220	76
MAY										
12...	--	--	--	--	--	--	--	33	144	78
JUL										
23...	--	--	--	--	--	--	--	8	7.8	97
SEP										
01...	<10	1	<1	<1	56	<6	7	20	19	77

NEUSE RIVER BASIN

02089500 NEUSE RIVER AT KINSTON, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/16	1300	WATER	0.1	3.25	547						
86/10/21	1040	WATER	0.1	2.73	367	180	7.30	15.0	8.0	9.4	140
86/11/17	1045	WATER	0.1	3.67	781	179	7.20	11.0		9.1	
86/12/03	1000	WATER	0.1	3.53	732	149	7.20	13.0		8.4	
87/01/21	1110	WATER	0.1	10.23	4021	94	6.90	8.0	5.1	10.0	
87/02/17	1030	WATER	0.1	6.93	2225	97	7.10	6.0		10.7	
87/03/12	1040	WATER	0.1	18.66	15222	59	6.70	9.0		9.0	
87/04/21	1100	WATER	0.1	14.78	8128	59	6.60	16.0	26.0	5.6	
87/05/11	1050	WATER	0.1	6.09	1804	97	7.00	21.0		7.0	
87/06/08	1050	WATER	0.1	4.09	818	140	7.20	25.0		7.2	
87/07/14	1130	WATER	0.1	3.32	511	117	7.40	30.0	12.0	5.8	
87/08/20	1130	WATER	0.1	3.23	491						
87/08/20	1130	WATER	0.15			162		30.0			
87/09/08	1015	WATER	0.1	3.11	468	165		26.5		6.1	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/21	1040	WATER	0.1	37	10	93	1.30	.040	.400	.470	.350
86/11/17	1045	WATER	0.1	38	15	34	1.30	.200	.400	.460	.310
86/12/03	1000	WATER	0.1	30	20	100	1.10	.110	.500	.250	.400
87/01/21	1110	WATER	0.1	14	21	140	1.40	.110	.500	.220	.070
87/02/17	1030	WATER	0.1	16	12	90	1.10	.140	.400	.140	.040
87/03/12	1040	WATER	0.1	10	17	30	.41	.020	.300	.090	.020
87/04/21	1100	WATER	0.1	12	13	93	.39	.100	.600	.150	.050
87/05/11	1050	WATER	0.1	20	24	121	.95	.100	.400	.210	.040
87/06/08	1050	WATER	0.1	24	21	130	.86	.020	.500	.290	.110
87/07/14	1130	WATER	0.1	29	13	110	.91	.080	.400	.350	.260
87/08/20	1130	WATER	0.15		12	5100	1.10	.110	.300	.350	.240
87/09/08	1015	WATER	0.1		19	130	1.10	.100	.400	.410	.330

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/21	1040	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/01/21	1110	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/04/21	1100	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/14	1130	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

NEUSE RIVER BASIN

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.

WATER-DISCHARGE RECORDS

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 02102178).

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

AVERAGE DISCHARGE.--23 years, 155 ft^3/s, 13.07 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,860 ft^3/s Oct. 6, 1964, gage height, 16.28 ft; minimum, 0.04 ft^3/s Sept. 9-14, 1976, due to regulation; minimum gage height, 1.07 ft July 14, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,680 ft^3/s Apr. 17, gage height, 15.61 ft; minimum, 7.2 ft^3/s Aug. 26, 27, gage height, 1.77 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e12	19	37	171	240	2030	291	199	25	18	21	8.5
2	e10	19	45	610	220	2700	228	171	24	18	21	9.1
3	e9.8	17	77	861	214	2010	188	325	22	19	21	9.2
4	e9.6	16	97	730	208	1200	187	303	27	18	20	9.6
5	e9.6	15	75	452	188	570	182	246	30	14	20	10
6	e9.4	16	66	253	171	360	173	177	30	13	20	10
7	e9.4	15	59	190	165	263	151	130	30	11	20	11
8	e9.4	16	50	157	162	233	141	110	26	9.8	19	11
9	e9.2	18	45	128	157	244	124	94	21	9.3	19	11
10	9.2	15	46	130	125	494	112	81	17	8.9	19	12
11	9.3	15	59	182	129	787	104	70	13	9.5	19	12
12	9.3	26	102	162	130	770	104	63	13	65	19	12
13	9.6	43	160	129	111	568	108	58	11	207	18	23
14	13	43	144	112	116	369	120	61	12	88	18	186
15	20	51	108	106	127	281	223	68	11	41	18	217
16	22	55	81	103	138	245	2160	63	13	28	18	113
17	20	66	68	112	200	228	4310	56	14	19	18	63
18	17	68	64	213	297	210	2760	51	15	16	17	39
19	15	60	64	1070	401	216	1780	48	18	14	17	27
20	13	48	72	2810	446	313	1070	68	21	11	17	30
21	11	49	64	2350	453	353	648	85	29	9.6	17	23
22	11	37	54	1900	496	305	440	81	61	9.2	18	22
23	11	39	49	2340	900	233	318	71	48	8.1	17	20
24	11	37	127	2050	1310	195	291	62	52	11	17	17
25	11	50	424	1450	1140	166	968	52	59	21	17	14
26	16	48	469	772	794	158	1640	45	67	21	12	13
27	25	45	304	525	546	170	1070	40	58	20	7.4	11
28	32	39	182	417	820	432	579	38	43	20	7.5	9.9
29	30	37	133	337	---	490	328	35	29	21	7.9	9.4
30	25	36	114	290	---	372	234	32	22	21	7.9	21
31	21	---	94	275	---	342	---	29	---	21	8.0	---
TOTAL	449.8	1058	3533	21387	10404	17307	21032	3012	861	820.4	515.7	983.7
MEAN	14.5	35.3	114	690	372	558	701	97.2	28.7	26.5	16.6	32.8
MAX	32	68	469	2810	1310	2700	4310	325	67	207	21	217
MIN	9.2	15	37	103	111	158	104	29	11	8.1	7.4	8.5
CFSM	.09	.22	.71	4.29	2.31	3.47	4.35	.60	.18	.16	.10	.20
IN.	.10	.24	.82	4.94	2.40	4.00	4.86	.70	.20	.19	.12	.23

CAL YR 1986 TOTAL 34900.1 MEAN 95.6 MAX 2010 MIN 5.9 CFSM .59 IN. 8.06
WTR YR 1987 TOTAL 81363.5 MEAN 223 MAX 4310 MIN 7.4 CFSM 1.38 IN. 18.8

e Estimated

NEUSE RIVER BASIN

02090380 CONTENTNEA CREEK NEAR LUCAMA, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/22	1145	WATER	0.1	1.87	11	42	7.00	15.0		7.9	140
86/11/06	0830	WATER	0.1	1.87	16	48	6.50	17.0		7.0	
86/12/02	0930	WATER	0.1	2.24	41	45	6.90	11.0		9.4	
87/01/27	1000	WATER	0.1	5.89	533						
87/02/24	1000	WATER	0.1	10.19	1344	38	6.70	5.0	40.0	12.4	
87/03/10	1050	WATER	0.1	5.39	465	31		10.0		11.8	
87/04/09	1015	WATER	0.1	2.86	124	43	6.20	15.0		9.5	
87/04/27	1400	WATER	0.1	8.87	995	30	6.20	15.0		8.9	
87/05/27	1200	WATER	0.1	2.23	40	50		25.0	10.0	6.6	
87/07/07	1200	WATER	0.1	1.87	12	60		29.0		3.4	
87/08/28	1040	WATER	0.1	1.78	8						
87/09/30	1300	WATER	0.1	2.14	30	51	6.55	24.0		6.5	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/22	1145	WATER	0.1	19	4	65					
86/11/06	0830	WATER	0.1	16			.18	.060	.400	.060	.010K
86/12/02	0930	WATER	0.1	14			.22	.040	.500	.010	.020
87/02/24	1000	WATER	0.1		23	140	.38	.190	.800	.070	.020
87/03/10	1050	WATER	0.1				.24	.030	.300	.090	.020
87/04/09	1015	WATER	0.1	14			.22	.020	.400	.070	.010K
87/04/27	1400	WATER	0.1				.14	.080	.500	.140	.020
87/05/27	1200	WATER	0.1		7	82	.12	.110	.400	.060	.010K
87/07/07	1200	WATER	0.1				.12	.090	.400	.070	.020
87/09/30	1300	WATER	0.1	12			.17	.030	.500	.060	.010

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/02/24	1000	WATER	0.1	10K	10K	25K	37	50K	.2K	50K	55
87/05/27	1200	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	44

NEUSE RIVER BASIN

02090625 TURNER SWAMP NEAR EUREKA, NC

LOCATION.--Lat 35°34'14", long 77°52'47", Wayne County, Hydrologic Unit 03020203, on right bank at downstream side of bridge on Secondary Road 1505, 2.0 mi north of Eureka, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--2.1 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1968 to September 1987 (discontinued).

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

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 90 ft, by barometer.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some diurnal fluctuation at low flow.

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

AVERAGE DISCHARGE.--19 years, 2.23 ft^3/s, 14.42 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 652 ft^3/s Aug. 5, 1974, gage height, 5.78 ft; minimum, 0.03 ft^3/s Sept. 18, 1987, result of unknown regulation; minimum unregulated, 0.14 ft^3/s Oct. 10, 11, 1983, Sept. 18, 1986 and Oct. 7, 8, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 19	1300	87	3.40	Mar. 1	0945	*146	*3.92
Jan. 22	1330	133	3.82				

Minimum discharge, 0.03 ft^3/s Sept 18, result of unknown regulation; minimum unregulated, .14 ft^3/s Oct. 7-8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.23	.28	.55	5.8	1.8	66	3.3	1.4	1.7	.24	e.24	.18
2	.25	.36	.75	4.4	1.8	11	2.4	1.5	1.5	.26	e.25	.15
3	.24	.37	.93	1.6	1.6	5.1	2.2	14	.90	.25	e.35	.15
4	.22	.38	.62	1.1	1.4	4.2	2.6	4.6	.85	.27	e.48	.14
5	.23	.31	.53	1.0	1.3	3.3	2.0	2.9	.90	.23	e.37	.24
6	.18	.34	.48	.91	1.4	2.8	1.8	2.3	.79	.22	e.16	.26
7	.15	.35	.40	.89	1.7	2.7	1.7	1.8	.72	.16	.31	.35
8	.18	.32	.45	.84	1.4	2.7	1.6	1.6	.69	.15	.39	.35
9	.22	.32	.45	.77	1.2	4.1	1.5	1.4	.65	.12	.19	.23
10	.28	.32	.54	1.7	1.2	18	1.5	1.2	.63	.11	.19	.19
11	.32	.27	1.1	1.5	1.2	5.9	1.4	1.1	.46	e.35	.29	.15
12	.28	.70	2.0	1.0	1.2	4.6	1.5	1.1	.52	e.37	.24	.30
13	.31	.68	1.4	.90	1.1	3.9	1.4	1.3	.59	e.30	.20	1.5
14	.62	.42	.76	.84	1.2	3.3	1.3	2.1	.72	e1.7	.16	.15
15	.37	1.5	.66	.85	1.1	3.0	9.2	1.4	.69	e1.1	.32	.07
16	.25	.91	.62	.89	2.4	2.8	16	1.2	.63	e1.3	.41	.07
17	.22	.69	.60	1.2	4.3	2.7	6.7	1.0	.54	e2.2	.33	.06
18	.22	.70	.63	4.7	4.8	2.4	6.3	1.0	.51	e1.4	.26	.06
19	.22	.47	.69	41	3.8	3.7	4.5	.95	.50	e.90	.31	.08
20	.20	.42	.62	7.7	3.0	4.6	3.6	.96	.41	e.50	.50	.43
21	.22	.46	.56	3.6	2.5	3.4	3.0	1.0	.39	e.35	.41	.18
22	.21	.44	.53	53	6.3	2.8	2.5	.98	.40	e.32	.50	.15
23	.21	.41	.56	9.9	4.7	2.4	2.1	.88	.42	e.28	.41	.12
24	.20	.46	9.2	4.5	3.5	2.2	2.6	.79	.39	e.26	.29	.12
25	.22	.56	4.6	3.4	2.6	2.1	4.6	.81	.41	e.25	.31	.12
26	.89	.52	.97	5.3	2.2	2.0	3.2	4.6	.35	e.25	.32	.11
27	.68	.48	.49	3.3	9.2	2.5	2.5	1.6	.35	e.26	.29	.11
28	.33	.44	.49	2.4	20	4.4	2.1	.99	.31	e.28	.23	.11
29	.31	.45	.64	2.2	---	3.0	1.7	.92	.17	e.29	.21	.12
30	.26	.45	.67	2.6	---	2.7	1.5	.85	.21	e.30	.19	.20
31	.30	---	.62	2.1	---	4.3	---	.78	---	e.27	.16	---
TOTAL	9.02	14.78	34.11	171.89	89.9	188.6	98.3	59.01	18.30	15.24	9.27	6.45
MEAN	.29	.49	1.10	5.54	3.21	6.08	3.28	1.90	.61	.49	.30	.21
MAX	.89	1.5	9.2	53	20	66	16	14	1.7	2.2	.50	1.5
MIN	.15	.27	.40	.77	1.1	2.0	1.3	.78	.17	.11	.16	.06
CFSM	.14	.23	.52	2.64	1.53	2.90	1.56	.91	.29	.23	.14	.10
IN.	.16	.26	.60	3.04	1.59	3.34	1.74	1.05	.32	.27	.16	.11

CAL YR 1986 TOTAL 273.22 MEAN .75 MAX 15 MIN .15 CFSM .36 IN. 4.84
WTR YR 1987 TOTAL 714.86 MEAN 1.96 MAX 66 MIN .06 CFSM .93 IN. 12.7

e Estimated

NEUSE RIVER BASIN

02090625 TURNER SWAMP NEAR EUREKA, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/08	1300	WATER	0.1	.94	0	80	6.30	18.0	14.0	.1	70
86/11/04	1230	WATER	0.1	.93	0	84	6.40	15.0		1.4	
86/12/17	1200	WATER	0.1	.98	1	68	6.30	7.0		6.6	
87/01/08	1230	WATER	0.1	1.05	1	70	6.40	5.0	14.0	7.5	
87/02/05	1135	WATER	0.1	1.19	1	69	6.70	6.0		8.7	
87/03/04	1120	WATER	0.1	1.54	4	40	6.60	9.0		8.0	
87/04/27	1100	WATER	0.1	1.42	3	63	6.40	12.0	10.0	4.7	
87/05/13	1115	WATER	0.1	1.08	1	88	6.50	20.0		1.5	
87/06/04	1300	WATER	0.1	1.02	1	80	6.40	18.0		1.0	
87/07/01	1220	WATER	0.1	.86	0	92	6.50	24.0	14.0	.7	
87/08/03	1415	WATER	0.1	.00	0	80	5.80	25.0		.1	
87/09/03	1130	WATER	0.1	1.15	0	74		22.0		.2	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/08	1300	WATER	0.1	22	8	87	.02	.380	1.000	.130	.010
86/11/04	1230	WATER	0.1	25	32	120					
86/12/17	1200	WATER	0.1	15	5	58					
87/01/08	1230	WATER	0.1	13	10	87	.26	.100	.400	.050	.010K
87/02/05	1135	WATER	0.1	10	1	38					
87/03/04	1120	WATER	0.1	8	5	58					
87/04/27	1100	WATER	0.1	11	3	72	.14	.250	.600	.100	.040
87/05/13	1115	WATER	0.1	21	4	92					
87/06/04	1300	WATER	0.1	20	5	66					
87/07/01	1220	WATER	0.1	22	24	82	.04	.290	.700	.150	.010
87/08/03	1415	WATER	0.1	19	9	61					
87/09/03	1130	WATER	0.1		24	60					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/08	1300	WATER	0.1		10K	25K	10K	50K	.2K	50K	15
87/01/08	1230	WATER	0.1		10K	25K	10K	50K	.2K	50K	10K
87/07/01	1220	WATER	0.1		10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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

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

AVERAGE DISCHARGE.--33 years, 83.7 ft^3/s, 14.14 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,470 ft^3/s Oct. 6, 1964, gage height, 14.14 ft; minimum, 1.0 ft^3/s Oct. 7, 8, 1954, gage height, 0.80 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 580 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 19	2200	748	7.71	Mar. 2	0930	*1,470	*9.68
Jan. 22	2200	1,010	8.32	Apr. 16	1100	614	6.70

Minimum discharges 1.2 ft^3/s Oct. 6, 7, 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	5.3	14	92	97	926	135	57	e27	4.4	3.8	1.6
2	1.7	6.9	16	230	87	1400	102	52	e21	5.8	30	2.0
3	1.6	6.6	26	117	83	997	88	74	e15	5.0	5.3	1.5
4	1.5	6.7	21	72	76	487	91	61	e11	5.0	3.8	1.5
5	1.4	6.6	18	59	69	218	79	53	e14	4.6	3.1	3.1
6	1.3	6.4	15	50	65	162	73	49	e12	4.3	2.3	3.8
7	1.2	6.5	15	46	70	136	70	43	e10	3.4	3.4	4.4
8	1.2	6.5	14	43	70	123	66	40	e10	2.8	22	5.0
9	1.3	6.9	14	40	65	120	62	37	e8.2	2.5	9.9	5.0
10	1.6	7.4	17	50	57	219	59	33	e7.6	2.5	5.8	7.0
11	1.9	6.9	21	74	54	203	56	30	e7.2	2.6	4.0	4.6
12	3.5	8.1	36	56	54	154	55	28	e6.8	3.8	3.2	4.1
13	2.9	13	59	48	53	130	52	32	e7.0	5.6	2.5	13
14	7.1	11	37	43	51	113	50	62	e9.0	4.5	3.2	26
15	9.7	14	29	42	53	103	145	39	e10	7.7	3.1	12
16	5.6	27	25	40	54	96	557	32	12	4.6	5.2	8.1
17	4.0	19	23	48	102	89	412	27	9.2	3.1	3.8	4.8
18	3.7	16	22	99	169	83	461	24	7.7	2.4	3.2	4.3
19	3.3	15	23	471	186	94	404	23	7.9	2.3	2.6	3.5
20	3.0	13	21	614	153	134	250	29	7.0	2.0	3.2	101
21	2.9	12	21	370	126	114	179	32	5.9	2.0	4.6	78
22	2.9	12	20	626	115	95	141	28	5.6	1.8	3.8	18
23	2.7	11	19	964	226	83	115	24	5.3	1.6	3.9	12
24	2.7	11	128	633	212	77	128	22	6.5	1.6	2.8	7.9
25	2.8	11	264	352	161	72	218	20	6.1	1.4	2.0	6.5
26	6.2	14	129	263	116	71	141	32	5.3	1.4	2.3	5.6
27	9.7	14	83	186	159	95	106	e28	4.8	1.3	2.1	5.2
28	6.9	16	57	137	522	185	96	e22	5.6	1.4	1.7	4.9
29	5.6	13	48	113	---	127	77	e17	4.9	1.5	1.5	4.4
30	5.2	12	43	114	---	104	66	e15	4.9	1.7	1.4	4.1
31	5.0	---	39	117	---	144	---	e20	---	1.5	1.4	---
TOTAL	111.9	334.8	1317	6209	3305	7154	4534	1085	274.5	96.1	150.9	362.9
MEAN	3.61	11.2	42.5	200	118	231	151	35.0	9.15	3.10	4.87	12.1
MAX	9.7	27	264	964	522	1400	557	74	27	7.7	30	101
MIN	1.2	5.3	14	40	51	71	50	15	4.8	1.3	1.4	1.5
CFSM	.04	.14	.53	2.49	1.47	2.87	1.88	.44	.11	.04	.06	.15
IN.	.05	.15	.61	2.87	1.53	3.31	2.10	.50	.13	.05	.07	.17

CAL YR 1986 TOTAL 6833.4 MEAN 18.7 MAX 264 MIN 1.2 CFSM .23 IN. 3.16
WTR YR 1987 TOTAL 24934.9 MEAN 68.3 MAX 1400 MIN 1.2 CFSM .85 IN. 11.5

e Estimated

NEUSE RIVER BASIN

02091000 NAHUNTA SWAMP NEAR SHINE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/08	1215	WATER	0.1	.89	1	80	6.80	18.0	12.0	5.7	180
86/11/04	1150	WATER	0.1	1.33	7	98	6.80	14.0		6.8	
86/12/17	1105	WATER	0.1	1.80	23	107	6.40	8.0		10.2	
87/01/08	1130	WATER	0.1	2.19	43	122	6.60	7.0	6.5	10.0	
87/02/05	1050	WATER	0.1	2.64	69	109	6.80	7.0		10.6	
87/03/04	1055	WATER	0.1	6.21	521	66	6.30	9.0		8.1	
87/04/27	1030	WATER	0.1	3.00	107	88	6.70	12.0	18.0	8.0	
87/05/13	1150	WATER	0.1	1.90	27	97	6.70	18.0		7.0	
87/06/04	1225	WATER	0.1	.00	11	101	6.90	19.0		5.9	
87/07/01	1145	WATER	0.1	.00	4	88	6.90	23.0	7.0	5.4	
87/08/03	1345	WATER	0.1	.00	5	100	6.10	25.0		5.3	
87/09/03	1100	WATER	0.1	.00	2	85		22.0		5.3	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/08	1215	WATER	0.1	18	10	63	.32	.060	.300	.250	.040
86/11/04	1150	WATER	0.1	17	2	90					
86/12/17	1105	WATER	0.1	12	3	72					
87/01/08	1130	WATER	0.1	11	9	100	2.80	.140	.400	.060	.010
87/02/05	1050	WATER	0.1	8	2	70					
87/03/04	1055	WATER	0.1	7	18	81					
87/04/27	1030	WATER	0.1	8	12	88	1.80	.170	.500	.200	.020
87/05/13	1150	WATER	0.1	13	9	78					
87/06/04	1225	WATER	0.1	15	4	64					
87/07/01	1145	WATER	0.1	18	9	79	.93	.050	.300	.170	.070
87/08/03	1345	WATER	0.1	10	7	160					
87/09/03	1100	WATER	0.1		8	56					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/08	1215	WATER	0.1		10K	25K	10K	50K	.2K	50K	10K
87/01/08	1130	WATER	0.1		10K	25K	10K	50K	.2K	50K	10K
87/07/01	1145	WATER	0.1		10K	25K	10K	50K	.2K	50K	12

NEUSE RIVER BASIN

02091500 CONTENTNEA CREEK AT HOOKERTON, NC
(National stream-quality accounting network station)

LOCATION.--Lat 35°25'40", long 77°35'10", Greene County, Hydrologic Unit 03020203, on right bank at Hookerton, 0.3 mi upstream from bridge on State Highway 123, and 2.5 mi upstream from Wheat Swamp Creek.

DRAINAGE AREA.--729 mi^2.

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 200 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--58 years (water years 1930-87), 760 ft^3/s, 14.16 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,200 ft^3/s Oct. 7, 1964; maximum gage height, 22.11 ft Oct. 8, 1964; minimum discharge, 15 ft^3/s Oct. 28, 1933, gage height, 1.22 ft.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,450 ft^3/s Jan. 26, gage height, 16.39 ft; minimum discharge, 32 ft^3/s July 31; minimum gage height, 2.93 ft Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	56	142	1360	3070	3310	1290	1800	192	86	41	37
2	61	63	141	1240	2570	4170	1360	1830	174	84	55	36
3	57	70	151	1130	2150	4970	1400	1710	162	80	75	35
4	54	70	160	1110	1820	6050	1420	1460	192	76	76	34
5	51	65	177	1180	1520	7020	1390	1270	176	69	61	36
6	48	58	186	1320	1280	7100	1280	1250	154	63	56	40
7	45	54	192	1500	1130	6340	1140	1360	140	58	72	41
8	45	54	198	1610	1030	5180	1010	1460	132	56	107	45
9	44	54	191	1600	956	3990	903	1400	124	55	110	61
10	44	54	178	1460	890	3210	801	1100	114	56	96	102
11	46	52	170	1220	828	2670	718	825	106	52	79	131
12	48	54	176	1010	770	2300	653	601	100	53	66	106
13	48	58	220	863	713	2160	596	502	95	53	57	84
14	50	59	301	769	658	2220	552	485	93	56	51	82
15	52	76	370	712	623	2350	591	474	91	75	58	138
16	59	109	406	657	606	2370	1140	434	87	85	68	163
17	70	125	408	609	656	2280	1740	417	81	125	59	128
18	66	152	373	598	758	2100	1990	390	77	136	54	121
19	57	162	328	862	866	1870	2310	349	74	115	50	158
20	52	171	290	1300	981	1640	3060	312	78	91	50	388
21	50	175	263	1740	1110	1440	4800	297	86	73	48	504
22	50	169	243	2480	1280	1330	5710	321	86	60	60	402
23	50	157	230	3570	1510	1280	5570	334	78	51	93	285
24	50	144	259	5450	1700	1270	4680	329	71	46	82	219
25	48	133	539	7530	1850	1250	3820	308	68	42	65	167
26	53	125	743	8300	1960	1190	3190	299	73	39	55	132
27	59	122	832	8190	2190	1160	2650	517	87	37	50	109
28	62	131	961	7180	2640	1270	2200	477	91	34	45	95
29	63	139	1130	5920	---	1250	1890	338	89	33	42	83
30	62	143	1360	4720	---	1210	1760	259	87	33	40	76
31	59	---	1450	3720	---	1220	---	219	---	32	38	---
TOTAL	1668	3054	12768	80910	38115	87170	61614	23127	3258	2004	1959	4038
MEAN	53.8	102	412	2610	1361	2812	2054	746	109	64.6	63.2	135
MAX	70	175	1450	8300	3070	7100	5710	1830	192	136	110	504
MIN	44	52	141	598	606	1160	552	219	68	32	38	34
CFSM	.07	.14	.56	3.58	1.87	3.86	2.82	1.02	.15	.09	.09	.18
IN.	.09	.16	.65	4.13	1.94	4.45	3.14	1.18	.17	.10	.10	.21

CAL YR 1986 TOTAL 99816 MEAN 273 MAX 1720 MIN 22 CFSM .38 IN. 5.09
WTR YR 1987 TOTAL 319685 MEAN 876 MAX 8300 MIN 32 CFSM 1.20 IN. 16.3

NEUSE RIVER BASIN

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 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV											
05...	1330	64	150	6.60	16.0	3.8	761	7.8	79	140	100
JAN											
08...	1245	1610	82	6.20	5.0	16	764	10.4	81	96	420
29...	1515	5740	46	6.10	3.0	28	769	10.8	79	K60	190
MAY											
12...	1500	629	89	7.00	20.0	10	769	7.9	86	180	580
JUL											
23...	1200	51	96	6.60	27.5	5.0	762	6.6	84	160	130
SEP											
01...	1145	38	148	6.80	24.0	--	767	--	--	160	36

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WHOLE IT-FLD (MG/L)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
NOV											
05...	22	8	5.2	2.2	18	57	2	5.6	17	14	18
JAN											
08...	20	14	4.5	2.0	6.1	36	0.6	3.3	7	6	14
29...	13	2	3.1	1.3	3.6	32	0.4	2.7	2	2	19
MAY											
12...	20	7	4.9	2.0	5.8	34	0.6	2.9	18	15	12
JUL											
23...	17	0	3.4	2.1	11	52	1	3.9	49	40	21
SEP											
01...	--	--	--	--	--	--	--	--	20	16	--

NEUSE RIVER BASIN

02091500 CONTENTNEA CREEK AT HOOKERTON, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRATE 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)
NOV											
05...	14	0.20	5.8	107	80	0.15	18	1.77	1.80	0.130	0.150
JAN											
08...	9.9	<0.10	9.1	67	53	0.09	291	--	0.810	0.090	0.100
29...	6.7	<0.10	6.5	58	51	0.08	899	0.780	0.790	0.080	0.060
MAY											
12...	9.9	0.10	7.7	70	54	0.09	119	0.800	0.830	0.190	0.200
JUL											
23...	10	0.30	4.5	67	81	0.09	9.2	--	--	0.150	0.170
SEP											
01...	--	--	--	--	--	--	--	1.34	1.40	0.650	0.580

DATE	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)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)
NOV										
05...	0.19	0.97	1.1	0.590	0.560	0.550	1.7	80	<1	25
JAN										
08...	0.13	0.51	0.60	0.090	0.060	0.060	0.18	180	<1	30
29...	0.08	0.72	0.80	0.110	0.060	0.060	0.18	660	<1	29
MAY										
12...	0.26	0.71	0.90	0.290	0.190	0.180	0.55	--	--	--
JUL										
23...	0.22	0.75	0.90	0.660	0.570	0.520	1.6	--	--	--
SEP										
01...	0.75	0.95	1.6	--	0.890	0.790	2.4	--	--	--

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										
05...	<0.5	2	<1	<3	1	570	5	<4	24	0.1
JAN										
08...	1	<1	<1	<3	2	230	<5	<4	25	<0.1
29...	<0.5	<1	<1	<3	4	550	10	<4	26	<0.1
MAY										
12...	--	--	--	--	--	--	--	--	--	--
JUL										
23...	--	--	--	--	--	--	--	--	--	--
SEP										
01...	--	--	--	--	--	--	--	--	--	--

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. [2] FINER THAN .062 MM
NOV										
05...	<10	3	<1	<1	29	<6	17	4	0.69	82
JAN										
08...	<10	2	<1	<1	25	<6	17	15	65	72
29...	<10	1	<1	<1	17	<6	30	95	1470	19
MAY										
12...	--	--	--	--	--	--	--	6	10	76
JUL										
23...	--	--	--	--	--	--	--	7	0.96	94
SEP										
01...	--	--	--	--	--	--	--	31	3.1	33

NEUSE RIVER BASIN

02091500 CONTENTNEA CREEK AT HOOKERTON, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/08	1100	WATER	0.1	3.12	45	119	7.00	21.0	9.6	5.8	70
86/11/04	1050	WATER	0.1	3.60	70	153	7.10	16.0		6.8	
86/12/12	1120	WATER	0.1	5.02	173	102	6.40	11.0		8.2	
87/01/08	1030	WATER	0.1	11.66	1615	70	6.70	5.0		10.0	
87/02/05	1000	WATER	0.1	11.54	1542	82	7.00	7.0		9.1	
87/03/04	1015	WATER	0.1	15.15	5953	65	6.50	10.0		7.9	
87/04/27	0940	WATER	0.1	13.15	2689	60	6.60	15.0	19.0	5.4	
87/05/13	1245	WATER	0.1	7.59	491	90	6.60	19.0		4.9	
87/06/04	1130	WATER	0.1	5.47	199	120	6.80	23.0		4.6	
87/07/01	1040	WATER	0.1	4.09	86	137	7.00	26.0	10.0	5.6	
87/08/03	1235	WATER	0.1	3.87	80	106	6.50	27.0		4.7	
87/09/03	1010	WATER	0.1	2.97	35	143		24.0		4.4	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/08	1100	WATER	0.1	21	10	82	1.10	.200	.500	.570	.010
86/11/04	1050	WATER	0.1	23	7	120	2.00	.300	.600	.620	.430
86/12/12	1120	WATER	0.1	19	2	74	1.20	.250	.600	.380	.260
87/01/08	1030	WATER	0.1	10	11	91	.83	.080	.500	.140	.040
87/02/05	1000	WATER	0.1	10	1	58	1.40	.180	.400	.130	.040
87/03/04	1015	WATER	0.1	6	7	92	.94	.060	.300	.160	.060
87/04/27	0940	WATER	0.1	9	5	79	.52	.170	.600	.260	.110
87/05/13	1245	WATER	0.1	14	11	91	.93	.210	.800	.330	.100
87/06/04	1130	WATER	0.1	23	10	86	1.30	4.100	4.300	.880	.590
87/07/01	1040	WATER	0.1	23	15	100	1.50	.160	.400	.570	.350
87/08/03	1235	WATER	0.1	18	6	96	1.20	.700	.900	.870	.600
87/09/03	1010	WATER	0.1		14	95	1.40	.250	.600	.770	.570

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/08	1100	WATER	0.1		10K	25K	10K	50K	.2K	50K	10K
87/01/08	1030	WATER	0.1		10K	25K	10K	50K	.2K	50K	10
87/04/27	0940	WATER	0.1		10K	25K	10K	50K		50K	10
87/07/01	1040	WATER	0.1		10K	25K	10K	50K	.2K	50K	15

NEUSE RIVER BASIN

02091700 LITTLE CONTENTNEA CREEK NEAR FARMVILLE, NC

LOCATION.--Lat 35°32'40", long 77°30'41", Pitt County, Hydrologic Unit 03020203, near center of span on downstream side of bridge on U.S. Highway 264, 1.5 mi upstream from Middle Swamp, and 5.5 mi southeast of Farmville.

DRAINAGE AREA.--93.3 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements water years 1952-54, 1956. October 1956 to September 1987 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 30 ft above National Geodetic Vertical Datum of 1929, from topographic map. Oct. 1, 1956 to Aug. 19, 1958, and June 23, 1964 to Aug. 24, 1965, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good above 10 ft^3/s and fair below.

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

AVERAGE DISCHARGE.--31 years, 114 ft^3/s, 16.59 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,170 ft^3/s Oct. 6, 1964, gage height, 19.65 ft from flood-mark, from rating curve extended above 3,100 ft^3/s; no flow part of each day July 30, 31, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August and September 1955 reached stages of 18.9 ft and 18.5 ft, respectively.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharges of 660 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 20	0830	1,110	14.11	Mar. 2	0300	1,170	14.27
Jan. 23	0430	*1,640	*15.28	Apr. 18	0700	981	13.73

Minimum daily discharge, 0.77 ft^3/s Aug. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	16	27	90	221	858	214	51	2.1	1.2	.77	4.7
2	13	16	28	390	179	1130	172	34	4.5	1.1	.89	4.8
3	13	17	47	428	152	1010	130	56	2.3	1.0	1.0	4.7
4	13	16	47	379	127	857	109	54	6.0	1.2	.99	4.8
5	12	16	40	275	106	588	110	65	5.0	1.5	1.1	6.0
6	11	16	37	154	90	349	103	46	2.1	1.7	.85	6.8
7	11	16	33	106	86	231	86	29	1.4	1.6	1.7	9.3
8	10	16	32	85	89	188	71	19	1.2	2.0	4.1	23
9	9.9	16	31	72	86	166	59	13	1.5	2.5	4.6	14
10	11	15	34	72	77	207	49	7.5	1.3	2.2	4.6	11
11	12	15	36	117	68	259	41	4.2	1.4	2.3	26	9.6
12	12	16	46	133	63	270	36	2.5	1.5	4.7	18	9.3
13	12	18	82	113	60	237	33	1.7	1.4	11	6.8	17
14	13	18	75	87	57	197	31	1.3	1.5	5.0	4.7	24
15	13	19	65	73	58	161	57	1.4	1.7	3.7	5.4	15
16	13	26	56	65	62	128	446	1.6	1.6	3.2	8.4	11
17	13	44	49	71	132	113	850	1.9	1.8	2.7	7.7	9.3
18	13	32	45	136	272	99	962	1.5	4.6	2.5	5.7	8.6
19	12	24	45	583	312	103	798	1.5	3.8	2.7	4.9	8.5
20	12	23	44	1070	310	177	566	1.6	3.4	2.6	12	47
21	12	23	42	940	274	211	361	2.0	3.1	2.4	9.7	45
22	12	29	40	1160	230	199	240	2.4	2.1	2.1	7.0	16
23	11	23	39	1490	308	157	177	2.3	1.8	1.9	5.7	9.9
24	12	22	69	1100	395	114	151	1.7	1.7	1.7	4.8	7.9
25	12	30	329	903	392	88	284	1.3	1.7	1.6	4.1	6.6
26	14	47	364	718	324	74	309	1.7	1.7	1.5	3.9	6.5
27	27	26	330	534	262	82	241	36	1.6	1.4	4.1	6.6
28	17	56	201	417	462	157	177	24	1.6	1.4	4.5	6.3
29	16	25	108	330	---	154	127	8.8	1.6	1.4	4.3	5.9
30	15	25	78	270	---	135	80	3.7	1.4	1.2	4.4	7.0
31	15	---	63	248	---	167	---	1.7	---	.89	4.5	---
TOTAL	404.9	701	2562	12609	5254	8866	7070	479.3	68.4	73.89	177.20	366.1
MEAN	13.1	23.4	82.6	407	188	286	236	15.5	2.28	2.38	5.72	12.2
MAX	27	56	364	1490	462	1130	962	65	6.0	11	26	47
MIN	9.9	15	27	65	57	74	31	1.3	1.2	.89	.77	4.7
CFSM	.14	.25	.89	4.36	2.01	3.07	2.53	.17	.02	.03	.06	.13
IN.	.16	.28	1.02	5.03	2.09	3.53	2.82	.19	.02	.04	.07	.15

CAL YR 1986 TOTAL 12844.27 MEAN 35.2 MAX 496 MIN 4.8 CFSM .38 IN. 5.12
WTR YR 1987 TOTAL 38631.36 MEAN 106 MAX 1490 MIN .77 CFSM 1.13 IN. 15.4

NEUSE RIVER BASIN

02091700 LITTLE CONTENTNEA CREEK NEAR FARMVILLE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/08	1415	WATER	0.1	8.84	10	280	7.40	19.0	6.2	.2	50
86/11/04	1345	WATER	0.1	9.07	16	283	7.20	16.0		.6	
86/12/17	1015	WATER	0.1	9.71	49	150	7.00	7.0		8.7	
87/01/08	1345	WATER	0.1	9.99	84	124	6.70	6.0	5.2	9.4	
87/01/08	1345	WATER				124	6.70	6.0		9.4	
87/02/05	1300	WATER	0.1	10.09	105	97	7.00	6.0		9.6	
87/03/04	1245	WATER	0.1	13.33	853	70	6.50	10.0		7.3	
87/04/27	1200	WATER	0.1	10.75	243	126	6.60	12.0	17.0	7.0	
87/05/13	1015	WATER	0.1	8.38	2	187	6.80	20.0		3.9	
87/06/04	1400	WATER	0.1	8.71	5	101	6.90	19.0		2.5	
87/07/01	1330	WATER	0.1	8.36	1	284	7.50	26.0	15.0	3.6	
87/08/03	1510	WATER	0.1	8.34	1	269	7.00	27.0		3.2	
87/09/03	1230	WATER	0.1	8.70	5	250		22.0		1.1	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/08	1415	WATER	0.1	118	15	230	.02	.380	1.300	4.000	2.700
86/11/04	1345	WATER	0.1	103	17	260					
86/12/17	1015	WATER	0.1	22	7	65					
87/01/08	1345	WATER	0.1	14	7	110	1.60	.070	.400	.180	.100
87/01/08	1345	WATER		14	7	110					
87/02/05	1300	WATER	0.1	13	2	51					
87/03/04	1245	WATER	0.1	9	16	78					
87/04/27	1200	WATER	0.1	11	6	92	.77	.220	.700	.310	.160
87/05/13	1015	WATER	0.1	36	28	195					
87/06/04	1400	WATER	0.1	38	41	200					
87/07/01	1330	WATER	0.1	112	11	260	.66	.080	.900	3.200	2.400
87/08/03	1510	WATER	0.1	101	10	430					
87/09/03	1230	WATER	0.1		12	180					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/08	1415	WATER	0.1		10K	25K	10K	50K	.2K	50K	10K
87/01/08	1345	WATER	0.1		10K	25K	10K	50K	.2K	50K	17
87/04/27	1200	WATER	0.1		10K	25K	10K	50K		50K	14
87/07/01	1330	WATER	0.1		10K	25K	19	50K	.2K	50K	11

NEUSE RIVER BASIN

02091970 CREEPING SWAMP NEAR VANCEBORO, NC

PERIOD OF RECORD.--Water years 1974-75, 1981 to March 1987 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1974 to June 1975.
WATER TEMPERATURE: July 1974 to September 1975.

INSTRUMENTATION.--Thermograph from April 1972 until September 1975.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (water year 1975): Maximum daily, 120 microsiemens Nov. 6, 1974; minimum daily, 36 microsiemens Apr. 16, 18, 1975.
WATER TEMPERATURE (water year 1975): Maximum 27.0°C Aug. 18, 19, 24-27, 1975; minimum, 5.5°C on several days during winter months.

WATER QUALITY DATA, OCTOBER 1986 TO MARCH 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)
JAN										
02...	1630	50	90	7.0	240	12	760	10.0	83	29

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	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)
JAN										
02...	23	7.8	2.2	4.9	25	0.4	3.3	34	9.0	<0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
JAN										
02...	7.9	89	73	0.12	12	0.170	0.030	0.200	0.190	2.3

DATE	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
JAN										
02...	2.3	2.5	11	0.130	0.110	<1	<1	4	3	1600

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
JAN										
02...	620	<5	<5	<0.10	<0.1	<10	9	17	45	6.0

NEUSE RIVER BASIN

02091970 CREEPING SWAMP NEAR VANCEBORO, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/14	1030	WATER	0.1			95	6.50	19.0	18.0	1.0	150
86/11/05	0930	WATER	0.1			96	6.40	15.0	3.2	.3	
86/12/01	0940	WATER	0.1			88	6.40	12.0		.7	
87/01/12	1000	WATER	0.1			91	6.10	5.0	5.0	6.4	
87/02/10	0920	WATER	0.1			115	7.10	3.0		9.0	
87/03/05	0930	WATER	0.1			82	6.90	7.0		8.6	
87/04/02	0920	WATER	0.1			65	6.40	10.0	3.6	7.8	
87/06/29	1210	WATER	0.1			41	6.90	24.0		2.8	
87/07/23	0910	WATER	0.1			59	6.10	26.0	8.0	.3	
87/08/26	0750	WATER	0.1			74	6.00	22.0		.1	
87/09/17	0915	WATER	0.1			83	5.50	23.0		.4	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/14	1030	WATER	0.1	18	18	18	.02	.050	1.100	.140	.140
86/11/05	0930	WATER	0.1	22							
86/12/01	0940	WATER	0.1	23							
87/01/12	1000	WATER	0.1	7		94	.10	.020	.300	.020	.010K
87/02/10	0920	WATER	0.1	7							
87/03/05	0930	WATER	0.1	6							
87/04/02	0920	WATER	0.1	5	8	48	.01	.010K	.400	.010	.010K
87/06/29	1210	WATER	0.1	9							
87/07/23	0910	WATER	0.1	12	13	80	.02	.080	.600	.100	.020
87/08/26	0750	WATER	0.1	11							
87/09/17	0915	WATER	0.1	9							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/14	1030	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/01/12	1000	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/23	0910	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10

NEUSE RIVER BASIN

02092000 SWIFT CREEK NEAR VANCEBORO, NC

LOCATION.--Lat 35°20'42", long 77°11'45", Craven County, Hydrologic Unit 03020202, on left bank at downstream side of bridge on Secondary Road 1478, 2.5 mi upstream from bridge on State Highway 118, 2.5 mi downstream from Clayroot Swamp, and 3.5 mi northwest of Vanceboro.

DRAINAGE AREA.--182 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 2.07 ft below National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Jan. 17, 1951, nonrecording gage and Jan. 17, 1951 to Sept. 30, 1964, water-stage recorder at same site at datum 6.00 ft higher.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. During 1964, the channel was canalized from a point 12.2 mi upstream to a point 2.5 mi downstream from the gage.

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

AVERAGE DISCHARGE.--37 years, 205 ft^3/s, 15.30 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,060 ft^3/s Sept. 22, 1955, gage height, 19.67 ft, present datum; no flow Aug. 8-29, Oct. 4 to Nov. 9, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1909 reached a stage of 22 ft, present datum, and flood in 1928 reached a stage of 17.7 ft, present datum, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,200 ft^3/s Jan. 24, gage height, 13.75 ft; minimum discharge, 5.5 ft^3/s Oct. 25, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	6.5	7.9	47	284	1280	551	134	103	89	44	16
2	8.4	6.6	8.9	462	255	1960	427	113	478	85	42	15
3	8.2	6.6	10	340	234	1800	340	103	359	82	40	15
4	8.1	6.6	14	233	205	1210	327	95	650	83	36	15
5	7.8	6.5	13	151	178	737	328	86	622	109	33	15
6	7.3	6.5	12	109	158	476	290	82	409	105	31	15
7	7.1	6.5	11	91	154	347	260	79	308	96	32	16
8	6.9	6.5	10	79	165	293	230	77	264	85	45	10
9	6.7	6.4	10	69	158	270	197	77	224	91	42	52
10	7.1	6.4	10	63	142	324	170	76	192	127	39	78
11	7.4	6.3	10	71	130	329	150	75	185	113	87	65
12	7.8	6.3	12	71	124	300	142	74	170	123	71	36
13	7.8	6.6	19	65	119	285	129	75	160	101	50	35
14	7.7	7.0	23	58	113	262	118	93	185	91	38	41
15	7.6	7.9	19	54	110	238	123	99	215	312	39	39
16	7.5	8.6	16	51	e114	213	745	106	211	247	51	32
17	7.2	11	15	70	e265	202	1320	105	238	131	46	27
18	6.7	9.9	14	124	514	188	1240	98	533	93	37	24
19	6.3	8.7	14	435	435	183	940	93	596	81	33	21
20	5.9	8.5	14	869	350	302	605	91	393	67	76	82
21	5.8	8.0	14	657	300	314	393	90	303	58	64	157
22	5.7	7.7	13	866	263	280	294	90	257	52	44	78
23	5.6	7.6	13	1910	334	253	234	90	216	46	34	45
24	5.6	7.8	17	2180	370	222	192	89	181	42	28	34
25	5.6	7.9	211	1810	314	197	433	88	156	40	24	28
26	5.8	8.4	126	1350	273	180	480	89	138	36	22	26
27	6.2	9.1	79	983	251	195	382	94	126	34	19	23
28	6.8	8.9	57	622	613	722	297	95	115	97	18	21
29	7.1	8.4	45	425	---	794	234	93	103	84	11	20
30	6.9	8.0	38	339	---	594	174	94	95	67	16	18
31	6.6	---	34	321	---	582	---	93	---	53	16	---
TOTAL	216.0	227.7	909.8	14975	6925	15532	11745	2836	8185	2920	1208	1099
MEAN	6.97	7.59	29.3	483	247	501	391	91.5	273	94.2	39.0	36.6
MAX	8.8	11	211	2180	613	1960	1320	134	650	312	87	157
MIN	5.6	6.3	7.9	47	110	180	118	74	95	34	11	10
CFSM	.04	.04	.16	2.65	1.36	2.75	2.15	.50	1.50	.52	.21	.20
IN.	.05	.04	.19	3.06	1.42	3.17	2.40	.58	1.67	.60	.25	.22

CAL YR 1986 TOTAL 18067.2 MEAN 49.5 MAX 449 MIN 5.6 CFSM .27 IN. 3.69
WTR YR 1987 TOTAL 66778.5 MEAN 183 MAX 2180 MIN 5.6 CFSM 1.01 IN. 13.6

e Estimated

NEUSE RIVER BASIN

02092000 SWIFT CREEK NEAR VANCEBORO, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/14	1130	WATER	0.1	5.49	8	202	7.40	21.0	2.2	7.1	120
86/11/05	1000	WATER	0.1			248	7.30	16.0		6.7	
86/11/05	1300	WATER	0.1	5.46	6						
86/12/01	1010	WATER	0.1	5.64	8	207	7.00	14.0		3.4	
87/01/12	1040	WATER	0.1	7.22	70	156	6.90	7.0	20.0	9.3	
87/02/10	0940	WATER	0.1	7.83	143	140	6.80	5.0		10.2	
87/03/05	0945	WATER	0.1	10.61	754	106	6.50	9.0		8.6	
87/04/02	0950	WATER	0.1	9.30	433	115	6.50	11.0	20.0	8.9	
87/05/05	1010	WATER	0.1	7.54	86	154	6.90	18.0		7.0	
87/06/18	1235	WATER	0.1	.00	533	51	6.70	24.0		5.0	
87/07/23	0940	WATER	0.1	.00	46	192	6.60	27.0	18.0	3.8	
87/08/26	0815	WATER	0.1	.00	22	208	6.60	23.0		3.9	
87/09/17	0945	WATER	0.1	7.06	28	159	6.60	22.0		4.3	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/14	1130	WATER	0.1	84	8	150	.30	.080	.600	.190	.060
86/11/05	1000	WATER	0.1	94			.36	.010	.400	.140	.050
86/12/01	1010	WATER	0.1	86			.89	.440	.500	.250	.070
87/01/12	1040	WATER	0.1		18	140	2.10	1.100	1.200	.160	.090
87/02/10	0940	WATER	0.1	25			2.60	.370	.500	.080	.020
87/03/05	0945	WATER	0.1				1.80	.220	.600	.070	.020
87/04/02	0950	WATER	0.1	14	20	110	1.50	.270	.600	.070	.020
87/05/05	1010	WATER	0.1	30			1.60	.470	.800	.160	.020
87/06/18	1235	WATER	0.1	11			.70	.370	1.400	.840	.160
87/07/23	0940	WATER	0.1	48	20	150	.99	.530	1.000	.250	.070
87/08/26	0815	WATER	0.1	46			1.00	.500	.900	.290	.060
87/09/17	0945	WATER	0.1	35			.38	.230	.700	.220	.050

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/14	1130	WATER	0.1		10K	25K	10K	50	.2K	50K	10K
87/01/12	1040	WATER	0.1		10K	25K	10K	50K	.2K	50K	10K
87/04/02	0950	WATER	0.1		10K	25K	10K	50K	.2K	50K	10K
87/07/23	0940	WATER	0.1		10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Records good.

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

AVERAGE DISCHARGE.--36 years, 195 ft^3/s, 15.76 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,100 ft^3/s Sept. 21, 1955, gage height, 17.84 ft; minimum, 0.30 ft^3/s Oct. 23, 24, 25, 26, 1974.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,010 ft^3/s Jan. 25, gage height, 13.90 ft; minimum, 0.81 ft^3/s Aug. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	49	59	428	431	790	986	401	24	8.8	1.6	8.9
2	7.2	47	60	563	369	1460	778	277	21	8.4	1.7	8.1
3	6.3	46	103	804	304	1810	609	200	18	9.8	1.6	6.9
4	5.3	46	148	1020	258	1660	498	147	18	24	1.3	6.1
5	4.6	42	155	1010	228	1140	423	118	28	42	1.1	6.6
6	4.3	39	156	847	202	806	359	100	34	56	1.1	6.8
7	3.8	36	152	667	192	626	297	87	28	52	2.1	9.3
8	3.6	35	156	522	205	484	242	77	22	50	2.7	13
9	3.6	34	149	419	214	398	190	67	19	46	17	27
10	4.5	33	128	344	211	340	154	57	16	36	19	28
11	8.4	31	111	297	195	296	133	48	13	25	14	25
12	29	30	103	268	178	268	119	40	11	18	12	26
13	70	30	121	246	163	248	106	36	11	14	12	25
14	111	31	225	223	149	229	93	40	21	12	12	29
15	150	37	292	199	137	208	93	46	47	12	17	37
16	169	61	331	175	130	185	315	56	72	10	36	36
17	150	85	344	179	212	166	573	75	68	8.7	54	34
18	114	101	323	245	313	152	1020	88	56	7.2	41	33
19	86	109	272	372	358	144	1040	74	52	5.8	35	31
20	67	108	217	460	374	162	821	137	60	4.7	54	25
21	55	109	179	552	363	181	605	217	48	3.8	100	20
22	45	106	155	848	331	185	454	187	37	3.4	97	16
23	35	99	136	1340	314	173	349	175	28	2.9	69	14
24	27	91	115	1790	315	156	267	158	23	2.4	47	12
25	24	84	271	1950	318	139	296	120	19	2.0	34	10
26	29	77	567	1580	310	124	542	89	17	1.7	26	8.9
27	41	73	1000	1080	294	154	1000	67	15	3.5	20	7.3
28	52	69	1140	871	378	306	1050	52	13	4.6	16	5.8
29	53	66	983	706	---	420	837	42	11	2.9	14	4.8
30	50	61	743	587	---	791	565	35	9.6	2.3	13	4.3
31	50	---	556	499	---	1050	---	29	---	1.8	9.8	---
TOTAL	1466.7	1865	9450	21091	7446	15251	14814	3342	859.6	481.7	782.0	524.8
MEAN	47.3	62.2	305	680	266	492	494	108	28.7	15.5	25.2	17.5
MAX	169	109	1140	1950	431	1810	1050	401	72	56	100	37
MIN	3.6	30	59	175	130	124	93	29	9.6	1.7	1.1	4.3
CFSM	.28	.37	1.81	4.05	1.58	2.93	2.94	.64	.17	.09	.15	.10
IN.	.32	.41	2.09	4.67	1.65	3.38	3.28	.74	.19	.11	.17	.12

CAL YR 1986 TOTAL 45211.3 MEAN 124 MAX 1260 MIN 3.1 CFSM .74 IN. 10.0
WTR YR 1987 TOTAL 77373.5 MEAN 212 MAX 1950 MIN 1.1 CFSM 1.26 IN. 17.1

NEUSE RIVER BASIN

02092500 TRENT RIVER NEAR TRENTON, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/14	1500	WATER	0.1	4.77	117	148	6.90	18.0	10.0	7.1	30
86/11/05	1300	WATER	0.1	3.41	42	142	7.20	16.0		6.5	
86/12/01	1330	WATER	0.1	3.93	59	122	7.00	14.0		6.7	
87/01/12	1455	WATER	0.1	6.79	266	95	6.70	7.0	3.4	9.8	
87/02/10	1225	WATER	0.1	6.26	211	97	6.90	6.0		10.1	
87/03/05	1245	WATER	0.1	12.18	1190	65	6.70	10.0		8.0	
87/04/02	1245	WATER	0.1	10.52	769	74	6.60	13.0	7.4	7.2	
87/05/05	1300	WATER	0.1	5.13	117	103	7.00	18.0		7.9	
87/06/18	1515	WATER	0.1	3.79	55	133	7.20	24.0		5.4	
87/07/23	1230	WATER	0.1	2.20	3	215	7.00	25.0	6.0	4.0	
87/08/26	1040	WATER	0.1	2.93	26						
87/08/26	1040	WATER	0.15			156	6.80	23.0		5.2	
87/09/17	1330	WATER	0.1	3.12	34	153	7.10	24.0		5.5	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/14	1500	WATER	0.1	25	9	100	.93	.030	.500	.100	.030
86/11/05	1300	WATER	0.1	41	7	140	.38	.020	.400	.050	.030
86/12/01	1330	WATER	0.1	39	2	100	.35	.040	.400	.070	.030
87/01/12	1455	WATER	0.1	22	14	110	.96	.020	.300	.040	.010
87/02/10	1225	WATER	0.1	26	35	72	.84	.010	.200	.040	.010
87/03/05	1245	WATER	0.1	12	3	200	.63	.010	.300	.050	.010
87/04/02	1245	WATER	0.1	16	4	90	.42	.020	.500	.070	.020
87/05/05	1300	WATER	0.1	30	3	9	.74	.050	.500	.100	.030
87/06/18	1515	WATER	0.1	35	2	110	.76	.040	.400	.090	.040
87/07/23	1230	WATER	0.1	79	6	140	.85	.010	.300	.090	.010
87/08/26	1040	WATER	0.1				.51	.030	.500	.090	.040
87/08/26	1040	WATER	0.15	29	5	130					
87/09/17	1330	WATER	0.1	38	9	110	.39	.030	.500	.100	.040

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/14	1500	WATER	0.1		10K	25K	10K	50K	.2K	50K	10K
87/01/12	1455	WATER	0.1		10K	25K	10K	50K	.2K	50K	10
87/04/02	1245	WATER	0.1		10K	25K	10K	50K	.2K	50K	10K
87/07/23	1230	WATER	0.1		10K	25K	10K	50K	.2K	50K	14

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.

WATER-DISCHARGE RECORDS

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 good.

EXTREMES FOR CURRENT PERIOD.--April to September 1986: Peak discharges greater than base discharge of 110 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug. 4	0700	127	3.20	Aug. 19	1430	*781	*4.48

Minimum discharge, 0.10 ft^3/s July 19-20, gage height, 0.46 ft.

WATER YEAR 1987

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 1	1700	118	3.16	Aug. 20	0430	*161	*3.32

Minimum discharge, 0.24 ft^3/s June 13; minimum gage height, 0.74 ft Aug. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, APRIL 1986 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	27	2.7	2.1	.63	5.9	27
2	---	---	---	---	---	---	26	2.3	1.8	1.3	7.7	24
3	---	---	---	---	---	---	24	2.0	1.6	5.4	38	22
4	---	---	---	---	---	---	22	1.8	1.2	4.5	120	21
5	---	---	---	---	---	---	21	1.6	1.0	3.6	95	19
6	---	---	---	---	---	---	20	1.4	1.7	3.1	75	17
7	---	---	---	---	---	---	18	1.2	1.7	2.4	62	16
8	---	---	---	---	---	---	17	.96	2.3	1.8	51	14
9	---	---	---	---	---	---	15	.79	2.9	1.3	41	13
10	---	---	---	---	---	---	14	.68	1.8	.86	33	12
11	---	---	---	---	---	---	12	.58	1.3	.87	28	11
12	---	---	---	---	---	---	11	.51	.93	.58	24	10
13	---	---	---	---	---	---	11	.45	.68	.41	23	10
14	---	---	---	---	---	---	12	.41	.57	.28	25	9.3
15	---	---	---	---	---	---	11	.40	.57	.21	26	8.4
16	---	---	---	---	---	---	12	.40	.72	.22	25	7.8
17	---	---	---	---	---	---	11	.47	.69	.20	36	7.1
18	---	---	---	---	---	---	9.8	.41	.53	.16	42	6.7
19	---	---	---	---	---	---	9.0	.32	.41	.12	470	6.1
20	---	---	---	---	---	---	7.9	3.7	.33	.21	358	6.4
21	---	---	---	---	---	---	7.2	9.5	.28	.21	189	6.4
22	---	---	---	---	---	---	6.7	8.5	.22	.28	108	6.5
23	---	---	---	---	---	---	6.1	6.4	.17	1.2	74	6.1
24	---	---	---	---	---	---	5.5	5.1	.18	2.7	58	6.0
25	---	---	---	---	---	---	5.1	4.0	.50	3.7	51	5.6
26	---	---	---	---	---	---	4.5	3.6	.34	4.1	43	5.1
27	---	---	---	---	---	---	4.1	3.4	.24	4.2	37	4.7
28	---	---	---	---	---	---	3.6	3.2	.20	3.9	34	4.3
29	---	---	---	---	---	---	3.3	3.0	.37	6.7	32	4.1
30	---	---	---	---	---	---	3.0	2.8	.37	7.2	29	3.8
31	---	---	---	---	---	---	---	2.5	---	6.6	28	---
TOTAL	---	---	---	---	---	---	359.8	75.08	27.70	68.94	2268.6	320.4
MEAN	---	---	---	---	---	---	12.0	2.42	.92	2.22	73.2	10.7
MAX	---	---	---	---	---	---	27	9.5	2.9	7.2	470	27
MIN	---	---	---	---	---	---	3.0	.32	.17	.12	5.9	3.8
CFSM	---	---	---	---	---	---	1.59	.32	.12	.30	9.72	1.42
IN.	---	---	---	---	---	---	1.78	.37	.14	.34	11.2	1.58

NEUSE RIVER BASIN

0209257120 W. P. BRICE CREEK AT SR 1101 NEAR RIVERDALE, NC--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	4.2	8.8	26	43	94	27	23	1.7	1.4	.50	18
2	3.3	4.6	12	42	40	101	25	20	1.4	1.4	.66	16
3	3.0	4.4	16	42	38	81	24	17	1.2	6.9	.48	14
4	2.8	4.1	16	38	36	68	27	15	1.8	23	.37	13
5	2.4	3.9	15	36	34	60	26	16	1.6	19	.50	13
6	2.0	4.3	13	33	32	54	24	14	1.4	15	.40	14
7	1.8	4.3	12	31	33	49	22	12	1.1	12	1.3	26
8	1.9	4.1	12	30	34	46	21	11	.82	11	4.6	36
9	2.7	3.9	11	28	32	45	19	11	.60	8.5	4.5	34
10	3.1	3.4	11	27	31	43	17	9.0	.46	6.4	4.3	29
11	3.8	3.6	11	27	29	40	16	7.5	.36	5.5	17	27
12	4.0	6.0	15	26	28	39	15	6.3	.29	4.6	33	25
13	3.7	6.4	23	24	26	39	13	5.5	.52	3.7	32	25
14	4.1	6.4	24	24	25	37	12	5.3	8.6	5.7	36	26
15	5.4	7.6	23	22	24	34	13	5.2	15	20	77	24
16	5.6	10	21	22	25	32	25	4.7	14	21	62	21
17	5.4	10	20	29	40	31	30	4.1	9.9	16	47	18
18	5.0	10	20	34	43	29	29	3.5	7.5	12	36	16
19	4.7	10	21	41	40	31	27	3.0	6.1	9.1	47	15
20	4.4	9.5	21	43	37	36	26	5.2	5.2	6.8	146	14
21	4.1	9.2	20	40	34	35	24	6.9	4.3	5.1	94	13
22	3.7	8.6	19	68	33	32	22	7.2	3.6	3.9	60	11
23	3.5	8.0	18	78	36	30	20	6.5	3.0	3.0	44	9.6
24	3.2	8.5	20	66	34	28	20	5.3	2.6	2.3	35	8.2
25	3.1	10	23	60	32	27	29	4.6	2.2	1.7	30	7.1
26	3.8	10	23	66	31	25	37	4.8	2.2	1.2	28	6.0
27	4.2	9.6	23	61	34	24	35	4.0	2.5	.95	25	5.2
28	4.1	8.8	21	55	48	25	31	3.3	2.3	1.0	22	4.7
29	3.9	8.1	20	51	---	24	28	2.8	1.9	.93	20	4.2
30	3.9	7.7	19	48	---	25	25	2.4	1.5	.66	22	4.5
31	3.9	---	18	45	---	28	---	2.0	---	.51	20	---
TOTAL	114.1	209.2	549.8	1263	952	1292	709	248.1	105.65	230.25	950.61	497.5
MEAN	3.68	6.97	17.7	40.7	34.0	41.7	23.6	8.00	3.52	7.43	30.7	16.6
MAX	5.6	10	24	78	48	101	37	23	15	23	146	36
MIN	1.8	3.4	8.8	22	24	24	12	2.0	.29	.51	.37	4.2
CFSM	.49	.93	2.36	5.41	4.52	5.53	3.14	1.06	.47	.99	4.07	2.20
IN.	.56	1.03	2.72	6.24	4.70	6.38	3.50	1.23	.52	1.14	4.70	2.46

CAL YR 1986 TOTAL 3993.60 MEAN 14.5 MAX 470 MIN .12 CFSM 1.93 IN. 19.7
WTR YR 1987 TOTAL 7121.17 MEAN 19.5 MAX 146 MIN .29 CFSM 2.59 IN. 35.2

NEUSE RIVER BASIN

0209257120 W. P. BRICE CREEK AT SECONDARY ROAD 1101 NEAR RIVERDALE, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1986 to September 1987.

REMARKS.--Basin above station is 100 percent forested. Station is part of district's Natural Quality Network for determining the quality of streams relatively unaffected by man.

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

WATER QUALITY DATA, APRIL TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	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, ORGANIC TOTAL (MG/L AS N)
JUN										
11...	1500	1.2	--	--	--	--	--	--	--	--
JUL										
29...	1615	7.5	--	--	--	--	--	--	--	--
AUG										
20...	1335	334	--	--	--	--	--	--	--	--
20...	1430	324	36	3.90	--	0.010	0.010	0.020	0.030	0.65
21...	1315	183	40	3.70	23.5	0.00	0.020	0.020	0.030	0.81
25...	1515	50	--	--	--	0.010	0.020	0.030	0.020	0.93

DATE	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-PHORUS, ORTHO, TOTAL (MG/L AS P)	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)
JUN										
11...	--	--	--	--	--	--	--	--	--	--
JUL										
29...	--	--	--	--	--	--	--	--	--	--
AUG										
20...	--	--	--	--	--	--	--	--	--	--
20...	0.68	0.70	3.1	0.030	0.020	690	<1	1	3	1
21...	0.84	0.86	3.8	0.030	0.030	800	<1	<1	8	<1
25...	0.95	0.98	4.3	0.030	0.030	920	<1	<1	10	<1

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)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
JUN										
11...	--	--	--	--	--	--	--	--	2	0.01
JUL										
29...	--	--	--	--	--	--	--	--	10	0.20
AUG										
20...	--	--	--	--	--	--	--	--	1	0.90
20...	2	840	<5	20	<0.10	1	<1	<10	2	1.7
21...	<1	850	<5	10	<0.10	9	<1	130	1	0.49
25...	<1	1100	<5	20	<0.10	14	<1	140	1	0.13

NEUSE RIVER BASIN

0209257120 W. P. BRICE CREEK AT SECONDARY ROAD 1101 NEAR RIVERDALE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	PRES-SURE (MM OF HG)	HARD-NESS (MG/L AS CACO3)	NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	SIUM, DIS-SOLVED (MG/L AS MG)
DEC												
04...	0945	16	--	--	--	--	--	--	--	--	--	--
JAN												
19...	1550	43	68	4.50	12.0	--	--	--	--	--	--	--
21...	1230	41	61	4.20	8.0	--	--	--	--	--	--	--
21...	1530	40	--	--	--	--	--	--	--	--	--	--
APR												
16...	1630	27	61	4.20	19.5	280	1.2	--	5	0	1.3	0.40
MAY												
29...	1030	3.0	--	--	--	--	--	--	--	--	--	--
JUL												
08...	1345	12	--	--	--	--	--	--	--	--	--	--
AUG												
20...	1400	148	--	--	24.0	--	--	762	--	--	--	--
SEP												
08...	1330	38	--	--	24.0	260	0.80	761	5	0	1.5	0.40

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	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)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
DEC												
04...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
19...	--	--	--	--	--	--	--	--	--	--	--	<0.090
21...	--	--	--	--	--	--	--	--	--	--	--	<0.090
21...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
16...	3.2	57	0.7	0.30	17	6.2	<0.10	5.1	54	0.07	3.9	<0.090
MAY												
29...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
08...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
20...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
08...	2.8	--	0.5	--	--	--	0.10	5.1	79	--	--	--

DATE	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, 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-PHORUS, ORTHO, TOTAL (MG/L AS P)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)
DEC												
04...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
19...	<0.010	<0.100	0.040	0.46	0.50	<0.60	<2.6	0.020	<0.010	570	<1	<1
21...	0.010	<0.100	0.070	0.63	0.70	<0.80	<3.5	0.020	<0.010	620	<1	1
21...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
16...	<0.010	<0.100	0.050	0.45	0.50	<0.60	<2.6	0.020	<0.010	520	<1	<1
MAY												
29...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
08...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
20...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
08...	<0.010	<0.100	0.060	0.54	0.60	--	--	0.020	<0.010	750	<1	<1

NEUSE RIVER BASIN

0209257120 W. P. BRICE CREEK AT SECONDARY ROAD 1101 NEAR RIVERDALE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	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)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PCB, TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)
DEC												
04...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
19...	4	<1	2	290	<5	<10	<0.10	3	<1	<10	--	--
21...	1	<1	7	290	20	<10	<0.10	2	<1	<10	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
16...	6	<1	2	240	<5	<10	--	<1	<1	<10	--	--
MAY												
29...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
08...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
20...	--	--	--	--	--	--	--	--	--	--	<0.1	<0.10
SEP												
08...	--	<1	1	--	<5	<10	<0.10	<1	--	--	<0.1	<0.10

DATE	ALDRIN, TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)
DEC												
04...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
19...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
16...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
29...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
08...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
20...	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010
SEP												
08...	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010

DATE	LINDANE TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	METHYL TRITHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	PERTHANE TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
DEC												
04...	--	--	--	--	--	--	--	--	--	--	1	0.04
JAN												
19...	--	--	--	--	--	--	--	--	--	--	1	0.12
21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	0	0.0
APR												
16...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
29...	--	--	--	--	--	--	--	--	--	--	4	0.03
JUL												
08...	--	--	--	--	--	--	--	--	--	--	5	0.16
AUG												
20...	<0.010	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	4	1.6
SEP												
08...	<0.010	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	1	0.10

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 current year.

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.

AVERAGE DISCHARGE.--10 years, 3.87 ft^3/s, 26.54 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 847 ft^3/s July 24, 1982, gage height, 5.77 ft from rating curve extended above 150 ft^3/s; no flow for part of July 26, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	1300	184	3.05	Apr. 15	1545	100	2.51
Jan. 1	1215	192	3.09	July 15	1400	160	2.91
Mar. 1	0930	*221	*3.25	Sept. 13	0015	106	2.55

Minimum discharge, 0.86 ft^3/s July 10, 11, 27, gage height, 1.35 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	6.2	4.6	51	4.8	53	3.3	2.8	1.1	1.1	1.5	3.1
2	2.0	4.3	17	15	4.6	15	3.2	2.3	2.2	1.1	1.3	2.2
3	2.0	3.3	9.6	8.7	4.3	10	3.4	2.1	1.7	1.1	1.7	1.8
4	2.0	2.9	5.9	7.1	4.1	8.3	3.4	2.3	2.6	1.2	12	15
5	1.9	3.1	4.5	5.8	4.0	7.3	2.9	2.5	1.6	1.1	3.6	16
6	1.8	3.1	3.4	4.9	4.0	6.6	2.9	2.3	1.4	1.0	2.2	8.6
7	1.7	2.6	3.0	4.7	9.4	6.6	3.0	1.9	1.3	1.0	2.2	11
8	2.8	2.4	2.7	4.2	5.6	6.9	2.9	1.7	1.3	1.0	2.9	8.6
9	2.3	2.3	2.5	3.8	4.7	6.1	3.0	1.6	1.2	1.0	1.9	6.2
10	4.3	1.9	2.7	8.1	4.3	5.4	2.8	1.5	1.2	.95	1.7	5.3
11	3.0	2.0	5.3	5.9	4.3	4.8	2.6	1.5	1.1	.95	1.7	4.6
12	2.9	2.1	25	5.4	4.1	4.6	2.6	1.8	1.1	1.2	1.8	8.2
13	2.9	2.0	9.7	3.7	3.9	4.3	2.6	2.5	1.2	1.1	1.5	24
14	4.0	1.9	6.7	2.7	4.0	3.9	2.6	1.6	1.8	1.0	3.6	9.0
15	2.9	9.7	5.3	2.6	3.7	3.9	19	1.5	1.3	16	7.6	6.5
16	2.4	4.2	4.5	2.7	6.8	3.9	7.3	1.5	1.1	2.5	3.3	5.6
17	2.2	3.5	4.0	4.1	5.5	4.3	5.7	1.3	1.1	1.7	2.5	4.8
18	2.0	3.2	4.3	6.2	4.7	4.3	8.7	1.3	5.3	1.5	2.3	4.3
19	2.0	2.9	3.6	5.9	4.3	5.8	8.6	1.3	2.8	1.4	2.0	3.8
20	1.8	4.4	3.1	4.5	4.3	4.5	5.5	2.8	1.9	1.3	2.3	3.7
21	1.8	3.2	3.0	4.3	5.1	4.1	5.2	1.8	1.6	1.1	1.7	3.1
22	1.8	2.7	2.6	23	6.7	3.9	4.4	2.4	1.6	1.2	1.8	3.0
23	1.7	2.6	2.7	8.7	7.0	3.8	4.0	1.4	1.6	1.1	1.9	2.5
24	1.7	2.3	42	6.6	5.5	3.7	3.8	1.4	1.4	1.0	2.6	2.2
25	3.0	2.3	13	10	5.7	3.7	3.6	1.4	1.4	1.1	2.2	2.0
26	2.2	2.3	8.1	8.3	5.7	3.3	3.4	1.3	1.4	1.6	2.0	1.9
27	1.8	2.3	6.6	6.0	16	3.3	3.1	1.3	1.3	3.6	1.7	1.9
28	1.7	2.1	5.4	4.9	34	3.4	2.9	1.2	1.2	2.4	1.5	7.6
29	1.7	2.0	4.7	4.4	---	3.5	2.8	1.2	1.1	3.3	1.4	3.4
30	1.9	7.1	4.3	4.2	---	4.7	2.6	1.2	1.2	1.4	2.0	3.9
31	1.7	---	3.5	3.7	---	5.4	---	1.1	---	1.3	4.7	---
TOTAL	69.9	96.9	223.3	241.1	181.1	212.3	131.8	53.8	48.1	58.30	83.1	183.8
MEAN	2.25	3.23	7.20	7.78	6.47	6.85	4.39	1.74	1.60	1.88	2.68	6.13
MAX	4.3	9.7	42	51	34	53	19	2.8	5.3	16	12	24
MIN	1.7	1.9	2.5	2.6	3.7	3.3	2.6	1.1	1.1	.95	1.3	1.8
CFSM	1.14	1.63	3.64	3.93	3.27	3.46	2.22	.88	.81	.95	1.35	3.09
IN.	1.31	1.82	4.20	4.53	3.40	3.99	2.48	1.01	.90	1.10	1.56	3.45

CAL YR 1986 TOTAL 1296.85 MEAN 3.55 MAX 62 MIN .93 CFSM 1.79 IN. 24.4
WTR YR 1987 TOTAL 1583.48 MEAN 4.34 MAX 53 MIN .95 CFSM 2.19 IN. 29.8

CAPE FEAR RIVER BASIN

0209330990 BROOKS LAKE TRIBUTARY NEAR BROWNS SUMMIT, NC

LOCATION.--Lat 35°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 current year.

GAGE.--Water-stage recorder. Elevation of gage is 750 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those below 0.02 ft^3/s, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 76.0 ft^3/s Apr. 15, 1987, gage height, 3.47 ft; minimum, 0.01 ft^3/s several times most years; minimum gage height, 1.13 ft July 17, 19, 20, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1.30 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Feb. 23	0045	1.6	1.79	Mar. 9	2145	1.7	1.81
Mar. 1	0100	7.4	2.26	Apr. 15	1300	21	2.70
Mar. 1	1445	7.4	2.26	Apr. 15	2400	*76	*3.47

Minimum discharge, 0.01 ft^3/s part or all of many days in October and Aug. 23, 24, 25, Sept. 23, 24, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.02	.03	.05	.16	4.3	.04	.06	.06	.02	.02	.02
2	.02	.02	.08	.07	.26	.36	.04	.02	.05	.03	.02	.02
3	.02	.02	.09	.06	.34	.13	.05	.02	.05	.10	.02	.02
4	.02	.02	.05	.04	.23	.12	.08	.02	.05	.05	.02	.02
5	.03	.02	.05	.04	.16	.09	.07	.02	.04	.04	.02	.05
6	.03	.03	.04	.03	.13	.08	.06	.02	.04	.04	.02	.04
7	.04	.05	.04	.03	.12	.07	.06	.02	.04	.04	.02	.07
8	.03	.02	.04	.03	.10	.07	.06	.02	.04	.03	.02	.06
9	.02	.02	.02	.03	.08	.30	.04	.02	.04	.03	.02	.02
10	.03	.02	.02	.03	.07	.39	.04	.02	.04	.03	.02	.04
11	.03	.05	.09	.02	.06	.12	.04	.02	.04	.03	.02	.04
12	.03	.03	.07	.02	.05	.08	.04	.03	.04	.03	.02	.03
13	.03	.03	.05	.02	.04	.06	.06	.04	.04	.03	.02	.02
14	.03	.02	.04	.02	.04	.05	.06	.04	.04	.03	.02	.02
15	.02	.04	.03	.02	.04	.05	3.1	.03	.04	.03	.02	.02
16	.02	.04	.03	.02	.04	.04	6.2	.03	.04	.03	.02	.02
17	.02	.03	.02	.02	.04	.04	.26	.02	.11	.02	.02	.02
18	.02	.04	.03	.07	.04	.04	.16	.02	.12	.02	.02	.02
19	.02	.03	.02	.39	.04	.05	.12	.06	.04	.02	.02	.02
20	.02	.04	.02	.17	.05	.05	.10	.04	.03	.02	.02	.02
21	.02	.03	.02	.11	.07	.04	.09	.03	.03	.02	.02	.03
22	.02	.02	.02	.09	.15	.04	.08	.03	.03	.02	.02	.02
23	.01	.02	.04	.07	.74	.04	.07	.02	.03	.02	.02	.02
24	.01	.02	.19	.07	.24	.03	.49	.04	.03	.02	.02	.02
25	.02	.02	.09	.07	.17	.03	.46	.03	.03	.02	.02	.02
26	.03	.03	.07	.06	.14	.03	.13	.04	.05	.02	.02	.02
27	.01	.02	e.05	.06	.13	.03	.06	.04	.04	.02	.03	.02
28	.01	.02	e.04	.06	1.0	.04	.02	.05	.03	.02	.03	.02
29	.02	.02	e.04	.06	---	.03	.02	.04	.02	.02	.04	.02
30	.02	.02	.04	.09	---	.05	.04	.03	.02	.02	.06	.03
31	.02	---	.03	.16	---	.05	---	.03	---	.02	.03	---
TOTAL	.69	.81	1.49	2.08	4.73	6.90	12.14	.95	1.30	.89	.71	.81
MEAN	.02	.03	.05	.07	.17	.22	.40	.03	.04	.03	.02	.03
MAX	.04	.05	.19	.39	1.0	4.3	6.2	.06	.12	.10	.06	.07
MIN	.01	.02	.02	.02	.04	.03	.02	.02	.02	.02	.02	.02
CFSM	.37	.45	.80	1.12	2.82	3.71	6.74	.51	.72	.48	.38	.45
IN.	.43	.50	.92	1.29	2.93	4.28	7.53	.59	.81	.55	.44	.50

CAL YR 1986 TOTAL 10.80 MEAN .03 MAX .19 MIN .01 CFSM .49 IN. 6.70
WTR YR 1987 TOTAL 33.50 MEAN .09 MAX 6.2 MIN .01 CFSM 1.53 IN. 20.8

e Estimated

CAPE FEAR RIVER BASIN

0209330990 BROOKS LAKE TRIBUTARY NEAR BROWNS SUMMIT, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1985 to current year.

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 district office in Raleigh, NC.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT										
29...	1100	0.02	62	6.90	13.5	746	7.2	71	73	0.200
DEC										
30...	0900	0.04	50	7.10	5.0	744	10.5	84	54	<0.100
MAR										
10...	0900	0.41	35	6.40	--	--	--	--	--	0.200
APR										
09...	1030	0.06	50	7.00	11.0	748	9.2	85	59	0.200
15...	1130	0.34	40	6.70	--	--	--	--	--	<0.100
15...	1300	22	30	6.60	--	--	--	--	--	<0.100
15...	1320	17	30	6.70	--	--	--	--	--	<0.100
15...	1340	8.2	31	6.60	--	--	--	--	--	<0.100
15...	1350	6.7	30	6.60	--	--	--	--	--	0.100
15...	1630	1.7	34	6.70	--	--	--	--	--	<0.100
AUG										
25...	1030	0.02	65	7.10	16.0	747	7.3	75	--	0.400

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	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-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT										
29...	<0.010	--	0.20	0.40	1.8	0.080	0.080	0.080	1	0.00
DEC										
30...	<0.010	--	0.20	--	--	0.050	0.030	0.040	8	0.00
MAR										
10...	0.070	0.33	0.40	0.60	2.7	0.050	--	0.030	114	0.13
APR										
09...	<0.010	--	0.50	0.70	3.1	0.060	0.050	0.020	3	0.00
15...	0.100	0.90	1.0	--	--	0.140	--	0.060	233	0.21
15...	0.120	2.2	2.3	--	--	0.320	--	0.090	2460	143
15...	0.080	1.8	1.9	--	--	0.210	--	0.050	2130	95
15...	0.060	2.0	2.1	--	--	0.180	--	0.040	1500	33
15...	0.160	2.7	2.9	3.0	13	0.220	--	0.050	633	11
15...	0.040	0.86	0.90	--	--	0.080	--	0.030	81	0.36
AUG										
25...	0.020	0.38	0.40	0.80	3.5	0.110	--	0.090	2	0.00

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 current year.

GAGE.--Water-stage recorder. Elevation of gage is 730 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those above 200 ft^3/s, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 356 ft^3/s Apr. 16, 1987, gage height, 6.77 ft; minimum, 0.02 ft^3/s part of each day June 28, July 9-25, 1986, many days in Aug. and Sept. 1, 2, 3, 4, 5, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	1415	24	2.92	Apr. 15	1330	183	5.38
Feb. 23	0200	26	2.96	Apr. 16	0030	*356	*6.77
Mar. 1	0100	146	4.99	Apr. 24	0645	38	3.29
Mar. 9	2145	34	3.20	Sept. 8	0515	29	3.04

Minimum discharge, 0.02 ft^3/s part of many days in Aug. and Sept. 1, 2, 3, 4, 5; minimum gage height, 1.38 ft Aug. 23, 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.28	.55	1.7	4.2	57	1.2	1.2	e.90	.15	.06	.04
2	.08	.31	1.4	1.9	6.7	7.2	1.1	1.1	e.72	.28	.06	.03
3	.08	.25	1.5	1.1	8.0	3.3	1.9	1.0	e.74	1.3	.06	.03
4	.07	.27	.91	.91	4.9	2.0	2.1	.93	e.70	1.2	.07	.03
5	.07	.27	.76	.82	2.8	1.5	1.4	.87	.62	.58	.06	.13
6	.06	.28	.67	.77	2.1	1.2	1.2	.83	.54	.37	.05	.11
7	.06	.78	.63	.73	2.0	1.0	1.1	.81	.47	.25	.08	.96
8	.07	.92	.63	.68	1.6	1.1	1.0	.78	.43	.21	.07	5.7
9	.09	.69	.67	.69	1.3	6.0	.98	.74	.40	.18	.05	.31
10	.09	.52	.79	.70	1.0	6.3	1.1	.72	.37	.19	.04	.20
11	.08	1.0	3.4	.64	.95	2.1	.94	.68	.34	.19	.04	.25
12	.08	.84	1.8	.64	.94	1.6	2.2	.61	.30	.18	.04	.60
13	.21	.62	1.1	.60	.90	1.3	1.6	.66	.29	.18	.04	.34
14	.59	.62	.87	.60	.88	1.2	.83	.68	.29	.18	.03	.21
15	.15	.78	.76	.58	.89	1.1	30	.64	.25	.14	.05	.15
16	.20	.65	.71	.68	1.1	1.2	42	.57	.25	.13	.06	.13
17	.12	.61	.65	.92	1.6	1.2	7.4	.56	.25	.11	.05	.12
18	.11	.58	.68	3.7	1.3	1.1	5.6	.54	.26	.11	.04	.10
19	.10	.53	.63	6.3	1.3	2.1	3.5	.78	.27	.10	.04	.09
20	.12	1.8	.61	2.4	1.4	1.5	2.0	.69	.27	.09	.03	.11
21	.10	.96	.55	1.5	2.1	1.3	1.6	e.66	.23	.08	.03	.10
22	.10	.71	.53	3.1	4.7	1.3	1.3	e.64	.21	.08	.03	.08
23	.09	.66	.56	2.0	15	1.2	1.1	e.59	.22	.08	.03	.08
24	.09	.63	7.9	1.6	4.4	1.1	11	e.72	.21	.07	.03	.09
25	.25	.60	3.1	1.7	2.4	1.1	9.6	e.66	.20	.06	.03	.10
26	1.0	.74	1.7	2.1	1.7	1.1	4.1	e.84	.26	.06	.04	.11
27	.40	.64	1.2	1.5	2.5	1.0	2.3	e.69	.24	.07	.03	.10
28	.23	.60	.99	1.4	27	1.2	1.8	e.75	.18	.06	.03	.11
29	.23	.57	.85	1.3	---	1.0	1.5	e.66	.17	.06	.03	.11
30	.23	.50	.80	2.2	---	1.5	1.3	e.60	.16	.06	.03	.22
31	.23	---	.74	4.5	---	1.9	---	e.57	---	.06	.04	---
TOTAL	5.46	19.21	38.64	49.96	105.66	114.7	144.75	22.77	10.74	6.86	1.37	10.74
MEAN	.18	.64	1.25	1.61	3.77	3.70	4.82	.73	.36	.22	.04	.36
MAX	1.0	1.8	7.9	6.3	27	57	42	1.2	.90	1.3	.08	5.7
MIN	.06	.25	.53	.58	.88	1.0	.83	.54	.16	.06	.03	.03
CFSM	.16	.58	1.13	1.47	3.43	3.36	4.39	.67	.33	.20	.04	.33
IN.	.18	.65	1.31	1.69	3.57	3.88	4.90	.77	.36	.23	.05	.36

CAL YR 1986 TOTAL 223.03 MEAN .61 MAX 12 MIN .02 CFSM .56 IN. 7.54
WTR YR 1987 TOTAL 530.85 MEAN 1.45 MAX 57 MIN .03 CFSM 1.32 IN. 18.0

e Estimated

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.

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 district office in Raleigh, NC.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT										
29...	0840	0.21	75	6.90	11.5	746	8.7	82	62	0.900
NOV										
11...	1610	1.6	58	6.00	--	--	--	--	55	0.500
11...	1645	2.4	67	6.00	--	--	--	--	60	0.400
11...	1745	3.1	71	6.00	--	--	--	--	--	0.300
11...	1815	3.0	64	6.00	--	--	--	--	63	0.300
20...	1315	2.1	67	6.70	--	--	--	--	--	0.600
20...	1400	2.5	76	6.70	--	--	--	--	--	0.500
20...	1415	2.9	71	6.70	--	--	--	--	--	0.400
20...	1445	2.9	72	6.60	--	--	--	--	--	0.400
DEC										
30...	1000	0.80	70	7.00	5.0	744	12.0	96	61	0.900
JAN										
18...	2245	15	60	6.30	--	--	--	--	--	0.600
18...	2345	20	55	6.60	--	--	--	--	--	0.600
19...	0015	20	54	6.60	--	--	--	--	--	2.60
MAR										
09...	1900	6.8	54	6.50	--	--	--	--	--	0.500
09...	1930	10	50	6.50	--	--	--	--	--	0.500
09...	2000	14	46	6.60	--	--	--	--	--	0.500
09...	2030	19	48	6.50	--	--	--	--	--	0.500
09...	2100	26	43	6.50	--	--	--	--	--	0.400
APR										
09...	0815	0.88	65	7.60	10.0	748	9.8	88	54	0.800
15...	1140	9.8	91	6.60	--	--	--	--	--	0.500
15...	1215	36	50	6.50	--	--	--	--	--	0.400
15...	1315	174	38	6.20	--	--	--	--	--	0.300
15...	1330	183	38	6.20	--	--	--	--	--	0.300
15...	1515	56	38	6.20	--	--	--	--	--	0.300
15...	1530	43	45	6.40	--	--	--	--	--	0.300
JUL										
03...	2000	4.6	42	6.50	--	--	--	--	--	0.700
03...	2015	5.5	37	6.50	--	--	--	--	--	0.700
03...	2115	7.8	35	6.60	--	--	--	--	--	0.600
AUG										
25...	1145	0.04	65	7.10	20.0	747	6.5	73	--	1.00

CAPE FEAR RIVER BASIN

0209331325 CANDY CREEK AT SECONDARY ROAD 2700 NEAR MONTICELLO--Continued

WATER-QUALITY RECORDS

DATE	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT										
29...	0.030	0.27	0.30	1.2	5.3	0.040	0.020	0.030	4	0.00
NOV										
11...	0.070	0.83	0.90	1.4	6.2	0.250	0.160	0.120	127	0.56
11...	0.020	0.88	0.90	1.3	5.8	0.240	0.140	0.110	148	0.97
11...	0.050	0.65	0.70	1.0	4.4	0.510	0.060	0.170	299	2.5
11...	0.070	0.93	1.0	1.3	5.8	0.390	0.050	0.190	--	--
20...	0.120	1.8	1.9	2.5	11	0.260	--	0.100	304	1.7
20...	0.080	1.5	1.6	2.1	9.3	0.230	--	0.130	240	1.6
20...	0.090	0.91	1.0	1.4	6.2	0.390	--	0.140	261	2.0
20...	0.060	1.0	1.1	1.5	6.6	0.430	--	0.110	252	2.0
DEC										
30...	0.110	0.19	0.30	1.2	5.3	0.060	0.030	0.040	6	0.01
JAN										
18...	0.340	2.0	2.3	2.9	13	0.600	--	0.180	607	25
18...	0.370	1.1	1.5	2.1	9.3	0.900	--	0.210	833	46
19...	0.410	2.2	2.6	5.2	23	0.800	--	0.250	784	42
MAR										
09...	0.380	2.8	3.2	3.7	16	0.320	--	0.280	567	10
09...	0.300	2.5	2.8	3.3	15	0.340	--	0.170	722	20
09...	0.320	2.0	2.3	2.8	12	0.470	--	0.190	778	29
09...	0.390	2.4	2.8	3.3	15	0.610	--	0.230	836	43
09...	0.370	1.9	2.3	2.7	12	0.860	--	0.220	--	--
APR										
09...	0.060	0.84	0.90	1.7	7.5	0.050	0.010	<0.010	10	0.02
15...	0.730	9.3	10	10	46	0.040	--	<0.010	1160	31
15...	0.460	7.5	8.0	8.4	37	1.60	--	0.370	2510	245
15...	0.470	3.2	3.7	4.0	18	1.40	--	0.550	1850	869
15...	0.450	4.3	4.7	5.0	22	1.50	--	0.610	--	--
15...	0.340	2.4	2.7	3.0	13	0.810	--	0.120	1420	215
15...	0.350	1.2	1.6	1.9	8.4	0.710	--	0.150	1350	157
JUL										
03...	0.280	9.3	9.6	10	46	1.90	--	0.320	1810	22
03...	0.470	4.4	4.9	5.6	25	2.90	--	0.430	2470	37
03...	0.600	3.5	4.1	4.7	21	3.00	--	0.310	2430	51
AUG										
25...	0.030	0.57	0.60	1.6	7.1	0.060	--	0.030	11	0.00

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.

WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Records fair. Some diurnal fluctuation at medium and low flows caused by mill upstream.

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

AVERAGE DISCHARGE.--32 years, 23.7 ft^3/s, 15.62 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,950 ft^3/s Oct. 10, 1959, gage height, 10.94 ft, from rating curve extended above 1,500 ft^3/s on basis of contracted-opening measurement of peak flow; maximum gage height, 12.41 ft Sept. 22, 1979; minimum, 1.2 ft^3/s Aug. 7, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 350 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 1	0930	1,250	10.73	Aug. 7	1900	438	8.32
Apr. 16	0430	*2,030	*11.81	Sept. 8	0230	433	8.29

Minimum discharge, 2.8 ft^3/s Oct. 6; minimum daily 3.0 ft^3/s Oct. 7.

CORRECTIONS.--The maximum discharge for water year 1986 is 965 ft^3/s, Aug. 12, 1986, gage height, 10.15 ft, the previously published figure was not the maximum.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	6.3	10	21	e36	909	28	26	12	8.3	6.9	5.6
2	4.4	8.9	18	34	e45	259	25	25	17	9.8	5.8	4.6
3	3.5	7.8	23	22	e62	77	25	23	12	10	6.8	4.5
4	4.0	7.3	15	18	e50	47	29	23	13	30	5.6	4.2
5	3.8	7.2	12	16	e33	36	23	22	13	57	5.0	8.2
6	3.2	7.4	11	14	29	31	21	21	11	16	5.0	13
7	3.0	12	11	14	25	28	20	20	10	13	156	71
8	3.4	22	11	13	22	26	19	19	9.8	18	43	215
9	3.9	11	13	12	18	43	18	18	9.4	11	18	35
10	4.2	8.7	18	13	17	100	18	18	9.1	9.1	12	20
11	3.9	13	44	12	16	42	17	17	8.9	9.0	8.4	15
12	4.4	25	40	11	16	33	18	17	9.2	8.8	7.2	12
13	6.8	13	23	11	15	29	19	17	10	9.8	6.8	14
14	24	9.6	17	11	15	26	17	18	11	9.0	6.4	10
15	9.1	12	15	11	15	24	157	17	9.5	8.4	7.0	9.0
16	6.7	13	13	11	14	24	914	16	9.1	8.0	8.0	8.5
17	5.5	10	13	14	19	22	136	15	9.3	7.5	7.1	8.1
18	5.9	9.6	13	26	17	21	65	15	17	7.4	6.4	7.6
19	5.2	9.1	12	83	19	34	49	18	11	7.1	6.0	7.4
20	4.8	17	11	58	21	27	38	20	10	6.7	5.9	7.5
21	5.3	22	10	32	26	24	32	16	9.4	6.3	5.5	7.2
22	4.9	13	10	27	32	22	29	15	8.9	6.0	5.2	6.7
23	5.5	11	10	29	113	20	27	15	8.8	5.7	4.8	6.5
24	5.0	10	71	23	54	20	192	14	11	5.7	4.5	6.5
25	6.6	10	60	21	35	22	130	14	9.9	5.5	4.7	6.4
26	26	12	29	22	28	22	68	27	10	5.3	5.1	6.5
27	10	15	21	20	29	20	47	17	14	5.1	4.7	6.3
28	8.0	11	17	17	116	25	35	15	9.0	5.1	4.4	6.3
29	6.6	10	15	e16	---	20	30	14	8.2	5.1	4.2	6.4
30	6.8	9.7	14	e21	---	33	27	12	7.8	5.0	3.9	12
31	6.1	---	13	e39	---	36	---	11	---	5.0	5.0	---
TOTAL	204.6	353.6	613	692	937	2102	2273	555	318.3	323.7	385.3	551.0
MEAN	6.60	11.8	19.8	22.3	33.5	67.8	75.8	17.9	10.6	10.4	12.4	18.4
MAX	26	25	71	83	116	909	914	27	17	57	156	215
MIN	3.0	6.3	10	11	14	20	17	11	7.8	5.0	3.9	4.2
CFSM	.32	.57	.96	1.08	1.62	3.29	3.68	.87	.52	.51	.60	.89
IN.	.37	.64	1.11	1.25	1.69	3.80	4.10	1.00	.57	.58	.70	.99

CAL YR 1986 TOTAL 4915.2 MEAN 13.5 MAX 598 MIN 2.2 CFSM .65 IN. 8.88
WTR YR 1987 TOTAL 9308.4 MEAN 25.5 MAX 914 MIN 3.0 CFSM 1.24 IN. 16.8

NEUSE RIVER BASIN

02093800 REEDY FORK NEAR OAK RIDGE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/14	0925	WATER	0.1			76	7.30	18.0	80.0	8.1	6900
86/11/18	1530	WATER	0.1	3.09	10	86	7.20	12.0		9.5	
86/12/16	0910	WATER	0.1	3.26	13	75	7.10	7.0		12.2	
87/01/20	0930	WATER	0.1	4.32	59	59	6.20	5.0	80.0	11.6	
87/02/24	0920	WATER	0.1	4.26	55	57	6.20	4.0		12.1	
87/03/10	1430	WATER	0.1	4.51	73	53	6.70	9.0		10.8	
87/04/08	1120	WATER	0.1	3.48	19	61	6.40	11.5	7.7	10.8	
87/05/14	1400	WATER	0.1	3.41	18	70	6.70	16.0		8.3	
87/06/02	1400	WATER	0.1	3.32	15	74	6.80	23.0		7.6	
87/07/01	0955	WATER	0.1	2.99	8	83	7.20	23.0	14.0	7.9	
87/08/24	1450	WATER	0.1	2.84	5	88	7.06	23.0		7.4	
87/09/16	1310	WATER	0.1	3.07	9	83	6.73	23.0		7.4	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/14	0925	WATER	0.1	24	130	210	.23	.040	.500	.170	.010K
86/11/18	1530	WATER	0.1	29	3	68					
86/12/16	0910	WATER	0.1	12	12	66					
87/01/20	0930	WATER	0.1	14	76	150	.44	.030	.200	.120	.010K
87/02/24	0920	WATER	0.1	4	55	140					
87/03/10	1430	WATER	0.1	12	100	180					
87/04/08	1120	WATER	0.1	24	2	70	.33	.020	.100K	.020	
87/05/14	1400	WATER	0.1	25	11	83					
87/06/02	1400	WATER	0.1	26	27	94					
87/07/01	0955	WATER	0.1	29	8	76	.39	.030	.100	.040	.040
87/08/24	1450	WATER	0.1	28	5	89					
87/09/16	1310	WATER	0.1	25	12	76					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/14	0925	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	13
87/01/20	0930	WATER	0.1	10K	10K	25K	10K	50K		50K	10K
87/04/08	1120	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/01	0955	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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 21.9 ft^3/s and an average of 19.9 ft^3/s from Lake Townsend for municipal water supply.

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

AVERAGE DISCHARGE.--59 years, 101 ft^3/s, 10.47 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft^3/s Sept. 25, 1947, gage height, 20.77 ft; minimum daily, 0.4 ft^3/s Oct. 14, 1954.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,450 ft^3/s Apr. 16, gage height 14.69 ft; minimum 2.0 ft^3/s Oct. 20; minimum daily, 2.2 ft^3/s Oct. 19, 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	3.9	6.7	33	185	3580	165	344	36	13	5.7	5.7
2	3.2	4.1	16	60	434	3310	99	59	53	15	5.7	5.7
3	3.1	4.4	46	52	421	1560	76	35	52	123	5.8	5.7
4	3.0	4.6	23	68	279	620	104	30	46	349	5.8	5.7
5	2.9	4.5	15	81	251	275	87	27	48	381	6.4	6.4
6	2.8	4.4	12	81	266	158	63	24	45	328	6.3	8.8
7	2.7	10	9.9	77	186	133	55	23	44	46	6.6	12
8	2.5	25	9.4	70	147	126	45	21	44	22	6.6	303
9	2.4	6.7	10	62	132	486	41	20	37	18	6.9	122
10	2.4	5.6	13	57	105	538	39	19	31	15	7.0	31
11	2.3	8.7	57	60	92	377	39	19	27	13	6.6	228
12	2.3	29	56	65	77	196	46	19	25	14	6.2	180
13	2.3	10	29	46	74	128	57	20	25	13	5.8	217
14	4.0	6.2	21	38	59	106	57	21	25	11	5.5	86
15	3.5	6.3	17	38	58	104	779	20	23	10	5.4	47
16	2.6	9.6	15	36	58	107	4480	19	22	9.5	5.6	32
17	2.4	8.1	15	39	87	110	4140	18	24	8.7	5.8	28
18	2.3	6.4	16	76	91	295	1560	17	23	8.3	6.1	25
19	2.2	6.0	14	367	86	277	619	17	22	7.5	6.3	22
20	2.2	15	13	480	89	162	310	26	21	7.2	7.7	20
21	2.2	43	11	273	105	109	508	20	21	7.0	7.7	18
22	3.0	18	11	261	147	80	474	15	19	6.7	6.8	16
23	2.8	12	10	583	407	64	462	14	19	6.4	6.0	15
24	3.2	9.1	181	345	613	53	649	18	18	6.3	5.8	13
25	3.8	8.0	106	164	344	47	745	32	16	6.6	5.3	10
26	15	7.2	41	126	183	47	832	76	18	6.3	5.2	8.8
27	6.6	8.4	27	95	149	48	576	45	21	6.0	5.3	7.9
28	4.4	7.9	22	75	826	63	463	47	16	5.9	5.4	7.5
29	4.0	7.1	20	76	---	90	421	37	13	5.8	5.4	6.9
30	3.9	6.6	19	100	---	318	400	33	12	5.8	5.5	10
31	4.0	---	19	162	---	354	---	34	---	5.8	5.8	---
TOTAL	107.2	305.8	881.0	4146	5951	13921	18391	1169	846	1480.8	188.0	1504.1
MEAN	3.46	10.2	28.4	134	213	449	613	37.7	28.2	47.8	6.06	50.1
MAX	15	43	181	583	826	3580	4480	344	53	381	7.7	303
MIN	2.2	3.9	6.7	33	58	47	39	14	12	5.8	5.2	5.7

CAL YR 1986 TOTAL 9472.5 MEAN 26.0 MAX 383 MIN 1.4
WTR YR 1987 TOTAL 48890.7 MEAN 134 MAX 4480 MIN 2.2

NEUSE RIVER BASIN

02094500 REEDY FORK NEAR GIBSONVILLE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/08	1510	WATER	0.1	.64	3	118	7.20	22.0	6.3	6.4	10K

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/08	1510	WATER	0.1	43	5	85	.05	.140	.400	.010	.010

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/08	1510	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

CAPE FEAR RIVER BASIN

0209509100 SOUTH BUFFALO CREEK AT SECONDARY ROAD 2821 AT McLEANSVILLE, NC

LOCATION.--Lat. 36°06'45", long 79°40'19", Guilford County, Hydrologic Unit 03030002, at bridge on Secondary Road 2821, 1.4 mi upstream from mouth and 0.8 mi northwest of McCleansville.

DRAINAGE AREA.--43.5 mi^2.

PERIOD OF RECORD.--Occasional measurements, water years 1969-70, 1973, 1976-81, 1983-85. March 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 620 ft above the National Geodetic Vertical Datum of 1929 from topographic map. Gage datum June 1968 to August 1983 arbitrarily set, and later destroyed by bridge construction. On August 24, 1983, an arbitrary datum was again set. This datum was tied into the previous datum of 1983 by levels on February 4, 1986.

REMARKS.--Records good except for periods of estimated daily discharge which are fair. Diversion into the basin from Greensboro enters above station.

EXTREMES FOR CURRENT PERIOD.--March to September 1986: Peak discharge greater than base discharge of 1,100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 15	0015	*822	*4.58				

Minimum discharge, 3.8 ft^3/s July 20, gage height, 1.12 ft.

Water Year 1987

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 19	1830	1,200	5.26	Apr. 16	1100	*5,930	*9.92
Mar. 1	1500	5,800	9.82				

Minimum discharge, 6.6 ft^3/s Oct. 5, gage height 1.15 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, MARCH 1986 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	35	30	23	17	19	19	17
2	---	---	---	---	---	30	31	22	18	119	16	20
3	---	---	---	---	---	31	29	21	20	27	14	24
4	---	---	---	---	---	32	30	18	20	19	18	23
5	---	---	---	---	---	30	29	20	20	15	55	104
6	---	---	---	---	---	32	26	21	20	14	86	40
7	---	---	---	---	---	31	29	23	20	14	25	22
8	---	---	---	---	---	28	27	22	62	17	21	21
9	---	---	---	---	---	26	28	21	23	18	18	22
10	---	---	---	---	---	27	26	19	21	19	14	23
11	---	---	---	---	---	31	25	17	20	22	51	22
12	---	---	---	---	---	30	27	19	21	18	411	20
13	---	---	---	---	---	42	23	29	42	14	140	19
14	---	---	---	---	---	322	24	38	21	24	38	16
15	---	---	---	---	---	315	27	26	16	20	31	17
16	---	---	---	---	---	92	30	23	18	19	25	20
17	---	---	---	---	---	56	25	22	21	22	21	20
18	---	---	---	---	---	47	25	19	19	19	39	20
19	---	---	---	---	---	62	25	33	19	17	41	20
20	---	---	---	---	---	137	23	134	18	13	92	18
21	---	---	---	---	---	82	44	42	18	16	64	16
22	---	---	---	---	---	49	33	24	16	18	27	17
23	---	---	---	---	---	40	25	23	15	74	24	20
24	---	---	---	---	---	39	24	21	16	22	29	20
25	---	---	---	---	---	37	25	17	21	20	22	20
26	---	---	---	---	---	36	30	19	17	26	22	21
27	---	---	---	---	---	36	25	22	18	104	22	19
28	---	---	---	---	---	34	22	23	15	23	57	15
29	---	---	---	---	---	34	23	29	82	20	30	16
30	---	---	---	---	---	28	23	21	36	67	21	20
31	---	---	---	---	---	27	---	22	---	22	17	---
TOTAL	---	---	---	---	---	1878	813	833	710	881	1510	692
MEAN	---	---	---	---	---	60.6	27.1	26.9	23.7	28.4	48.7	23.1
MAX	---	---	---	---	---	322	44	134	82	119	411	104
MIN	---	---	---	---	---	26	22	17	15	13	14	15
CFSM	---	---	---	---	---	1.39	.62	.62	.54	.65	1.12	.53
IN	---	---	---	---	---	1.61	.70	.71	.61	.75	1.29	.59

CAPE FEAR RIVER BASIN

0209509100 SOUTH BUFFALO CREEK AT SECONDARY ROAD 2821 AT McLEANSVILLE, NC--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	24	24	130	158	4830	52	52	27	19	e42	30
2	20	27	86	130	227	519	42	50	51	27	e28	21
3	21	30	103	51	217	103	55	49	30	35	e21	20
4	19	27	40	37	129	71	155	48	36	288	e19	19
5	15	27	32	34	79	57	55	47	83	86	e23	52
6	17	27	28	33	61	54	46	47	32	31	24	67
7	20	84	24	31	55	47	42	47	23	29	65	370
8	20	102	29	29	45	47	39	45	22	33	39	483
9	20	32	46	29	40	127	35	45	25	24	21	52
10	21	26	57	29	37	e283	34	44	24	22	20	122
11	20	49	197	27	37	78	36	43	24	22	22	77
12	16	130	90	27	38	61	39	44	24	24	21	62
13	25	51	43	28	36	54	81	43	24	23	21	51
14	122	33	30	28	34	47	38	42	29	34	21	e28
15	37	75	30	28	37	43	843	42	23	e26	22	e24
16	25	56	30	28	31	43	4430	41	25	e22	25	e25
17	23	33	29	43	35	43	508	41	99	e22	23	e26
18	21	32	29	177	56	e40	202	41	62	e21	22	e24
19	18	30	28	607	97	137	106	55	29	e21	20	e22
20	20	120	24	179	110	63	76	126	27	e21	20	e22
21	22	90	22	72	e105	44	64	39	24	e22	19	e23
22	23	36	21	67	134	37	56	34	24	e21	18	e24
23	23	28	22	95	358	36	50	30	26	e21	16	e24
24	23	27	396	76	101	36	234	24	34	e22	16	e26
25	23	29	236	87	68	e37	554	25	29	e21	18	e23
26	189	30	59	82	55	41	140	357	27	e20	19	e22
27	42	41	41	65	71	35	75	68	55	e20	21	e22
28	30	26	34	58	839	58	61	49	21	e21	19	e23
29	27	24	33	61	---	36	56	38	18	e21	19	e24
30	26	22	32	181	---	90	53	29	18	e21	16	e60
31	26	---	30	274	---	103	---	26	---	e27	33	---
TOTAL	974	1368	1925	2823	3290	7300	8257	1711	995	1067	733	1868
MEAN	31.4	45.6	62.1	91.1	117	235	275	55.2	33.2	34.4	23.6	62.3
MAX	189	130	396	607	839	4830	4430	357	99	288	65	483
MIN	15	22	21	27	31	35	34	24	18	19	16	19
CFSM	.72	1.05	1.43	2.09	2.70	5.41	6.33	1.27	.76	.79	.54	1.43
IN.	.83	1.17	1.65	2.41	2.81	6.24	7.06	1.46	.85	.91	.63	1.60

CAL YR 1986 TOTAL 11584 MEAN 37.9 MAX 411 MIN 13 CFSM .87 IN. 9.91
WTR YR 1987 TOTAL 32311 MEAN 88.5 MAX 4830 MIN 15 CFSM 2.04 IN. 27.6

e Estimated

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.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1303: 1929, 1931-42, monthly and yearly runoff. WSP 1383: 1928(M), 1929, 1933-34(M), 1936(M), 1941(M), 1943(M), 1945(M). 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 fair. Diurnal fluctuation at low flow caused by mills upstream from station. Diversion into basin from Greensboro and Proximity Mills enter upstream from station.

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

AVERAGE DISCHARGE.--59 years, 56.4 ft^3/s, 20.64 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,140 ft^3/s Sept. 22, 1979, gage height, 20.12 ft 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, 1.6 ft^3/s Aug. 28, 1932.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 1	0600	3,740	13.40	Apr. 16	1530	1,840	10.60
Apr. 15	1530	2,660	12.03	July 3	2400	1,360	9.09
Apr. 16	0230	*5,410	*15.50				

Minimum discharge, 12 ft^3/s Oct. 7, 8, gage height, 1.91 ft; minimum daily, 20 ft^3/s Oct. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	26	26	149	137	2140	51	53	30	24	39	28
2	24	38	131	100	197	240	45	50	38	38	23	25
3	25	25	90	46	160	215	95	43	29	195	21	25
4	23	25	36	40	104	79	130	45	52	261	30	27
5	22	24	37	35	75	70	57	44	58	125	32	111
6	22	25	32	35	64	64	51	41	30	39	39	153
7	21	131	28	34	62	58	48	41	25	65	182	351
8	21	58	41	35	53	65	48	42	27	80	34	350
9	22	30	40	33	46	188	44	38	26	31	26	59
10	23	25	57	34	44	250	44	36	28	29	24	71
11	22	136	221	31	45	89	41	35	25	27	27	70
12	22	91	79	32	42	74	56	38	25	26	24	82
13	53	37	47	33	46	59	53	38	27	27	23	44
14	147	30	37	32	43	53	39	38	25	28	23	30
15	35	94	34	31	47	46	1010	36	25	26	33	30
16	25	42	33	30	42	50	2440	34	26	25	35	30
17	25	29	32	50	45	44	247	34	51	24	25	29
18	24	31	34	198	67	47	202	34	34	24	26	33
19	23	30	30	458	111	142	107	112	29	23	25	30
20	20	156	29	106	109	64	82	92	29	23	24	26
21	22	70	29	61	106	52	73	41	25	25	26	25
22	22	39	27	68	161	45	64	34	27	24	27	28
23	21	32	27	94	275	43	57	28	46	23	26	28
24	27	29	477	73	99	44	419	28	33	25	24	28
25	31	28	116	81	70	45	314	32	28	24	27	31
26	235	43	59	72	58	47	120	376	66	23	39	29
27	33	41	47	59	83	45	77	63	39	22	32	25
28	26	30	38	55	880	70	65	61	25	25	26	25
29	26	28	35	59	---	39	58	43	25	24	24	27
30	25	25	35	199	---	112	54	34	24	24	23	97
31	29	---	33	200	---	109	---	29	---	26	73	---
TOTAL	1119	1448	2017	2563	3271	4688	6191	1693	977	1405	1062	1947
MEAN	36.1	48.3	65.1	82.7	117	151	206	54.6	32.6	45.3	34.3	64.9
MAX	235	156	477	458	880	2140	2440	376	66	261	182	351
MIN	20	24	26	30	42	39	39	28	24	22	21	25
CFSM	.97	1.30	1.75	2.23	3.15	4.08	5.56	1.47	.88	1.22	.92	1.75
IN.	1.12	1.45	2.02	2.57	3.28	4.70	6.21	1.70	.98	1.41	1.06	1.95

CAL YR 1986 TOTAL 15416 MEAN 42.2 MAX 477 MIN 19 CFSM 1.14 IN. 15.5
WTR YR 1987 TOTAL 28381 MEAN 77.8 MAX 2440 MIN 20 CFSM 2.10 IN. 28.5

NEUSE RIVER BASIN

02095500 NORTH BUFFALO CREEK NEAR GREENSBORO, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/21	0930	WATER	0.1	2.10	22	471	6.80	13.0	2.3	8.4	160
86/11/04	1040	WATER	0.1	2.12	24	414	7.10	19.0		7.3	
86/12/11	1200	WATER	0.1	4.48	435	107	6.20	10.0		10.3	
87/01/28	1010	WATER	0.1	2.40	47	1490	7.00	6.0	10.0	11.2	
87/02/19	0950	WATER	0.1	2.50	63	413	7.10	5.0		10.3	
87/03/12	1355	WATER	0.1	2.67	80	337	7.00	11.0		9.9	
87/04/08	1420	WATER	0.1	2.42	52	365	7.00	17.0	10.0	6.8	
87/05/20	0945	WATER	0.1	2.54	62	253	6.60	20.0		7.5	
87/06/30	1005	WATER	0.1	2.07	20	520	7.00	25.0		6.8	
87/07/28	1020	WATER	0.1	2.05	19	663	6.89	27.0	2.1	5.5	
87/08/12	0955	WATER	0.1	1.97	15	398	6.96	25.0		6.0	
87/09/21	1000	WATER	0.1	2.07	23	612	7.15	24.0		6.2	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/21	0930	WATER	0.1	38	12	390	12.00	.190	1.300	3.900	3.600
86/11/04	1040	WATER	0.1	34	10	160					
86/12/11	1200	WATER	0.1	25							
87/01/28	1010	WATER	0.1	14	11	580					
87/02/19	0950	WATER	0.1	49	18	330					
87/03/12	1355	WATER	0.1	73	18	260					
87/04/08	1420	WATER	0.1	79	4	260					
87/05/20	0945	WATER	0.1	41	46	200					
87/06/30	1005	WATER	0.1	42	4	340					
87/07/28	1020	WATER	0.1	43	7	410					
87/08/12	0955	WATER	0.1	39	1	280					
87/09/21	1000	WATER	0.1	49	14	400					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/21	0930	WATER	0.1	10K	10K	25K	12	50K	.2K	50K	120
87/01/28	1010	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	62
87/04/08	1420	WATER	0.1	10K	2	25K	11	10K	.2K	13	70
87/05/20	0945	WATER	0.1		10K	25K	12	50K		50K	92
87/07/28	1020	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	15

CAPE FEAR RIVER BASIN

0209555450 BUFFALO CREEK AT SECONDARY ROAD 2719 NEAR OSCEOLA, NC

LOCATION.--Lat 36°09'11", long 79°36'51", Guilford County, Hydrologic Unit 03030002, on right bank on downstream-side of bridge on Secondary Road 2719, 1.3 mi north from junction of Secondary Road 2719 and Secondary Road 2746, 1.5 mi upstream from mouth, 5.0 mi northwest of Gibsonville, and 5.0 mi south of Osceola.

DRAINAGE AREA.--97.4 mi^2.

PERIOD OF RECORD.--May 1986 to March 1987 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 620 ft above National Geodetic Vertical Datum of 1929 from topographic map.

REMARKS.--Records are good except for estimated daily discharges which are fair. Flow diverted into basin by city of Greensboro above station.

EXTREMES FOR CURRENT PERIOD.-- May to September 1986: Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*) :

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug. 12	0600	*1,540	*9.76	No other peak greater than base discharge.			

Minimum discharge, 16 ft^3/s Sept. 28, 29; minimum gage height, 1.31 ft July 21.

Period Oct. to March 1987

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	2400	1,810	11.00	Feb. 23	0900	1,320	9.12
Jan. 19	2200	1,980	11.70	Mar. 1	1430	*4,740	*19.90
Jan. 31	0300	1,100	8.22	Mar. 10	0730	1,460	9.65

Minimum discharge, 14 ft^3/s Oct. 6, gage height 1.38 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, MAY 1986 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	57	42	52	48	39
2	---	---	---	---	---	---	---	57	39	250	45	46
3	---	---	---	---	---	---	---	55	45	78	39	54
4	---	---	---	---	---	---	---	52	41	52	40	78
5	---	---	---	---	---	---	---	49	42	41	80	205
6	---	---	---	---	---	---	---	52	42	39	192	124
7	---	---	---	---	---	---	---	53	54	37	63	60
8	---	---	---	---	---	---	---	55	174	37	53	45
9	---	---	---	---	---	---	---	51	62	40	49	49
10	---	---	---	---	---	---	---	46	53	42	39	53
11	---	---	---	---	---	---	---	48	47	45	76	52
12	---	---	---	---	---	---	---	44	49	42	1160	49
13	---	---	---	---	---	---	---	53	85	40	510	44
14	---	---	---	---	---	---	---	115	56	42	120	39
15	---	---	---	---	---	---	---	59	43	46	85	33
16	---	---	---	---	---	---	---	53	39	41	70	38
17	---	---	---	---	---	---	---	51	44	47	57	42
18	---	---	---	---	---	---	---	47	43	46	141	40
19	---	---	---	---	---	---	---	59	39	42	86	43
20	---	---	---	---	---	---	---	305	41	39	177	47
21	---	---	---	---	---	---	---	134	39	33	214	39
22	---	---	---	---	---	---	---	65	36	43	81	34
23	---	---	---	---	---	---	---	58	37	144	65	41
24	---	---	---	---	---	---	---	51	37	87	193	45
25	---	---	---	---	---	---	---	46	37	49	67	45
26	---	---	---	---	---	---	---	43	43	89	58	42
27	---	---	---	---	---	---	---	49	36	301	56	41
28	---	---	---	---	---	---	---	54	37	69	107	34
29	---	---	---	---	---	---	---	64	180	52	81	29
30	---	---	---	---	---	---	---	50	116	184	55	41
31	---	---	---	---	---	---	---	46	---	64	45	---
TOTAL	---	---	---	---	---	---	---	2021	1678	2213	4152	1571
MEAN	---	---	---	---	---	---	---	65.2	55.9	71.4	134	52.4
MAX	---	---	---	---	---	---	---	305	180	301	1160	205
MIN	---	---	---	---	---	---	---	43	36	33	39	29
CFSM	---	---	---	---	---	---	---	.67	.57	.73	1.38	.54
IN.	---	---	---	---	---	---	---	.77	.64	.85	1.59	.60

CAPE FEAR RIVER BASIN

0209555450 BUFFALO CREEK AT SECONDARY ROAD 2719 NEAR OSCEOLA, NC--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER 1986 TO MARCH 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	42	45	196	435	4210	---	---	---	---	---	---
2	44	38	174	429	490	2190	---	---	---	---	---	---
3	45	64	295	134	615	429	---	---	---	---	---	---
4	42	46	96	97	392	258	---	---	---	---	---	---
5	36	46	73	84	218	199	---	---	---	---	---	---
6	28	47	65	80	157	180	---	---	---	---	---	---
7	36	76	58	77	141	155	---	---	---	---	---	---
8	34	350	55	75	118	139	---	---	---	---	---	---
9	36	73	99	71	93	311	---	---	---	---	---	---
10	38	51	115	68	84	897	---	---	---	---	---	---
11	39	54	402	71	79	255	---	---	---	---	---	---
12	33	376	312	65	80	180	---	---	---	---	---	---
13	46	127	114	68	80	148	---	---	---	---	---	---
14	295	67	80	68	75	121	---	---	---	---	---	---
15	99	124	71	63	84	110	---	---	---	---	---	---
16	50	164	69	60	74	105	---	---	---	---	---	---
17	41	69	66	91	77	106	---	---	---	---	---	---
18	42	59	67	340	104	99	---	---	---	---	---	---
19	37	60	64	1180	171	309	---	---	---	---	---	---
20	33	178	61	732	284	204	---	---	---	---	---	---
21	37	326	54	190	287	123	---	---	---	---	---	---
22	40	91	50	151	286	100	---	---	---	---	---	---
23	40	66	52	241	975	90	---	---	---	---	---	---
24	42	57	784	197	331	92	---	---	---	---	---	---
25	48	58	756	190	177	e105	---	---	---	---	---	---
26	444	59	164	205	128	e130	---	---	---	---	---	---
27	100	95	111	161	146	e170	---	---	---	---	---	---
28	45	61	89	133	1010	e210	---	---	---	---	---	---
29	42	53	79	132	---	e270	---	---	---	---	---	---
30	37	50	76	242	---	e370	---	---	---	---	---	---
31	40	---	73	727	---	e320	---	---	---	---	---	---
TOTAL	2012	3027	4669	6618	7191	12585	---	---	---	---	---	---
MEAN	64.9	101	151	213	257	406	---	---	---	---	---	---
MAX	444	376	784	1180	1010	4210	---	---	---	---	---	---
MIN	28	38	45	60	74	90	---	---	---	---	---	---
CFSM	.67	1.04	1.55	2.19	2.64	4.17	---	---	---	---	---	---
IN.	.77	1.16	1.78	2.53	2.75	4.81	---	---	---	---	---	---

e Estimated

CAPE FEAR RIVER BASIN

0209560800 REEDY FORK CREEK AT NC 61 NEAR OSCEOLA, NC

LOCATION.--Lat 36°10'44", long 79°34'36", Guilford County, Hydrologic Unit 03030002, on left downstream-side of bridge on NC 61 and 3.6 mi south of Osceola.

DRAINAGE AREA.--243 mi^2.

PERIOD OF RECORD.--April 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 610 ft above National Geodetic Vertical Datum of 1929 from topographic map.

REMARKS.--Records are good, except periods of estimated daily discharges which are poor. Flow regulated since 1923 by Lake Brandt (sta. 02094117) 16 mi upstream, since 1957 by Lake Higgins on Brush Creek (sta. 02093981) a tributary to Lake Brandt, since 1943 by Richland Lake 14 mi above site, and since 1968 by Lake Townsend 11 mi above site. City of Greensboro diverted from Lake Brandt an average of 24.8 ft^3/s and an average of 18.6 ft^3/s from Lake Townsend for municipal water supply. Flow is diverted into basin by city of Greensboro, enters upstream from station.

EXTREMES FOR CURRENT PERIOD.--April to September 1986: Peak discharges greater than base discharge of 1,740 ft^3/s and maximum (*) :

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug. 12	0930	*1,440	*7.54				

Minimum discharge, 32 ft^3/s July 21, Sept. 22; minimum gage height 1.73 ft July 21.

Water Year 1987

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 2	unknown	11,700	23.16	Apr. 25	1940	1,870	8.81
Apr. 16	2300	*12,500	*23.82	July 3	2300	1,760	8.46

Minimum discharge, 31 ft^3/s Oct. 6, gage height, 1.74 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, APRIL 1986 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e105	61	55	62	50	43
2	---	---	---	---	---	---	e98	62	51	257	47	45
3	---	---	---	---	---	---	e95	58	55	91	43	52
4	---	---	---	---	---	---	92	58	52	61	43	75
5	---	---	---	---	---	---	89	52	53	49	73	162
6	---	---	---	---	---	---	84	55	53	46	185	169
7	---	---	---	---	---	---	84	58	92	46	71	64
8	---	---	---	---	---	---	82	59	236	44	55	46
9	---	---	---	---	---	---	79	55	85	47	53	47
10	---	---	---	---	---	---	75	54	65	48	46	50
11	---	---	---	---	---	---	73	54	60	49	106	49
12	---	---	---	---	---	---	71	50	60	48	1200	47
13	---	---	---	---	---	---	71	55	81	46	659	48
14	---	---	---	---	---	---	66	113	72	42	140	44
15	---	---	---	---	---	---	66	70	55	49	90	38
16	---	---	---	---	---	---	74	63	51	44	70	40
17	---	---	---	---	---	---	74	60	54	46	60	42
18	---	---	---	---	---	---	72	56	53	48	129	42
19	---	---	---	---	---	---	71	54	49	45	79	44
20	---	---	---	---	---	---	69	324	50	42	149	49
21	---	---	---	---	---	---	88	162	49	38	282	43
22	---	---	---	---	---	---	109	80	46	42	91	38
23	---	---	---	---	---	---	74	69	47	117	68	40
24	---	---	---	---	---	---	69	65	47	92	388	44
25	---	---	---	---	---	---	71	59	47	53	99	46
26	---	---	---	---	---	---	71	59	53	81	65	47
27	---	---	---	---	---	---	84	66	45	291	59	47
28	---	---	---	---	---	---	65	68	49	82	91	41
29	---	---	---	---	---	---	66	82	170	54	86	39
30	---	---	---	---	---	---	63	67	115	163	60	46
31	---	---	---	---	---	---	---	60	---	70	50	---
TOTAL	---	---	---	---	---	---	2350	2308	2050	2293	4687	1627
MEAN	---	---	---	---	---	---	78.3	74.5	68.3	74.0	151	54.2
MAX	---	---	---	---	---	---	109	324	236	291	1200	169
MIN	---	---	---	---	---	---	63	50	45	38	43	38
CFSM	---	---	---	---	---	---	.32	.31	.28	.30	.62	.22
IN.	---	---	---	---	---	---	.36	.35	.31	.35	.72	.25

e Estimated

CAPE FEAR RIVER BASIN

0209560800 REEDY FORK CREEK AT NC 61 NEAR OSCEOLA, NC--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	57	56	136	e491	e5090	349	479	104	62	83	101
2	46	53	138	463	e560	e2640	208	176	143	70	71	53
3	47	74	359	192	e715	e1650	170	133	126	272	50	45
4	46	55	128	155	e443	783	504	117	114	1150	57	45
5	43	54	91	153	e243	410	265	120	203	654	64	49
6	38	54	80	148	e179	285	179	113	132	439	68	173
7	41	64	71	145	e160	255	164	114	107	132	185	610
8	41	383	65	138	e138	249	147	107	98	158	159	1140
9	42	97	98	130	e115	e665	137	101	95	94	66	463
10	43	65	116	123	e104	1220	129	95	89	75	53	116
11	43	62	346	125	e97	647	127	88	85	71	54	435
12	41	371	446	125	e99	406	129	91	82	68	55	251
13	41	157	151	113	e98	299	218	95	83	66	52	380
14	270	82	103	e77	e92	244	149	98	88	72	50	154
15	117	82	85	e76	e102	227	1520	97	80	74	52	104
16	61	212	82	e76	e90	219	10900	95	78	65	67	86
17	48	87	78	e111	e93	226	7670	87	146	62	60	79
18	50	73	76	e322	e127	372	2170	84	153	61	54	73
19	43	71	75	e1430	e198	559	950	86	99	59	53	72
20	40	102	71	e801	e310	414	557	367	88	54	50	67
21	41	438	63	e218	e317	248	663	121	82	58	49	62
22	44	118	58	e174	e315	192	625	96	75	58	50	57
23	44	84	57	e267	e1180	160	587	89	78	57	49	59
24	44	70	353	e223	e370	150	1090	84	99	57	45	60
25	51	71	515	e223	e206	140	1600	101	83	58	45	55
26	403	69	217	e232	e155	146	1250	610	81	55	50	58
27	149	99	140	e186	e169	141	803	371	142	50	65	55
28	66	78	109	e152	e1090	190	637	173	83	52	52	51
29	57	67	94	e152	---	170	569	147	63	55	46	50
30	53	62	91	e259	---	437	530	118	63	55	42	110
31	53	---	87	e848	---	657	---	106	---	55	45	---
TOTAL	2193	3411	4499	7973	8256	19491	34996	4759	3042	4368	1941	5113
MEAN	70.7	114	145	257	295	629	1167	154	101	141	62.6	170
MAX	403	438	515	1430	1180	5090	10900	610	203	1150	185	1140
MIN	38	53	56	76	90	140	127	84	63	50	42	45
CFSM	.29	.47	.60	1.06	1.21	2.59	4.80	.63	.42	.58	.26	.70
IN.	.34	.52	.69	1.22	1.26	2.98	5.36	.73	.47	.67	.30	.78

CAL YR 1986 TOTAL 25418 MEAN 92.4 MAX 1200 MIN 38 CFSM .38 IN. 3.89
WTR YR 1987 TOTAL 100042 MEAN 274 MAX 10900 MIN 38 CFSM 1.13 IN. 15.3

e Estimated

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.

WATER-DISCHARGE RECORDS

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.

REMARKS.--Records fair. Diurnal fluctuation and occasional regulation at low flows. City of Burlington diverted from two reservoirs on Stony Creek (stations 02096003, 02096432) an average of 13.7 ft^3/s for municipal water supply, about half of which was returned upstream from station as treated effluent, the remainder was returned downstream from station. U. S. Army Corps of Engineers gage-height telephone telemeter at station.

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

AVERAGE DISCHARGE.--59 years, 580 ft^3/s, 13.00 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,000 ft^3/s Sept. 18, 1945, gage height, 31.10 ft, from floodmark; minimum 3 ft^3/s Sept. 5, 1930, gage height, 0.92 ft; minimum daily, 5 ft^3/s Sept. 6, 1930.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 1	1530	22,200	25.64	Sept. 8	1100	7,930	16.04
Apr. 16	0630	*26,200	*27.37				

Minimum discharge, 26 ft^3/s Oct. 7, gage height, 1.27 ft; minimum daily, 65 ft^3/s Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	117	163	394	1530	19400	776	757	231	133	84	107
2	88	123	239	1090	1810	15400	521	521	321	123	121	90
3	85	112	793	608	2580	7040	462	386	339	230	88	81
4	86	133	457	470	2090	3090	799	334	254	2130	85	78
5	80	116	310	420	1460	1590	678	314	289	1040	97	81
6	72	113	259	371	1190	1090	515	296	327	829	100	206
7	67	154	219	344	997	808	456	281	239	535	110	574
8	74	460	196	328	800	676	407	265	206	355	271	5190
9	70	246	206	301	652	991	370	256	184	259	113	1650
10	75	170	263	290	523	2260	342	246	186	178	86	883
11	77	162	616	290	460	1530	339	218	178	146	82	1100
12	78	445	1170	278	427	1100	347	202	171	149	84	741
13	84	346	533	262	399	856	474	210	171	166	88	845
14	171	225	420	242	362	654	411	306	162	155	82	580
15	333	210	338	239	357	564	4520	328	173	136	75	367
16	150	335	272	238	371	528	22500	288	165	122	77	271
17	125	226	237	252	427	516	18500	242	196	121	96	217
18	113	175	222	477	463	541	8540	217	289	111	83	174
19	100	166	218	3740	519	792	3230	274	226	102	83	155
20	97	186	210	3180	664	917	1740	629	172	104	77	145
21	93	584	196	1310	834	617	1380	347	168	92	74	140
22	97	330	179	1100	1200	510	1160	277	164	100	74	121
23	100	242	176	1280	3530	441	951	231	161	99	69	117
24	98	200	1710	1140	2790	399	1370	214	186	97	e68	112
25	115	176	2550	826	1720	374	2890	332	187	89	69	106
26	348	206	833	787	1320	372	3100	380	183	87	72	100
27	412	242	628	647	1100	376	2600	1020	278	90	91	101
28	182	234	495	545	3640	411	1610	646	234	84	91	93
29	152	185	365	501	---	445	1210	501	175	84	70	91
30	141	172	299	594	---	537	923	354	149	86	71	115
31	121	---	266	1620	---	986	---	265	---	82	71	---
TOTAL	3964	6791	15038	24164	34215	65811	83121	11137	6364	8114	2802	14631
MEAN	128	226	485	779	1222	2123	2771	359	212	262	90.4	488
MAX	412	584	2550	3740	3640	19400	22500	1020	339	2130	271	5190
MIN	67	112	163	238	357	372	339	202	149	82	68	78
CFSM	.21	.37	.80	1.29	2.02	3.50	4.57	.59	.35	.43	.15	.80
IN.	.24	.42	.92	1.48	2.10	4.04	5.10	.68	.39	.50	.17	.90

CAL YR 1986 TOTAL 92716 MEAN 254 MAX 2670 MIN 46 CFSM .42 IN. 5.69
WTR YR 1987 TOTAL 276152 MEAN 757 MAX 22500 MIN 67 CFSM 1.25 IN. 17.0

e Estimated

CAPE FEAR RIVER BASIN

02096500 HAW RIVER AT HAW RIVER, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/21	1100	WATER	0.1	1.77	94	372	7.60	13.0	10.0	10.1	100
86/11/04	1210	WATER	0.1	1.97	132	409	7.90	18.0	7.1	9.5	
86/12/11	1320	WATER	0.1	3.69	632	230	7.10	11.0		11.3	
87/01/28	1150	WATER	0.1	3.36	525	237	7.40	2.0	19.0	15.0	
87/02/19	1210	WATER	0.1	3.22	484						
87/02/19	1210	WATER	1			245	7.50	5.0	13.0	13.2	
87/03/12	1145	WATER	0.1	4.99	1106	145	7.20	9.0	37.0	12.1	
87/04/23	1420	WATER	0.1	3.56	942	101	6.40	18.9	50.0	9.2	
87/05/20	1330	WATER	0.1	3.73	1009	127	6.60	22.0	29.0	8.3	
87/06/30	1138	WATER	0.1	2.14	148	270	7.50	26.0	22.0	8.0	
87/07/28	1330	WATER	0.1	1.83	87	540	8.11	30.0	10.0	8.0	
87/08/12	1150	WATER	0.1	1.77	94						
87/08/12	1150	WATER				413	7.43	27.0	10.0	6.7	
87/09/21	1155	WATER	0.1	1.99	137	298	7.50	25.0	12.0	7.8	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/21	1100	WATER	0.1	48	14	280	3.00	.050	.800	1.700	1.500
86/11/04	1210	WATER	0.1	50	12	260					
86/12/11	1320	WATER	0.1	36	6	240					
87/01/28	1150	WATER	0.1	47	8	180	.95	.610	.900	.410	.180
87/02/19	1210	WATER	1	43	8	170					
87/03/12	1145	WATER	0.1	23	23	160					
87/04/23	1420	WATER	0.1	410	32	120	.64	.040	.300	.200	.090
87/05/20	1330	WATER	0.1	34	110	230					
87/06/30	1138	WATER	0.1	41	17	200					
87/07/28	1330	WATER	0.1	65	140	500	7.10	.050	1.100	1.600	1.500
87/08/12	1150	WATER		53	5	290					
87/09/21	1155	WATER	0.1	38	160	380					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/21	1100	WATER	0.1	10K	10K	25K	16	50K	.2K	50K	33
87/01/28	1150	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	16
87/04/23	1420	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	11
87/07/28	1330	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	27

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.

WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Records good. Considerable regulation for short periods at low flow caused by powerplant above station. Gage height telemeter and satellite data transmitter at the station.

AVERAGE DISCHARGE.--14 years, 1,334 ft^3/s, 14.21 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,800 ft^3/s Mar. 1, 1987; maximum gage height, 17.67 ft Mar. 14, 1975; minimum, 0.18 ft^3/s Sept. 10, 27, 1983, gage height, 1.86 ft; minimum daily, 0.18 ft^3/s Sept. 10, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 19	2145	16,500	11.78	Apr. 16	2400	40,900	16.46
Mar. 1	2100	*46,800	*17.40				

Minimum discharge, 4.3 ft^3/s Oct. 13, gage height, 1.96 ft; minimum daily discharge, 36 ft^3/s Aug. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	173	289	609	3460	39400	1920	1270	383	133	36	158
2	133	177	333	3200	3360	35000	1240	1080	412	238	105	113
3	67	146	1240	2100	4540	11400	1020	802	479	179	142	132
4	164	100	1350	1200	4160	5610	1580	691	504	3450	151	98
5	85	157	727	938	2810	3180	1940	626	376	2400	138	106
6	89	162	511	806	2160	2240	1310	616	436	1410	102	128
7	119	137	404	699	1850	1750	1070	594	467	1020	107	296
8	66	229	360	658	1540	1450	954	562	334	663	114	5660
9	93	625	339	599	1280	1530	861	531	302	476	343	4160
10	115	255	433	573	1050	2870	792	501	282	373	182	1190
11	91	185	650	566	914	3020	720	451	256	248	84	1590
12	80	248	2640	560	845	2030	701	446	170	227	82	1270
13	90	637	1470	483	798	1670	793	426	228	273	100	925
14	83	391	898	502	736	1360	909	542	247	369	104	956
15	242	351	694	404	708	1150	1800	603	189	281	114	656
16	395	356	575	472	711	1060	24600	579	271	148	127	419
17	135	577	460	484	836	1010	30500	504	231	232	114	323
18	126	277	438	688	881	968	13300	413	494	168	97	285
19	138	304	431	8810	918	1240	5940	428	543	147	109	265
20	97	241	383	10300	1150	2020	3370	2730	354	161	115	221
21	125	434	387	3420	1890	1480	2470	1320	382	136	115	210
22	110	797	346	3850	2660	1160	2130	712	120	130	156	233
23	109	458	265	3570	7390	981	1750	570	247	124	123	187
24	120	350	3240	2610	6620	899	1570	481	341	131	101	157
25	182	340	7570	2060	3720	825	3780	486	253	56	88	149
26	115	254	2590	2110	2710	784	4400	614	270	128	94	161
27	520	487	1440	1670	2400	792	3740	1210	254	159	96	153
28	445	640	1090	1310	8720	834	2640	1000	356	116	100	136
29	203	424	854	1140	---	864	1970	921	317	99	111	137
30	203	334	681	1100	---	878	1550	695	316	101	106	151
31	167	---	589	3160	---	1710	---	529	---	120	107	---
TOTAL	4773	10246	33677	60651	70817	131165	121320	22933	9814	13896	3663	20625
MEAN	154	342	1086	1956	2529	4231	4044	740	327	448	118	687
MAX	520	797	7570	10300	8720	39400	30500	2730	543	3450	343	5660
MIN	66	100	265	404	708	784	701	413	120	56	36	98
CFSM	.12	.27	.85	1.53	1.98	3.32	3.17	.58	.26	.35	.09	.54
IN.	.14	.30	.98	1.77	2.07	3.83	3.54	.67	.29	.41	.11	.60

CAL YR 1986 TOTAL 179489 MEAN 492 MAX 7570 MIN 37 CFSM .39 IN. 5.24
WTR YR 1987 TOTAL 503580 MEAN 1380 MAX 39400 MIN 36 CFSM 1.08 IN. 14.7

CAPE FEAR RIVER BASIN

02096960 HAW RIVER NEAR BYNUM, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/23	1130	WATER	0.1	2.94	152	362	7.30	13.0		9.9	10
86/11/10	1145	WATER	0.1	3.74	456	290	7.10	15.0	5.1	7.6	
86/12/03	1130	WATER	0.1	4.75	1145	125		10.0	18.0	10.0	
87/01/22	1045	WATER	0.1	6.50	3369	50	6.60	3.0	50.0	10.5	
87/02/26	1030	WATER	0.1	6.07	2721	59		5.0	29.0	11.4	
87/03/25	1300	WATER	0.1	4.35	823						
87/03/31	1300	WATER	0.1			100		12.0	12.0	10.4	
87/04/08	1045	WATER	0.1	4.53	959	91	5.70	12.0	19.0	10.9	
87/05/18	1200	WATER	0.1	3.57	369	230		23.0	5.4	8.5	
87/07/07	1715	WATER	0.1	4.54	967	130		29.0	50.0	5.1	150
87/08/27	1230	WATER	0.1	2.76	108						
87/09/24	1040	WATER	0.1	3.04	179	242	8.40	22.0	5.6	1.0	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/23	1130	WATER	0.1	79	8	320	3.80	.040	.900	2.000	1.900
86/11/10	1145	WATER	0.1	63	12	150	2.90	.080	.800	1.500	1.300
86/12/03	1130	WATER	0.1		10	160	1.40	.070	.400	.690	.610
87/01/22	1045	WATER	0.1	14	30	130	.72	.130	.400	.210	.090
87/02/26	1030	WATER	0.1		18	110	.55	.070	.400	.130	.050
87/03/31	1300	WATER	0.1		13	140	.77	.010	.300	.280	.200
87/04/08	1045	WATER	0.1	9	23	85	.53	.030	.400	.170	.110
87/05/18	1200	WATER	0.1		17	140	1.20	.020	.400	.480	.400
87/07/07	1715	WATER	0.1		23	150	1.20		.400	.320	.260
87/09/24	1040	WATER	0.1	36	5	170	.47	.010	.600	.510	.460

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/23	1130	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	34
86/11/10	1145	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	25
86/12/03	1130	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/01/22	1045	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/26	1030	WATER	0.1	10K	10K	25K	10K	50K	.2	50K	10K
87/03/31	1300	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	20
87/04/08	1045	WATER	0.1	10K	10K	25K	10	50K	.2K	50K	12
87/05/18	1200	WATER	0.1	10K	10K	25K	10K	50K	.2K	65	11
87/07/07	1715	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/09/24	1040	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	18

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.

WATER-DISCHARGE RECORDS

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.--Records good except for the period March 1-12 which are poor. Slight diurnal fluctuation at low flow. The city of Durham diverted an average of 34.7 ft^3/s from Neuse River basin for municipal water supply and returned 16.7 ft^3/s as treated effluent into the Cape Fear River basin, of which 12.5 ft^3/s entered upstream from station. About 12.4 ft^3/s was returned to the Neuse River basin.

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

AVERAGE DISCHARGE.--5 years, 107 ft^3/s, 19.14 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,980 ft^3/s Apr. 19, 1987; maximum gage height 15.03 ft Mar. 4, 1987 (Backwater from B. Everett Jordan Lake); minimum, 0.42 ft^3/s May 26, 1987, gage height, 2.76 ft, result of regulation; minimum unregulated, 4.2 ft^3/s Apr. 28, 29, May 1, 2, July 10, 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 25	2200	742	8.80	(a)Mar. 2	unknown	unknown	unknown
Jan. 20	1200	1,280	9.60	Mar. 4	1630	(a)	*15.03
Jan. 23	0730	1,020	9.25	Apr. 19	1430	*4,980	11.53

(a) Backwater from B. Everett Jordan Lake

Minimum discharge, 0.42 ft^3/s May 26, gage height, 2.76 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	11	20	63	119	e1600	106	53	23	17	30	113
2	12	11	43	327	96	e2200	73	48	38	16	26	41
3	12	12	100	285	105	e600	62	44	30	17	20	23
4	12	12	63	136	90	e200	158	42	25	21	16	18
5	11	12	35	62	68	e125	178	40	27	58	16	16
6	11	9.4	25	43	55	e100	112	39	25	31	16	20
7	11	11	21	39	51	e95	77	38	20	22	20	78
8	11	34	18	37	47	e90	65	36	19	18	38	213
9	11	25	19	34	44	e90	58	34	18	17	21	362
10	12	17	26	33	39	e230	52	33	17	17	16	74
11	11	14	57	46	37	e400	48	31	17	16	15	197
12	11	22	111	36	36	e200	47	30	17	22	13	96
13	11	53	68	33	35	114	92	28	16	84	13	81
14	14	27	40	28	33	78	69	34	16	30	12	57
15	21	25	31	26	34	60	126	50	16	20	13	34
16	15	67	27	25	37	55	962	46	17	17	16	42
17	13	31	24	30	46	56	1100	37	17	15	17	24
18	11	22	23	89	73	52	2720	30	18	14	15	22
19	9.9	17	22	408	93	75	4620	27	18	13	14	20
20	10	17	20	1030	124	139	3870	120	17	13	14	20
21	9.9	50	17	582	159	97	1970	152	16	14	15	44
22	10	31	16	400	214	72	822	69	16	13	16	54
23	10	22	15	902	497	62	269	45	18	13	15	28
24	10	18	80	514	644	58	146	35	41	13	14	22
25	10	16	487	209	476	53	237	32	32	13	14	20
26	22	15	554	168	253	50	203	13	23	13	14	18
27	32	13	226	135	169	51	109	22	28	13	14	17
28	15	13	73	96	531	162	77	27	26	12	14	17
29	13	15	43	80	---	160	66	25	19	13	13	17
30	11	15	36	76	---	84	60	25	17	15	13	37
31	12	---	31	101	---	129	---	23	---	15	33	---
TOTAL	396.8	657.4	2371	6073	4205	7537	18554	1308	647	625	536	1825
MEAN	12.8	21.9	76.5	196	150	243	618	42.2	21.6	20.2	17.3	60.8
MAX	32	67	554	1030	644	2200	4620	152	41	84	38	362
MIN	9.9	9.4	15	25	33	50	47	13	16	12	12	16
CFSM	.17	.29	1.01	2.58	1.98	3.20	8.15	.56	.28	.27	.23	.80
IN.	.19	.32	1.16	2.98	2.06	3.69	9.09	.64	.32	.31	.26	.89

CAL YR 1986 TOTAL 17107.2 MEAN 46.9 MAX 1310 MIN 9.4 CFSM .62 IN. 8.38
WTR YR 1987 TOTAL 44735.2 MEAN 123 MAX 4620 MIN 9.4 CFSM 1.61 IN. 21.9

e Estimated

CAPE FEAR RIVER BASIN

02097314 NEW HOPE CREEK NEAR BLANDS, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/17	0920	WATER	0.1	3.85	11	420	7.20	11.0		7.1	200
86/11/12	1050	WATER	0.1	4.00	12	340	6.80	15.0		6.3	320
86/12/04	1015	WATER	0.1	5.41	61	110	6.80	8.0	50.0	8.8	430
87/01/14	1045	WATER	0.1	4.41	25	178	6.50	7.0		9.4	10K
87/02/20	1100	WATER	0.1	6.61	131	140	6.90	2.0	32.0	10.5	230
87/03/13	1200	WATER	0.1	6.15	12	109		7.0		12.4	10
87/04/08	1300	WATER	0.1	5.28	63	125	6.00	14.0		10.6	990
87/05/26	1400	WATER	0.1	3.22	5	292		21.0	50.0	6.1	180
87/06/25	1000	WATER	0.1			270		24.0		5.0	1600
87/06/25	1600	WATER	0.1	4.22	29						
87/08/27	1020	WATER	0.1	3.69	13						

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/17	0920	WATER	0.1	146	14	380	13.00	.090	1.000	4.500	4.000
86/11/12	1050	WATER	0.1	79	32	400	16.00	.120	1.200	4.400	3.800
86/12/04	1015	WATER	0.1	31	22	190	3.30	.040	.600	.800	.700
87/01/14	1045	WATER	0.1	35	21	230	7.30	.120	.900	2.100	1.800
87/02/20	1100	WATER	0.1		31	210	1.10	.250	.900	.380	.220
87/03/13	1200	WATER	0.1		17	150	2.70	.050	.300	.630	.520
87/04/08	1300	WATER	0.1	13	39	140	2.00	.070	.500	.760	.620
87/05/26	1400	WATER	0.1		57	280	9.90	.480	1.600	3.200	2.800
87/06/25	1000	WATER	0.1		89	310	6.50	.150	.900	2.600	2.300

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/17	0920	WATER	0.1		10K	25K	10	50K	.2K	50K	58
87/02/20	1100	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	37
87/05/26	1400	WATER	0.1	10K	10K	25K	11	50K	.2K	50K	37

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.

WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Records fair. Slight diurnal fluctuation at low flow. The city of Durham diverted from Neuse River basin an average of 34.7 ft^3/s for municipal water supply and returned an average of 16.7 ft^3/s as treated effluent into the Cape Fear River basin, of which 4.3 ft^3/s entered upstream from station. About 12.4 ft^3/s, was returned to Neuse River basin.

AVERAGE DISCHARGE.--5 years, 28.4 ft^3/s, 18.28 in/yr.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,220 ft^3/s Aug. 20, 1986, gage height, 11.07 ft; minimum 0.76 cfs Oct. 7, 1985, minimum gage height, 3.50 ft Sept. 5, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 2	0400	458	9.12	Mar. 1	0700	925	9.94
Jan. 19	2030	626	9.46	Apr. 16	0930	*1,020	*10.06
Jan. 22	1930	889	9.89	Sep. 13	0300	682	9.56
Feb. 23	1030	499	9.21				

Minimum discharge, 1.2 ft^3/s June 20, Sept. 26; minimum gage height, 3.63 ft, May 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	3.6	11	88	12	806	44	7.3	5.9	5.2	4.1	23
2	4.3	3.3	34	338	13	204	20	5.7	6.5	5.6	5.4	4.8
3	4.2	3.7	30	43	18	39	14	5.1	5.8	5.4	4.0	3.5
4	3.5	3.7	10	16	13	23	40	6.3	6.1	4.7	4.4	3.1
5	3.4	3.2	6.2	12	10	16	19	6.5	6.3	4.4	4.9	3.3
6	4.1	2.9	4.9	9.5	8.8	15	13	6.9	4.3	6.4	4.4	15
7	4.4	3.0	4.2	8.3	7.2	12	11	7.5	3.4	6.7	4.4	13
8	4.3	3.1	4.6	7.6	6.7	12	10	7.9	4.0	6.4	2.5	168
9	4.0	2.5	4.7	7.0	7.7	21	8.6	7.4	4.2	6.1	3.0	44
10	4.9	2.9	9.6	8.1	6.9	39	7.6	6.2	3.5	6.1	4.5	6.8
11	3.9	2.3	32	11	7.8	21	6.6	7.1	2.9	5.2	5.2	15
12	3.3	24	23	8.4	8.0	15	6.1	7.2	3.7	5.4	4.7	38
13	4.1	12	12	7.4	7.6	12	18	6.9	3.3	6.5	4.6	348
14	4.9	6.0	7.6	6.7	6.7	9.9	10	9.8	3.2	5.2	4.4	21
15	4.3	16	6.2	6.4	6.8	8.7	236	8.4	3.7	5.0	5.0	6.6
16	4.1	13	5.7	6.4	8.0	8.4	826	20	3.8	5.3	4.5	4.1
17	3.8	6.4	5.3	8.5	13	9.4	202	8.2	4.0	5.1	4.7	3.4
18	3.1	5.5	5.5	98	26	9.0	89	7.2	4.3	4.1	4.6	3.1
19	3.5	5.5	5.3	420	35	43	52	4.9	3.0	3.7	7.2	2.3
20	4.1	7.0	4.2	314	58	45	27	58	2.3	4.7	7.9	1.9
21	4.3	13	3.5	40	85	19	18	14	3.1	4.9	9.2	20
22	4.3	6.4	3.8	398	113	12	14	6.8	2.8	4.9	6.2	5.8
23	4.0	4.4	4.0	411	422	10	12	4.1	6.0	4.8	3.8	3.0
24	4.3	4.9	110	44	234	9.3	41	3.2	14	4.9	5.2	2.3
25	3.8	6.1	235	29	81	8.1	107	4.0	3.6	4.1	5.9	2.2
26	7.6	5.9	25	58	55	7.9	34	5.2	4.3	3.9	6.2	1.8
27	4.5	5.2	12	26	78	8.4	17	4.7	5.2	4.4	6.4	2.0
28	3.7	4.5	8.2	20	556	73	13	4.9	3.5	4.4	6.6	3.2
29	3.8	4.2	7.0	17	---	23	9.9	5.1	4.9	5.2	5.3	4.6
30	3.7	4.4	6.1	17	---	28	8.2	3.9	4.9	4.9	4.6	11
31	3.5	---	5.7	16	---	92	---	5.3	---	4.4	34	---
TOTAL	128.2	188.6	646.3	2500.4	1904.2	1659.1	1934.0	265.7	136.5	158.0	187.8	783.8
MEAN	4.14	6.29	20.8	80.7	68.0	53.5	64.5	8.57	4.55	5.10	6.06	26.1
MAX	7.6	24	235	420	556	806	826	58	14	6.7	34	348
MIN	3.1	2.3	3.5	6.4	6.7	7.9	6.1	3.2	2.3	3.7	2.5	1.8
CFSM	.20	.30	.99	3.82	3.22	2.54	3.06	.41	.22	.24	.29	1.24
IN.	.23	.33	1.14	4.41	3.36	2.93	3.41	.47	.24	.28	.33	1.38

CAL YR 1986 TOTAL 6763.5 MEAN 18.5 MAX 911 MIN 1.7 CFSM .88 IN. 11.9
WTR YR 1987 TOTAL 10492.5 MEAN 28.7 MAX 826 MIN 1.8 CFSM 1.36 IN. 18.5

CAPE FEAR RIVER BASIN

0209741955 NORTHEAST CREEK AT SECONDARY ROAD 1100 NEAR GENLEE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/17	0850	WATER	0.1			405	6.70	12.0		6.2	2900
86/11/12	1015	WATER	0.1			301	6.50	11.0		5.9	
86/12/04	0945	WATER	0.1			138	6.80	8.0		7.6	
87/01/14	1020	WATER	0.1			275	6.80	6.0		9.1	
87/02/20	1000	WATER	0.1			135	7.00	2.0	38.0	10.8	
87/03/11	1420	WATER	0.1			136		7.0		11.6	
87/04/08	1330	WATER	0.1	4.57	12	225	6.00	15.0		9.9	
87/06/02	1300	WATER	0.1	4.45	6	488		24.0	19.0	6.8	
87/06/25	0930	WATER	0.1	4.20	3	430		22.0		6.0	
87/08/27	1110	WATER	0.1	4.58	5						

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/17	0850	WATER	0.1	40	16	410	14.00	.150	1.100	7.200	5.700
86/11/12	1015	WATER	0.1	31			13.00	.110	1.000	5.100	4.600
86/12/04	0945	WATER	0.1	37			3.10	.800	1.200	1.200	1.100
87/01/14	1020	WATER	0.1	57			8.80	.120	.800	2.700	2.700
87/02/20	1000	WATER	0.1		37	220	1.10	.120	.400	.390	.310
87/03/11	1420	WATER	0.1				3.30	.040	.300	.950	.860
87/04/08	1330	WATER	0.1	11			5.20	.040	.500	1.700	1.500
87/06/02	1300	WATER	0.1		34	360	14.00	.120	.800	5.800	5.700
87/06/25	0930	WATER	0.1				12.00	.530	2.500	5.200	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/17	0850	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	130
87/02/20	1000	WATER	0.1	10K	10K	25K	14	50K	.2K	50K	41
87/06/02	1300	WATER	0.1	10K	10K	25K	16	50K	.2K	50K	86

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.--Records fair, except for estimated daily discharges and those below 10 ft^3/s, which are poor. Slight diurnal fluctuation at low flow.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,240 ft^3/s Mar. 6, 1984, gage height, 12.75 ft; minimum daily, 0.60 ft^3/s Nov. 26, 1982.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 19	1630	822	8.58	May 19	1930	806	8.52
Mar. 1	unknown	*2,120	*12.46				

Minimum daily discharge, 9.3 ft^3/s, Aug. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	16	13	68	35	e792	e33	17	16	14	15	27
2	14	16	21	104	33	e283	e30	16	15	13	14	14
3	15	13	16	25	33	e156	e29	15	15	11	14	13
4	16	14	10	17	27	e115	e111	15	15	11	20	13
5	16	12	10	15	23	e84	e50	14	13	10	18	13
6	19	13	10	13	21	e58	e41	14	12	11	12	29
7	19	19	10	12	21	e48	30	13	13	11	19	30
8	16	17	11	11	21	e35	26	13	13	11	13	117
9	17	15	11	10	24	e30	22	13	e13	11	11	18
10	20	16	11	11	18	e62	20	13	13	11	10	15
11	20	17	16	11	16	e48	20	13	12	10	12	13
12	18	20	11	11	16	e40	34	12	12	17	11	14
13	18	13	9.5	10	18	e32	24	13	11	17	9.3	13
14	27	11	9.7	10	e15	e29	113	14	12	15	9.9	13
15	16	21	11	10	e16	e26	314	14	12	14	14	12
16	15	14	10	10	e18	e24	150	14	12	14	13	12
17	17	13	8.3	11	e33	e25	118	12	12	14	12	12
18	17	13	6.9	59	e40	e23	75	12	11	13	12	12
19	16	11	9.1	438	e66	e63	47	282	12	13	12	11
20	15	11	9.5	206	e76	e35	e40	182	11	13	10	11
21	16	12	9.4	75	e96	e28	e35	48	10	12	17	13
22	14	11	8.1	415	e109	e24	e30	27	11	12	14	12
23	14	11	9.2	260	e256	e22	25	22	52	11	11	12
24	15	12	235	108	e205	e22	54	18	27	11	12	11
25	16	10	170	94	e133	e20	52	16	14	10	12	11
26	20	9.7	29	104	e104	e20	32	15	24	9.8	13	10
27	17	10	17	53	e168	e22	25	15	25	11	12	10
28	16	11	14	36	e250	e90	22	15	13	11	12	11
29	13	11	13	30	---	e22	20	14	15	44	11	12
30	14	12	11	30	---	e26	18	14	15	17	11	30
31	15	---	9.9	58	---	e105	---	14	---	15	89	---
TOTAL	513	404.7	749.6	2325	1891	2409	1640	929	461	417.8	475.2	544
MEAN	16.5	13.5	24.2	75.0	67.5	77.7	54.7	30.0	15.4	13.5	15.3	18.1
MAX	27	21	235	438	256	792	314	282	52	44	89	117
MIN	12	9.7	6.9	10	15	20	18	12	10	9.8	9.3	10
CFSM	.40	.33	.59	1.83	1.65	1.90	1.33	.73	.37	.33	.37	.44
IN.	.47	.37	.68	2.11	1.72	2.19	1.49	.84	.42	.38	.43	.49

CAL YR 1986 TOTAL 7397.7 MEAN 20.3 MAX 467 MIN 6.5 CFSM .49 IN. 6.71
WTR YR 1987 TOTAL 12759.3 MEAN 35.0 MAX 792 MIN 6.9 CFSM .85 IN. 11.6

e Estimated

CAPE FEAR RIVER BASIN

0209782150 NEW HOPE RIVER TRIBUTARY AT SR 1716 NEAR FARRINGTON, NC

LOCATION.--Lat 35°45'50", long 79°03'08", Chatham County, Hydrologic Unit 03030002, at downstream side of culvert on SR 1716, 3.3 mi southwest of Farrington.

DRAINAGE AREA.--2.05 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 230 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

EXTREMES FOR CURRENT PERIOD.--March to September 1986: Peak discharges greater than base discharge of 90 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Mar. 14	1300	124	3.01	Aug. 20	1030	*186	*3.16

No flow several days May-Sept.

Water Year 1987

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 19	1030	108	2.96	Mar. 1	0445	*198	*3.18
Jan. 22	0930	94	2.92				

No flow several days in Oct.-Dec., May-Sept.

DISCHARGE, IN CUBIC FEET PER SECOND, MARCH 1986 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	1.7	.54	.04	.04	.00	.00	.04
2	---	---	---	---	---	1.2	.50	.02	.01	.00	.00	.04
3	---	---	---	---	---	.95	.46	.01	.00	.00	.00	.02
4	---	---	---	---	---	.74	.44	.00	.00	.00	.00	.00
5	---	---	---	---	---	.64	.41	.00	.00	.00	.00	.02
6	---	---	---	---	---	.57	.43	.00	.00	.00	.00	.08
7	---	---	---	---	---	.53	.56	.00	.00	.00	.00	.03
8	---	---	---	---	---	.42	.44	.00	.00	.00	.00	.01
9	---	---	---	---	---	.41	.40	.00	.00	.00	.00	.02
10	---	---	---	---	---	.44	.36	.00	.00	.00	.00	.03
11	---	---	---	---	---	.45	.35	.00	.00	.00	.00	.01
12	---	---	---	---	---	.39	.35	.05	.00	.00	.00	.00
13	---	---	---	---	---	5.1	.32	.03	.00	.00	.04	.00
14	---	---	---	---	---	51	.31	.05	.00	.00	.00	.00
15	---	---	---	---	---	13	.30	.05	.00	.00	.00	.00
16	---	---	---	---	---	5.6	.31	.04	.00	.00	.00	.00
17	---	---	---	---	---	3.1	.28	.02	.00	.00	.00	.00
18	---	---	---	---	---	2.1	.27	.00	.00	.00	.00	.00
19	---	---	---	---	---	10	.23	.59	.00	.00	.00	.00
20	---	---	---	---	---	12	.20	1.5	.00	.00	22	.00
21	---	---	---	---	---	7.7	.58	.23	.00	.00	1.7	.00
22	---	---	---	---	---	3.9	.30	.09	.00	.00	.36	.00
23	---	---	---	---	---	2.7	.21	.04	.00	.00	.14	.00
24	---	---	---	---	---	2.0	.19	.03	.00	.00	.07	.00
25	---	---	---	---	---	1.6	.16	.02	.00	.00	.01	.00
26	---	---	---	---	---	1.4	.17	.02	.00	.00	.00	.00
27	---	---	---	---	---	1.2	.18	.03	.00	.00	.02	.00
28	---	---	---	---	---	.94	.12	.07	.00	.00	.95	.00
29	---	---	---	---	---	.80	.09	.08	.00	.00	.63	.00
30	---	---	---	---	---	.69	.05	.05	.00	.00	.21	.00
31	---	---	---	---	---	.60	---	.16	---	.00	.10	---
TOTAL	---	---	---	---	---	133.87	9.51	3.22	.05	.00	26.23	.30
MEAN	---	---	---	---	---	4.32	.32	.10	.00	.00	.85	.01
MAX	---	---	---	---	---	51	.58	1.5	.04	.00	22	.08
MIN	---	---	---	---	---	.39	.05	.00	.00	.00	.00	.00
CFSM	---	---	---	---	---	2.11	.15	.05	.00	.00	.41	.00
IN.	---	---	---	---	---	2.43	.17	.06	.00	.00	.48	.00

CAPE FEAR RIVER BASIN

0209782150 NEW HOPE RIVER TRIBUTARY AT SR 1716 NEAR FARRINGTON, NC--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	9.2	.57	43	1.8	.29	.00	.00	.00	.00
2	.00	.00	.16	6.4	.57	10	1.2	.23	.00	.00	.00	.00
3	.00	.00	.50	1.6	.54	e7.0	1.7	.18	.00	.00	.00	.00
4	.00	.00	.19	.82	.43	e3.5	4.8	.16	.00	.00	.00	.00
5	.00	.00	.07	.52	.36	e2.0	2.0	.17	.00	.00	.00	.00
6	.00	.00	.03	.36	.33	e1.0	1.3	.14	.00	.00	.00	.00
7	.00	.00	.0	.26	.32	.75	1.1	.13	.00	.00	.00	.00
8	.00	.00	.00	.18	.28	.78	.85	.12	.00	.00	.00	.01
9	.00	.00	.00	.12	.24	1.2	.69	.09	.00	.00	.00	.00
10	.00	.00	.07	.17	.23	1.2	.55	.07	.00	.00	.00	.00
11	.00	.00	.43	.18	.21	.88	.48	.06	.00	.00	.00	.00
12	.00	.00	.62	.15	.22	.76	.45	.04	.00	.00	.00	.00
13	.00	.00	.37	.13	.20	.65	.43	.06	.00	.00	.00	.00
14	.00	.00	.21	.11	.19	.55	.36	.14	.00	.00	.00	.00
15	.00	.00	.14	.12	.20	.48	25	.11	.00	.00	.00	.00
16	.00	.00	.09	.11	.27	.43	29	.08	.00	.00	.00	.00
17	.00	.00	.06	.17	.47	.37	6.7	.05	.00	.00	.00	.00
18	.00	.00	.05	7.1	.54	.34	4.3	.03	.00	.00	.00	.00
19	.00	.00	.04	35	.82	2.0	3.0	.02	.00	.00	.00	.00
20	.00	.00	.03	6.4	1.7	1.8	1.8	.19	.00	.00	.00	.00
21	.00	.00	.01	2.4	4.9	1.2	1.2	.09	.00	.00	.00	.00
22	.00	.00	.00	32	13	.85	.88	.07	.00	.00	.00	.00
23	.00	.00	.00	6.9	23	.65	.65	.05	.00	.00	.00	.00
24	.00	.00	13	2.5	11	.56	1.6	.03	.00	.00	.00	.00
25	.00	.00	4.0	1.7	7.3	.52	2.7	.01	.00	.00	.00	.00
26	.00	.00	1.3	1.8	4.5	.49	1.4	.00	.00	.00	.00	.00
27	.00	.00	.73	1.2	12	.53	.87	.00	.00	.00	.00	.00
28	.00	.00	.48	.96	45	1.8	.66	.00	.00	.00	.00	.00
29	.00	.00	.35	.82	---	1.1	.48	.00	.00	.00	.00	.00
30	.00	.00	.28	.77	---	3.0	.38	.00	.00	.00	.00	.00
31	.00	---	.21	.66	---	3.8	---	.00	---	.00	.00	---
TOTAL	.00	.00	23.42	120.81	129.39	93.19	98.33	2.61	.00	.00	.00	.01
MEAN	.00	.00	.76	3.90	4.62	3.01	3.28	.08	.00	.00	.00	.00
MAX	.00	.00	13	35	45	43	29	.29	.00	.00	.00	.01
MIN	.00	.00	.00	.11	.19	.34	.36	.00	.00	.00	.00	.00
CFSM	.00	.00	.37	1.90	2.25	1.47	1.60	.04	.00	.00	.00	.00
IN.	.00	.00	.42	2.19	2.35	1.69	1.78	.05	.00	.00	.00	.00

CAL YR 1986 TOTAL 196.60 MEAN .64 MAX 51 MIN .00 CFSM .31 IN. 3.57
WTR YR 1987 TOTAL 467.76 MEAN 1.28 MAX 45 MIN .00 CFSM .63 IN. 8.49

e Estimated

CAPE FEAR RIVER BASIN

0209782150 NEW HOPE RIVER TRIBUTARY AT SECONDARY ROAD 1716 NEAR FARRINGTON, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1986 to September 1987.

REMARKS.--Basin above station is 100 percent forested. Station is part of district's Natural Quality Network for determining the quality of streams relatively unaffected by man. Samples collected upstream from the culvert at a point just below the confluence of two tributaries that make up the main flow of the stream.

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

WATER QUALITY DATA, MARCH 1986 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	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, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
AUG										
12...	1853	<0.10	62	6.40	0.430	0.010	0.440	0.030	0.29	0.32
12...	1915	0.06	77	6.10	0.030	0.010	0.040	0.020	0.23	0.25
12...	1945	0.03	72	6.10	0.120	0.020	0.140	0.020	0.25	0.27
13...	0815	0.06	80	6.40	<0.010	0.010	<0.020	0.020	<0.18	<0.20
20...	1048	176	33	6.40	0.00	0.020	0.020	0.050	0.92	0.97
20...	1216	72	34	6.00	0.010	0.010	0.020	0.040	0.76	0.80

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	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)
AUG										
12...	0.76	3.4	0.040	0.010	500	<1	<1	6	<1	<1
12...	0.29	1.3	0.070	0.040	520	<1	<1	5	<1	1
12...	0.41	1.8	0.050	0.040	550	<1	1	1	<1	<1
13...	<0.22	<1.0	0.040	0.010	240	<1	<1	3	1	<1
20...	0.99	4.4	0.060	0.050	--	<1	--	--	--	--
20...	0.82	3.6	0.040	0.030	770	<1	<1	5	<1	4

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)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
AUG									
12...	700	<5	160	0.10	4	<1	<10	--	--
12...	440	<5	30	0.20	3	<1	10	12	0.00
12...	500	<5	30	0.20	5	<1	<10	16	0.00
13...	160	<5	10	0.10	3	<1	<10	3	0.00
20...	--	--	--	0.30	--	<1	--	19	9.0
20...	710	<5	80	0.70	3	<1	--	46	8.9

CAPE FEAR RIVER BASIN

0209782150 NEW HOPE RIVER TRIBUTARY AT SECONDARY ROAD 1716 NEAR FARRINGTON, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	PRES-SURE (MM OF HG)	HARD-NESS (MG/L AS CACO3)	NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)
JAN											
19...	0900	35	48	6.70	13.0	--	--	--	--	--	--
19...	1010	88	46	6.10	13.0	--	--	--	--	--	--
20...	1015	6.2	58	7.50	5.0	--	--	--	--	--	--
FEB											
28...	1730	68	30	6.05	5.5	60	9.0	754	10	6	2.0
MAR											
01...	0920	47	30	6.20	7.5	65	8.5	--	10	5	2.1
APR											
15...	1230	39	56	7.40	13.5	120	--	--	19	5	4.0
15...	1815	40	43	7.00	13.0	160	--	--	15	5	3.2
16...	1015	28	39	6.40	12.0	130	27	--	14	4	3.1
28...	1015	0.68	--	--	--	--	--	--	--	--	--
JUL											
27...	1015	0.0	--	--	--	--	--	--	--	--	--

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	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)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
JAN											
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
FEB											
28...	1.2	1.7	26	0.2	0.40	13	0.90	<0.10	6.9	31	28
MAR											
01...	1.1	1.6	25	0.2	0.40	11	1.6	<0.10	7.2	40	28
APR											
15...	2.1	3.5	28	0.4	0.40	13	2.5	<0.10	13	57	47
15...	1.6	2.6	27	0.3	0.40	12	2.0	<0.10	10	58	38
16...	1.6	2.6	28	0.3	0.30	12	2.1	<0.10	11	47	39
28...	--	--	--	--	--	--	--	--	--	--	--
JUL											
27...	--	--	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)
JAN											
19...	--	--	<0.090	<0.010	<0.100	0.010	0.39	0.40	<0.50	<2.2	0.030
19...	--	--	<0.090	0.010	<0.100	0.020	1.3	1.3	<1.4	<6.2	0.110
20...	--	--	<0.090	<0.010	<0.100	<0.010	<0.29	0.30	<0.40	<1.8	0.030
FEB											
28...	0.04	5.7	<0.090	<0.010	<0.100	<0.010	<0.79	0.80	<0.90	<4.0	0.010
MAR											
01...	0.05	5.1	<0.090	<0.010	<0.100	0.020	0.58	0.60	<0.70	<3.1	<0.010
APR											
15...	0.08	6.0	<0.080	0.020	<0.100	0.080	0.62	0.70	<0.80	<3.5	0.070
15...	0.08	6.3	<0.080	0.020	<0.100	0.050	0.55	0.60	<0.70	<3.1	0.060
16...	0.06	3.6	<0.090	0.010	<0.100	0.040	0.56	0.60	<0.70	<3.1	0.020
28...	--	--	--	--	--	--	--	--	--	--	--
JUL											
27...	--	--	--	--	--	--	--	--	--	--	--

CAPE FEAR RIVER BASIN

0209782150 NEW HOPE RIVER TRIBUTARY AT SECONDARY ROAD 1716 NEAR FARRINGTON, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	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)
JAN										
19...	0.010	650	<1	<1	<1	<1	4	560	<5	20
19...	0.010	1900	<1	<1	6	3	6	--	<5	--
20...	0.010	640	<1	<1	5	<1	2	520	<5	<10
FEB										
28...	<0.010	480	<1	<1	<1	1	3	530	10	60
MAR										
01...	<0.010	460	<1	<1	<1	1	5	460	<5	20
APR										
15...	0.050	1100	<1	<1	4	<1	5	1600	<5	70
15...	0.010	840	<1	<1	5	<1	3	1100	<5	30
16...	0.010	610	<1	<1	6	<1	3	530	<5	20
28...	--	--	--	--	--	--	--	--	--	--
JUL										
27...	--	--	--	--	--	--	--	--	--	--

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
JAN										
19...	<0.10	5	<1	<10	--	--	--	--	--	--
19...	0.10	4	<1	<10	--	--	--	--	--	--
20...	<0.10	1	<1	<10	--	--	--	--	--	--
FEB										
28...	<0.10	1	<1	<10	--	--	--	--	--	--
MAR										
01...	<0.10	2	<1	<10	--	--	--	--	--	--
APR										
15...	0.20	--	<1	<10	--	--	--	--	--	--
15...	0.10	--	<1	<10	--	--	--	--	--	--
16...	0.50	6	<1	<10	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
JUL										
27...	--	--	--	--	<1	<1.0	<0.1	<1.0	<0.1	<0.1

CAPE FEAR RIVER BASIN

0209782150 NEW HOPE RIVER TRIBUTARY AT SECONDARY ROAD 1716 NEAR FARRINGTON, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
JAN										
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
FEB										
28...	--	--	--	--	--	--	--	--	--	--
MAR										
01...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
JUL										
27...	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
JAN										
19...	--	--	--	--	--	--	--	--	11	1.0
19...	--	--	--	--	--	--	--	--	151	36
20...	--	--	--	--	--	--	--	--	1	0.02
FEB										
28...	--	--	--	--	--	--	--	--	--	--
MAR										
01...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	--	--	--	--	47	4.9
15...	--	--	--	--	--	--	--	--	19	2.1
16...	--	--	--	--	--	--	--	--	5	0.38
28...	--	--	--	--	--	--	--	--	6	0.01
JUL										
27...	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1	--	--

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.

WATER-DISCHARGE RECORDS

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.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. 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). Satellite data transmitter at station.

AVERAGE DISCHARGE.--22 years, 1,630 ft^3/s, adjusted for storage, 13.11 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,800 ft^3/s Oct. 25, 1971, gage height, 22.41 ft at former site; no flow for part of Aug. 1, 1980, result of gate closure by the 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,600 ft^3/s Mar. 6, gage height, 14.78 ft; minimum daily discharge, 184 ft^3/s Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	612	620	212	209	2720	e240	1110	3530	440	468	547	640
2	610	620	212	e210	3190	e260	1640	2620	438	467	546	631
3	609	620	212	e210	4750	e3000	e3450	1660	432	470	546	630
4	628	620	213	e210	6820	6030	e2400	1010	e480	469	554	624
5	625	620	224	e210	5850	13200	e2000	459	494	463	564	611
6	620	582	230	817	3640	16100	e2000	481	493	478	549	610
7	620	560	223	1360	3030	16400	2030	502	497	462	547	610
8	655	577	221	1360	3030	16100	e2030	494	502	463	542	379
9	660	582	221	1360	1800	15800	e2200	494	503	488	522	259
10	702	522	221	1080	594	15000	e1400	488	495	489	519	269
11	708	400	221	950	262	11100	e900	486	485	490	442	246
12	700	310	218	950	262	8780	e900	481	486	482	400	326
13	722	337	230	675	263	8570	e900	478	486	496	440	314
14	741	392	257	489	268	8470	821	475	486	531	464	218
15	711	392	242	486	268	8350	e650	470	484	526	470	184
16	681	392	235	486	268	8240	e250	469	478	465	470	e300
17	710	414	230	486	268	7110	e250	462	482	438	470	e420
18	756	398	223	779	731	e4000	e1200	462	487	453	425	e440
19	785	355	209	e900	1340	e1800	e5500	455	493	428	459	e480
20	753	355	208	e1600	1920	e1800	e12500	1390	517	483	470	e480
21	e700	352	208	4060	2850	e1900	e15000	2330	518	513	470	e480
22	630	348	208	e3000	2860	e1900	15400	1790	500	481	470	e480
23	630	348	203	e2800	e4000	e2200	16000	1770	483	516	469	e480
24	630	348	e210	8670	4660	e1900	14200	1750	478	547	575	e510
25	631	348	e210	11000	6440	e1100	11000	918	478	602	740	e570
26	630	261	e210	12300	8800	1140	10200	454	478	606	702	570
27	630	212	e210	10800	7540	1140	7860	453	474	597	660	582
28	630	212	e210	7550	e3000	1110	6870	446	470	585	660	583
29	630	212	219	5050	---	1070	6770	426	462	564	660	591
30	630	212	217	3870	---	1160	6210	409	462	555	645	607
31	620	---	217	2300	---	937	---	407	---	558	640	---
TOTAL	20599	12521	6784	86227	81424	185907	153641	28519	14461	15633	16637	14124
MEAN	664	417	219	2782	2908	5997	5121	920	482	504	537	471
MAX	785	620	257	12300	8800	16400	16000	3530	518	606	740	640
MIN	609	212	203	209	262	240	250	407	432	428	400	184
(†)	-481	-81	-1198	+403	+826	-746	0	-47	-233	-88	-453	+337

CAL YR 1986 TOTAL 254154 MEAN 696 MAX 8170 MIN 203 MEAN‡ 677 CFSM‡ 0.40 IN‡ 5.43
WTR YR 1987 TOTAL 636477 MEAN 1744 MAX 16400 MIN 184 MEAN‡ 1791 CFSM‡ 1.06 IN‡ 14.39

e Estimated
† Change in contents, equivalent in cubic feet per second, in B. Everett Jordan Reservoir; furnished by U. S. Army Corps of Engineers.
‡ Adjusted for change in contents.

CAPE FEAR RIVER BASIN

02098198 HAW RIVER BELOW B. EVERETT JORDAN DAM NEAR MONCURE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/23	0925	WATER	0.1	4.12	630	205	6.90	16.0		8.7	10K
86/11/10	1000	WATER	0.1	4.07	582	138	6.80	16.0	7.9	8.5	
86/12/03	1030	WATER	0.1	3.54	213	135		12.0	11.0	10.2	
87/01/22	1000	WATER	0.1	.00	3000	65	6.50	6.0	100.0	10.4	
87/02/26	0930	WATER	0.1	10.91	8856	82		6.0	23.0	12.0	
87/03/25	1200	WATER	0.1	.00	1100						
87/03/31	1200	WATER	0.1			82		10.0	19.0	11.4	
87/04/08	1000	WATER	0.1	5.21	2032	98	6.50	12.0	17.0	11.0	
87/05/18	1000	WATER	0.1	3.95	462	95		19.0	18.0	10.5	
87/07/07	1615	WATER	0.1	3.92	462	200		29.0	40.0	6.2	
87/08/27	1410	WATER	0.1	4.11	660						
87/09/24	1315	WATER	0.1	.00	510	159	7.30	25.0	14.0	7.1	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/23	0925	WATER	0.1	55	29	200					
86/11/10	1000	WATER	0.1	42							
87/01/22	1000	WATER	0.1	15							
87/02/26	0930	WATER	0.1		21	120					
87/04/08	1000	WATER	0.1	22							
87/05/18	1000	WATER	0.1		22	93					
87/09/24	1315	WATER	0.1	31			.30	.120	.800	.180	.090

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/02/26	0930	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	19
87/05/18	1000	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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 fair except those for estimated daily discharges, which are poor. Slight diurnal fluctuation at low flow during growing season.

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

AVERAGE DISCHARGE.--59 years, 16.6 ft^3/s, 15.23 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,300 ft^3/s Sept. 24, 1947, 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, 0.6 ft^3/s Jan. 17, 1981 (result of temporary regulation); minimum unregulated, 1.0 ft^3/s Aug. 8, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 1	Unknown	Unknown	Unknown	Apr. 16	0100	*2,980	*8.18

Minimum discharge, 2.0 ft^3/s Oct. 6, 7; minimum daily, 2.2 ft^3/s Oct. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	3.7	5.0	61	44	e500	16	11	5.9	3.9	e2.6	3.2
2	2.9	4.5	25	42	71	e220	13	9.5	6.6	4.8	e2.5	2.7
3	2.7	3.6	20	16	62	e50	21	8.7	6.2	18	e2.7	2.6
4	2.5	3.4	9.1	11	34	19	25	8.4	7.0	46	e2.5	2.5
5	2.3	3.4	7.4	9.3	20	15	15	8.2	12	191	e2.4	10
6	2.2	3.6	6.8	8.4	e18	13	13	7.7	6.6	13	e4.0	44
7	2.2	35	6.3	8.3	e15	11	11	7.4	5.6	9.2	e12	124
8	2.3	14	8.0	7.3	e13	12	11	7.0	5.4	9.2	e27	149
9	2.6	6.2	8.9	6.6	e12	100	9.9	6.7	5.0	6.5	e8.2	14
10	2.8	5.2	16	6.5	e10	96	8.7	6.5	4.5	5.2	e4.8	7.7
11	2.5	32	83	6.2	e9.0	23	8.3	6.3	4.1	4.8	e4.3	8.3
12	2.6	20	26	5.8	e8.4	18	10	6.2	4.0	5.7	e4.0	14
13	5.9	8.1	13	5.5	e7.8	15	10	6.1	4.6	15	e3.9	9.8
14	24	6.1	9.6	5.5	e7.5	12	8.4	6.5	4.5	7.4	e3.5	6.2
15	5.9	16	8.6	5.6	e7.5	11	e455	5.4	4.2	5.2	e3.7	5.4
16	4.3	9.7	7.8	6.4	e7.0	11	e848	5.5	4.0	4.8	e5.5	5.1
17	4.1	7.2	7.0	7.6	e6.8	9.8	66	5.6	6.6	4.1	e3.4	4.6
18	3.7	6.6	7.2	48	e7.5	9.4	45	5.4	16	4.1	e3.3	4.2
19	3.2	6.1	6.2	136	e12	36	25	5.7	5.2	3.9	e3.2	4.0
20	3.1	29	5.7	30	e18	17	18	6.1	4.6	3.6	e3.1	4.0
21	3.0	16	5.4	16	e35	13	15	5.5	4.3	3.4	e3.1	3.8
22	2.9	8.0	5.2	18	e80	11	13	5.4	4.1	3.4	e3.0	3.6
23	2.9	6.8	5.4	18	e170	10	12	5.3	4.8	3.2	e2.9	3.5
24	2.9	6.4	161	16	e70	9.6	173	5.4	6.3	3.2	e2.9	3.5
25	5.8	6.1	39	18	e28	10	192	5.9	5.1	3.1	e3.0	3.5
26	42	10	16	17	e20	10	43	109	6.1	3.6	3.2	3.4
27	7.2	8.9	11	13	e35	10	21	13	5.4	3.1	3.1	3.4
28	5.0	6.3	9.2	12	e150	15	17	8.2	3.5	3.1	2.8	3.4
29	4.5	5.6	8.1	12	---	9.8	14	6.8	2.9	2.9	2.7	3.4
30	4.4	5.2	7.6	45	---	34	12	6.3	3.6	e2.8	2.6	8.4
31	4.1	---	7.0	60	---	35	---	6.0	---	e2.5	4.1	---
TOTAL	169.4	302.7	561.5	678.0	978.5	1365.6	2149.3	316.7	168.7	399.7	140.0	465.2
MEAN	5.46	10.1	18.1	21.9	34.9	44.1	71.6	10.2	5.62	12.9	4.52	15.5
MAX	42	35	161	136	170	500	848	109	16	191	27	149
MIN	2.2	3.4	5.0	5.5	6.8	9.4	8.3	5.3	2.9	2.5	2.4	2.5
CFSM	.37	.68	1.22	1.48	2.36	2.98	4.84	.69	.38	.87	.31	1.05
IN.	.43	.76	1.41	1.70	2.46	3.43	5.40	.80	.42	1.00	.35	1.17

CAL YR 1986 TOTAL 3209.1 MEAN 8.79 MAX 224 MIN 1.7 CFSM .59 IN. 8.07
WTR YR 1987 TOTAL 7695.2 MEAN 21.1 MAX 848 MIN 2.2 CFSM 1.42 IN. 19.3

e Estimated

CAPE FEAR RIVER BASIN

02099000 EAST FORK DEEP RIVER NEAR HIGH POINT, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/30	0915	WATER	0.1	.38	5	126	7.00	12.0	8.0	9.8	620
86/11/25	0930	WATER	0.1	.44	6						
86/11/25	0930	WATER				124	7.20	13.0		9.9	
86/12/09	1230	WATER	0.1	.55	10	129	7.40	12.0		10.7	
87/01/01	0915	WATER	0.1			121	6.70	4.0	6.0	12.4	
87/01/14	0915	WATER	0.1	.44	5						
87/02/12	0850	WATER	0.1	.97	8	123	7.10	6.0		11.8	
87/03/03	1340	WATER	0.1			87	6.90	13.0		11.3	
87/03/03	1540	WATER	0.1	.90	28						
87/04/06	0935	WATER	0.1	.64	13	109	7.10	7.0	9.3	12.0	
87/05/06	0930	WATER	0.1	.54	8	114	7.10	13.0		9.6	
87/06/18	0945	WATER	0.1	.56	8	87	7.00	24.0		7.0	
87/07/23	1515	WATER	0.1	.00	3	142	8.07	26.0	4.2	8.8	
87/08/13	1015	WATER	0.1	.00	4	127	7.15	22.0		7.6	
87/09/23	0930	WATER	0.1	.40	4	128	7.08	17.0		8.1	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/30	0915	WATER	0.1	45	4	87	.17	.010	.400	.080	.050
86/11/25	0930	WATER		38	10	130					
86/12/09	1230	WATER	0.1	48	6	100					
87/01/01	0915	WATER	0.1	47	22	62	.43	.020	.200	.330	.290
87/02/12	0850	WATER	0.1	48	4	100					
87/03/03	1340	WATER	0.1	20	11	110					
87/04/06	0935	WATER	0.1	40	18	83	.21	.020	.300	.050	.010
87/05/06	0930	WATER	0.1	48	5	92					
87/06/18	0945	WATER	0.1	27	140	270					
87/07/23	1515	WATER	0.1	51	2	100	.40	.040	.200	.070	.060
87/08/13	1015	WATER	0.1	45	20	150					
87/09/23	0930	WATER	0.1	48	10	140					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/30	0915	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/01/01	0915	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/04/06	0935	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/23	1515	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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 occasionally active 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.

WATER-DISCHARGE RECORDS

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 daily 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 20.9 ft^3/s for municipal water supply during water year; 18.0 ft^3/s was discharged as treated effluent into Richland Creek above station and 6.2 ft^3/s into Rich Fork Creek in Pee Dee River basin.

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

AVERAGE DISCHARGE.--59 years, 125 ft^3/s, 13.58 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft^3/s Sept. 25, 1947, 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, 0.5 ft^3/s Nov. 28, 1931, gage height, 1.41 ft; minimum daily, 1.2 ft^3/s Nov. 12, 1933.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 1	1030	7,290	22.63	Apr. 16	1100	*8,190	*23.71
Apr. 15	1630	2,710	13.20	July 4	0230	2,740	13.29

Minimum discharge, 4.9 ft^3/s Nov. 28, gage height, 1.64 ft; minimum daily 9.6 ft^3/s Oct. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	23	29	193	376	6130	128	105	44	18	37	23
2	18	25	46	222	460	1660	112	99	126	24	20	18
3	16	14	89	159	545	421	133	93	50	102	22	19
4	20	19	46	119	390	249	248	93	52	873	20	18
5	13	21	34	101	240	182	153	92	123	374	19	26
6	24	18	26	94	180	151	130	88	60	191	22	114
7	17	40	35	92	150	133	117	85	43	84	89	402
8	18	67	24	88	130	126	109	95	38	53	144	923
9	11	29	65	86	121	194	104	80	27	42	79	175
10	25	20	96	85	108	805	100	76	31	38	44	92
11	16	24	215	85	103	297	96	73	28	25	31	185
12	16	99	223	80	102	196	95	59	25	31	25	84
13	15	52	141	79	95	159	116	57	24	37	24	86
14	50	35	88	78	93	134	96	40	30	38	20	55
15	36	46	79	77	91	119	1250	37	20	22	23	39
16	24	59	89	76	92	115	6560	38	30	23	28	33
17	18	41	85	83	98	110	1290	27	33	24	20	30
18	9.6	39	86	211	102	107	474	27	29	25	21	23
19	22	18	82	802	140	234	309	35	25	22	20	27
20	24	65	78	355	159	166	225	110	28	20	20	20
21	16	82	76	230	165	138	174	44	23	26	20	17
22	14	43	75	215	200	121	143	38	29	17	19	22
23	19	36	76	237	486	114	123	29	30	18	17	21
24	21	25	556	181	336	109	576	23	39	23	16	21
25	20	25	311	182	206	108	1140	37	26	18	17	19
26	90	26	194	190	151	109	578	235	29	17	19	19
27	38	30	130	150	175	104	259	71	37	25	20	18
28	19	27	103	130	1820	124	180	55	24	15	17	18
29	22	20	96	124	---	103	137	47	27	21	17	21
30	20	29	91	256	---	162	117	41	20	21	16	56
31	19	---	87	412	---	183	---	29	---	15	24	---
TOTAL	712.6	1097	3451	5472	7314	13063	15272	2058	1150	2282	930	2624
MEAN	23.0	36.6	111	177	261	421	509	66.4	38.3	73.6	30.0	87.5
MAX	90	99	556	802	1820	6130	6560	235	126	873	144	923
MIN	9.6	14	24	76	91	103	95	23	20	15	16	17

CAL YR 1986 TOTAL 16278.5 MEAN 44.6 MAX 556 MIN 7.3 CFSM .36 IN. 4.84
WTR YR 1987 TOTAL 55425.6 MEAN 152 MAX 6560 MIN 9.6 CFSM 1.21 IN. 16.5

CAPE FEAR RIVER BASIN

02099500 DEEP RIVER NEAR RANDLEMAN, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/30	1035	WATER	0.1	1.79	10	371	7.50	17.0	8.9	8.5	50
86/11/25	1040	WATER	0.1	2.28	43	440	7.10	13.0		8.7	
86/12/09	1115	WATER	0.1	2.55	72	498	7.40	11.0		10.6	
87/01/14	1100	WATER	0.1	2.56	73	258	7.50	6.0	7.7	11.9	
87/02/12	1000	WATER	0.1	2.76	100	277	7.50	7.0		13.0	
87/03/03	1440	WATER	0.1	4.19	377	117	6.80	10.0		12.4	
87/04/06	1100	WATER	0.1			130	6.90	10.0	19.0	11.1	
87/04/06	1110	WATER	0.1	2.93	126						
87/05/06	1045	WATER	0.1	2.65	85	211	7.10	18.0		9.4	
87/06/18	1120	WATER	0.1	2.20	36	450	7.00	25.0		6.0	
87/07/23	1220	WATER	0.1	2.34	49	490	7.40	27.0	6.2	7.0	
87/08/13	1200	WATER	0.1	2.00	21	259	7.56	28.0		7.8	
87/09/23	1100	WATER	0.1	1.98	20	636	7.28	22.0		7.6	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/30	1035	WATER	0.1	65	4	230	4.00	.020	.700	1.900	1.700
86/11/25	1040	WATER	0.1	62	12	340	4.60	.110	.600	1.500	1.400
86/12/09	1115	WATER	0.1	127	2	350	5.40	.120	.900	1.600	1.200
87/01/14	1100	WATER	0.1	57	28	130	2.10	.130	.500	.590	
87/02/12	1000	WATER	0.1	64	6	180	.85	.840	1.000	.670	.600
87/03/03	1440	WATER	0.1	21	24	150	.39	.240	.500	.190	.120
87/04/06	1100	WATER	0.1	37	30	120	1.40	.050	.400	.520	.440
87/05/06	1045	WATER	0.1	45	8	150	1.10	1.300	1.900	1.100	1.000
87/06/18	1120	WATER	0.1	47	10	330	7.50	.100	2.600	3.100	3.100
87/07/23	1220	WATER	0.1	49	47	400	8.80	.060	1.300	3.700	3.500
87/08/13	1200	WATER	0.1	42	11	210	5.10	.020	1.000	1.900	1.700
87/09/23	1100	WATER	0.1	47	8	400	8.00	.100	1.300	3.300	3.000

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/30	1035	WATER	0.1	10K	10K	25K	10K	50K	.2K	60	22
87/01/14	1100	WATER	0.1		10K	25K	10K	50K		50K	30
87/04/06	1100	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/23	1220	WATER	0.1	10K	10K	25K	22	50	.2K	50	37

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.

WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Records good. 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 6.8 ft^3/s for water supply from Pee Dee River basin and discharged an average of 7.0 ft^3/s of treated effluent into the Deep River above the station.

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

AVERAGE DISCHARGE.--64 years (1923-87), 354 ft^3/s, 13.77 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,000 ft^3/s Sept. 18, 1945, gage height, 34.04 ft, from floodmark, from rating curve extended above 18,000 ft^3/s on basis of slope-area measurement of peak flow; minimum, 0.4 ft^3/s May 27, Nov. 28, 29, 1941; minimum daily, 0.7 ft^3/s Nov. 29, 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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 19	1430	7,510	12.62	Apr. 16	0630	*18,100	*23.62
Mar. 1	0930	16,800	22.54				

Minimum discharge, 21 ft^3/s July 30; minimum daily, 23 ft^3/s Oct. 9, July 24, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	58	141	789	1050	15100	512	257	122	64	26	27
2	26	51	189	1490	973	5400	370	196	146	61	30	28
3	35	43	412	495	1240	1190	358	219	113	63	35	30
4	36	39	318	331	918	691	815	257	108	1350	37	31
5	32	51	128	257	557	510	542	256	170	535	36	32
6	27	50	121	231	402	423	383	233	198	470	35	34
7	25	45	126	202	347	389	328	138	122	214	39	562
8	24	42	141	184	314	331	338	164	94	99	54	2260
9	23	47	120	106	245	437	295	243	95	107	143	486
10	25	107	176	140	248	1580	251	152	86	111	107	355
11	32	105	654	249	123	770	180	159	67	97	66	919
12	32	148	843	107	212	489	229	158	68	81	50	258
13	32	157	400	143	239	401	277	150	65	72	48	198
14	43	129	309	92	162	352	293	156	57	66	56	160
15	41	110	107	103	129	337	2070	150	54	71	45	95
16	56	163	109	128	190	246	14800	154	61	70	43	90
17	64	162	169	191	199	249	5420	100	65	66	39	82
18	46	130	204	430	224	269	1630	79	84	62	46	68
19	37	128	111	4480	254	557	1010	77	212	53	48	71
20	32	147	113	1920	442	586	653	180	118	43	44	65
21	29	256	94	700	522	400	506	255	131	36	43	54
22	27	279	133	674	589	354	399	151	81	35	38	51
23	35	119	161	788	1870	248	351	90	81	30	34	51
24	36	123	1000	536	980	213	526	74	70	23	34	46
25	33	82	1520	519	551	262	2190	74	76	24	33	41
26	36	51	516	657	393	274	1350	173	92	24	32	41
27	45	363	344	421	535	286	608	360	101	26	30	42
28	89	187	250	345	5890	297	421	221	102	28	29	41
29	95	124	128	321	---	278	352	104	68	27	28	37
30	99	122	218	506	---	340	337	77	63	25	26	42
31	53	---	196	1500	---	722	---	70	---	23	27	---
TOTAL	1273	3618	9451	19035	19798	33981	37794	5127	2970	4056	1381	6297
MEAN	41.1	121	305	614	707	1096	1260	165	99.0	131	44.5	210
MAX	99	363	1520	4480	5890	15100	14800	360	212	1350	143	2260
MIN	23	39	94	92	123	213	180	70	54	23	26	27
CFSM	.12	.35	.87	1.76	2.03	3.14	3.61	.47	.28	.37	.13	.60
IN.	.14	.39	1.01	2.03	2.11	3.62	4.03	.55	.32	.43	.15	.67

CAL YR 1986 TOTAL 50032 MEAN 137 MAX 1900 MIN 19 CFSM .39 IN. 5.33
WTR YR 1987 TOTAL 144781 MEAN 397 MAX 15100 MIN 23 CFSM 1.14 IN. 15.4

CAPE FEAR RIVER BASIN

02100500 DEEP RIVER AT RAMSEUR, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/30	1200	WATER	0.1	1.56	219	748	7.70	17.0	8.9	8.5	250
86/11/25	1230	WATER	0.1	1.09	93	301	7.30	11.0		10.1	
86/12/09	0955	WATER	0.1	1.22	106	218	6.90	10.0		11.3	
87/01/14	1230	WATER	0.1	1.52	185	250	7.60	6.0	20.0	12.4	
87/02/12	1400	WATER	0.1	1.63	216	174	8.00	8.0		13.1	
87/03/03	1340	WATER	0.1	3.27	1063	79	7.40	9.0		13.4	
87/04/06	1300	WATER	0.1	2.03	386	141	7.10	11.0	22.0	12.0	
87/05/06	1205	WATER	0.1	1.63	243	190	6.80	19.0		9.5	
87/06/18	1335	WATER	0.1	1.05	84	317	7.10	27.0		6.9	
87/07/23	1045	WATER	0.1	.80	33	402	7.26	30.0	3.1	6.8	
87/08/13	1410	WATER	0.1	.92	48	658	7.35	28.0		6.1	
87/09/23	1250	WATER	0.1	.87	51	224	6.87	24.0		5.8	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/30	1200	WATER	0.1	64	14	440	5.50	.160	.900	2.200	2.100
86/11/25	1230	WATER	0.1	49	8	220	1.90	.620	1.000	.810	.760
86/12/09	0955	WATER	0.1	9	4	160	1.90	.090	.400	.400	.340
87/01/14	1230	WATER	0.1	44	140	170	1.90	.070	.300	.430	.370
87/02/12	1400	WATER	0.1	35	12	140	1.10	.400	.600	.330	.240
87/03/03	1340	WATER	0.1	16	35	160	.48	.120	.400	.130	.050
87/04/06	1300	WATER	0.1	36	25	110	.92	.030	.400	.290	.200
87/05/06	1205	WATER	0.1	35	7	130	1.50	.020	.400	.420	.320
87/06/18	1335	WATER	0.1	43	4	210	1.90	.050	.600	.540	.460
87/07/23	1045	WATER	0.1	46	6	250	2.40	.060	.700	.620	.600
87/08/13	1410	WATER	0.1	56	3	410	5.10	.130	1.000	2.100	2.000
87/09/23	1250	WATER	0.1	35	16	270	1.40	.210	.700	.470	.330

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/30	1200	WATER	0.1	10K	10K	25K	11	50K	.2K	50K	33
87/01/14	1230	WATER	0.1	10K	10K	25K	11	50K	.2K	50K	26
87/04/06	1300	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/23	1045	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

CAPE FEAR RIVER BASIN

0210108450 SUCK CREEK TRIBUTARY NEAR ZION GROVE, NC

LOCATION.--Lat 35°20'17", long 79°33'57", Moore County, Hydrologic Unit 03030003, on left bank 300 ft from mouth, 0.8 mi south of SR 1261, and 2.0 mi east of Zion Grove.

DRAINAGE AREA.--0.67 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional measurements water years 1983-85. April 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 400 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good.

EXTREMES FOR CURRENT PERIOD.--April to September 1986: Peak discharges greater than base discharge of 12 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug. 18	2045	12	1.00	Aug.20	0945	*20	*1.20

No flow several days in June, July, and August.

WATER YEAR 1987

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 19	1015	12	1.01	Feb. 28	1345	*21	*1.23
Jan. 22	1000	17	1.14				

No flow several days in July, August, and September.

DISCHARGE, IN CUBIC FEET PER SECOND, APRIL 1986 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	.33	.03	.05	.01	.00	.21
2	---	---	---	---	---	---	.31	.03	.03	.02	.00	.24
3	---	---	---	---	---	---	.28	.03	.02	.02	.00	.25
4	---	---	---	---	---	---	.27	.03	.02	.02	.01	.20
5	---	---	---	---	---	---	.24	.03	.01	.02	.01	.29
6	---	---	---	---	---	---	.22	.02	.01	.02	.01	.22
7	---	---	---	---	---	---	.21	.02	.01	.02	.01	.13
8	---	---	---	---	---	---	.22	.02	.01	.02	.01	.09
9	---	---	---	---	---	---	.20	.03	.01	.02	.01	.25
10	---	---	---	---	---	---	.18	.02	.01	.02	.01	.16
11	---	---	---	---	---	---	.17	.02	.01	.02	.01	.09
12	---	---	---	---	---	---	.13	.02	.01	.02	.10	.08
13	---	---	---	---	---	---	.13	.03	.01	.02	.28	.06
14	---	---	---	---	---	---	.12	.04	.01	.02	.06	.05
15	---	---	---	---	---	---	.11	.05	.01	.01	.04	.04
16	---	---	---	---	---	---	.11	.05	.01	.01	.02	.04
17	---	---	---	---	---	---	.10	.02	.02	.01	.02	.04
18	---	---	---	---	---	---	.10	.02	.01	.01	1.5	.03
19	---	---	---	---	---	---	.08	1.0	.01	.01	3.4	.03
20	---	---	---	---	---	---	.08	.40	.00	.01	6.7	.03
21	---	---	---	---	---	---	.14	.07	.00	.01	3.1	.02
22	---	---	---	---	---	---	.14	.04	.00	.01	1.6	.02
23	---	---	---	---	---	---	.08	.03	.00	.01	1.2	.02
24	---	---	---	---	---	---	.07	.03	.00	.00	.84	.02
25	---	---	---	---	---	---	.06	.05	.01	.00	.62	.01
26	---	---	---	---	---	---	.06	.03	.01	.00	.50	.01
27	---	---	---	---	---	---	.05	.04	.01	.01	.43	.01
28	---	---	---	---	---	---	.05	.04	.01	.00	.56	.01
29	---	---	---	---	---	---	.04	.03	.01	.00	.46	.01
30	---	---	---	---	---	---	.03	.02	.01	.00	.30	.01
31	---	---	---	---	---	---	---	.31	---	.00	.26	---
TOTAL	---	---	---	---	---	---	4.31	2.60	.34	.37	22.07	2.67
MEAN	---	---	---	---	---	---	.14	.08	.01	.01	.71	.09
MAX	---	---	---	---	---	---	.33	1.0	.05	.02	6.7	.29
MIN	---	---	---	---	---	---	.03	.02	.00	.00	.00	.01
CFSM	---	---	---	---	---	---	.21	.13	.01	.01	1.06	.13
IN.	---	---	---	---	---	---	.24	.14	.01	.01	1.23	.15

CAPE FEAR RIVER BASIN

0210108450 SUCK CREEK TRIBUTARY NEAR ZION GROVE, NC--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.03	.36	1.6	1.4	12	1.2	.48	.04	.05	.00	.01
2	.01	.04	1.7	1.0	1.4	5.9	1.0	.38	.04	.09	.00	.01
3	.01	.04	1.6	.79	1.2	4.7	1.1	.30	.03	.09	.00	.00
4	.01	.04	.57	.67	1.1	3.9	.95	.29	.04	.04	.00	.01
5	.01	.04	.39	.63	1.0	3.4	.78	.27	.09	.04	.00	.01
6	.01	.05	.35	.55	.93	3.1	.72	.23	.04	.02	.01	.01
7	.01	.05	.29	.55	1.1	2.8	.66	.20	.03	.02	.01	.01
8	.01	.05	.28	.48	.92	3.0	.61	.18	.02	.01	.01	.02
9	.01	.05	.31	.46	.86	2.6	.55	.14	.02	.01	.01	.01
10	.01	.05	.57	.71	.78	1.9	.52	.12	.02	.01	.01	.01
11	.01	.05	.81	.55	.78	1.8	.46	.10	.02	.01	.01	.01
12	.01	.39	1.2	.46	.77	1.4	.35	.09	.01	.51	.01	.04
13	.01	.10	.92	.37	.66	1.3	.31	.24	.02	.33	.01	.04
14	.01	.06	.58	.35	.66	1.2	.28	.28	.10	.10	.01	.01
15	.01	.27	.54	.35	.60	1.1	1.2	.18	.04	.05	.02	.01
16	.01	.12	.46	.36	.74	1.0	1.2	.12	.03	.04	.01	.01
17	.01	.08	.46	.41	.64	.98	.95	.09	.02	.03	.01	.01
18	.01	.08	.42	1.6	.70	.90	1.0	.07	.03	.02	.01	.01
19	.01	.06	.34	6.1	.99	2.1	.85	.32	.05	.02	.01	.00
20	.01	.19	.28	3.3	1.3	1.0	.78	1.8	.04	.01	.01	.01
21	.01	.17	.25	2.3	1.8	.85	.74	.28	.02	.01	.01	.01
22	.01	.09	.22	8.7	2.5	.78	.70	.18	.02	.01	.01	.01
23	.01	.07	.23	4.9	3.4	.78	.63	.13	.19	.01	.01	.01
24	.01	.12	3.8	3.6	2.0	.72	.76	.09	.77	.01	.01	.01
25	.01	.43	1.6	3.5	1.6	.72	.99	.07	.31	.01	.00	.01
26	.02	.19	1.0	3.2	1.4	.66	.68	.08	.20	.01	.00	.01
27	.02	.12	.83	2.6	4.9	.89	.54	.07	.08	.01	.00	.01
28	.02	.09	.76	2.2	12	1.1	.51	.10	.05	.01	.00	.01
29	.02	.08	.66	1.8	---	.66	.44	.09	.03	.01	.00	.01
30	.02	.11	.64	1.8	---	2.1	.47	.06	.03	.00	.01	.01
31	.02	---	.55	1.5	---	1.7	---	.05	---	.00	.01	---
TOTAL	.37	3.31	22.97	57.39	48.13	67.04	21.93	7.08	2.43	1.59	.22	.35
MEAN	.01	.11	.74	1.85	1.72	2.16	.73	.23	.08	.05	.01	.01
MAX	.02	.43	3.8	8.7	12	12	1.2	1.8	.77	.51	.02	.04
MIN	.01	.03	.22	.35	.60	.66	.28	.05	.01	.00	.00	.00
CFSM	.01	.16	1.11	2.76	2.57	3.23	1.09	.34	.12	.08	.01	.01
IN.	.01	.18	1.28	3.19	2.67	3.72	1.22	.39	.13	.09	.01	.01

CAL YR 1986 TOTAL 59.01 MEAN .21 MAX 6.7 MIN .00 CFSM .32 IN. 3.28
WTR YR 1987 TOTAL 232.81 MEAN .64 MAX 12 MIN .00 CFSM .95 IN. 12.9

CAPE FEAR RIVER BASIN

0210108450 SUCK CREEK TRIBUTARY NEAR ZION GROVE, NC--Continued

WATER-QUALITY RECORDS

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

REMARKS.--Station operated as partial-record site in the National Acid Precipitation Assessment Program for defining effects of atmospheric deposition on surface-water chemistry (station 0213228795), Sept. 1983 to March 1986. In April 1986, station reactivated as part of district's Natural Quality Network for determining the quality of streams relatively unaffected by man. Samples collected from bank as close to the main flow of the stream as possible.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
NOV										
19...	1100	0.17	17	6.10	16.5	4	2	0.70	0.60	1.5
JAN										
13...	1100	0.34	17	6.10	5.5	4	2	0.70	0.50	1.4

DATE	PERCENT SODIUM	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, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
NOV									
19...	38	0.3	0.80	1.6	2.4	0.04	9.5	19	0.02
JAN									
13...	41	0.3	0.50	2.6	2.1	0.03	7.7	17	0.02

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV									
19...	0.01	0.010	0.036	0.05	0.005	0.02	50	40	31
JAN									
13...	0.02	<0.010	0.016	0.02	0.001	0.00	30	16	13

CAPE FEAR RIVER BASIN

0210108450 SUCK CREEK TRIBUTARY NEAR ZION GROVE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)
JAN											
08...	1545	0.48	--	--	--	--	--	--	--	--	--
19...	1545	6.8	23	5.20	9.0	--	--	740	11.8	105	--
19...	1645	6.3	--	--	--	--	--	--	--	--	--
22...	1320	11	21	6.00	8.0	--	--	--	--	--	--
FEB											
24...	1330	4.5	--	--	--	--	--	--	--	--	--
28...	1435	20	24	5.40	7.5	28	4.1	749	--	--	4
28...	1520	19	22	5.50	7.5	26	2.8	749	--	--	4
MAR											
01...	1115	11	20	5.17	10.0	23	2.5	741	--	--	4
APR											
15...	1600	1.1	24	6.70	14.0	19	--	--	--	--	4
16...	1315	1.1	28	6.40	15.0	6	1.5	--	--	--	4
JUL											
24...	1200	0.01	--	--	22.0	--	--	--	--	--	--

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	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)
JAN											
08...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
FEB											
24...	--	--	--	--	--	--	--	--	--	--	--
28...	2	0.64	0.70	1.1	30	0.2	0.90	7.8	1.1	<0.10	4.1
28...	2	0.62	0.69	1.0	29	0.2	0.80	7.6	1.0	<0.10	4.1
MAR											
01...	2	0.59	0.63	1.1	32	0.2	0.80	7.2	1.2	<0.10	4.4
APR											
15...	2	0.69	0.66	1.6	39	0.3	0.70	4.7	1.6	<0.10	6.2
16...	1	0.56	0.64	1.5	39	0.3	0.80	4.8	3.8	<0.10	6.4
JUL											
24...	--	--	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	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)
JAN											
08...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	<0.010	<0.100	<0.010	--	0.70	<0.80
19...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	<0.090	<0.010	0.100	0.030	0.27	0.30	0.40
FEB											
24...	--	--	--	--	--	--	--	--	--	--	--
28...	12	18	0.02	0.65	<0.190	<0.010	0.200	<0.010	<0.69	0.70	0.90
28...	19	17	0.03	0.97	<0.090	<0.010	0.100	0.020	0.48	0.50	0.60
MAR											
01...	20	17	0.03	0.59	<0.090	<0.010	0.100	<0.010	<0.99	1.0	1.1
APR											
15...	11	17	0.02	0.03	<0.090	<0.010	<0.100	<0.010	<0.29	0.30	<0.40
16...	20	20	0.03	0.06	<0.090	<0.010	<0.100	<0.010	<1.2	1.2	<1.3
JUL											
24...	--	--	--	--	--	--	--	--	--	--	--

CAPE FEAR RIVER BASIN

0210108450 SUCK CREEK TRIBUTARY NEAR ZION GROVE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	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)
JAN											
08...	--	--	--	--	--	--	--	--	--	--	--
19...	<3.5	0.040	0.010	830	<1	<1	5	2	4	480	<5
19...	--	--	--	--	--	--	--	--	--	--	--
22...	1.8	0.010	<0.010	420	--	<1	<1	5	4	420	<5
FEB											
24...	--	--	--	--	--	--	--	--	--	--	--
28...	4.0	0.010	<0.010	910	<1	<1	<1	3	3	1100	<5
28...	2.7	0.010	0.010	720	<1	<1	<1	3	6	920	6
MAR											
01...	4.9	<0.010	<0.010	270	<1	<1	<1	2	4	160	<5
APR											
15...	<1.8	0.020	<0.010	180	<1	<1	2	7	5	120	<5
16...	<5.8	<0.010	<0.010	120	<1	<1	6	<1	2	--	<5
JUL											
24...	--	--	--	--	--	--	--	--	--	--	--

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
JAN											
08...	--	--	--	--	--	--	--	--	--	--	--
19...	120	0.60	3	<1	<10	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
22...	70	1.0	1	--	<10	--	--	--	--	--	--
FEB											
24...	--	--	--	--	--	--	--	--	--	--	--
28...	110	<0.10	3	<1	<10	--	--	--	--	--	--
28...	10	<0.10	3	<1	<10	--	--	--	--	--	--
MAR											
01...	40	<0.10	3	<1	<10	--	--	--	--	--	--
APR											
15...	20	0.10	--	<1	<10	--	--	--	--	--	--
16...	10	0.40	13	<1	<10	--	--	--	--	--	--
JUL											
24...	--	--	--	--	--	<0.1	<1	<0.10	<1.0	<0.010	<0.1

CAPE FEAR RIVER BASIN

0210108450 SUCK CREEK TRIBUTARY NEAR ZION GROVE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	CHLORDANE, TOTAL (UG/L)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL (UG/L)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN TOTAL (UG/L)
JAN											
08...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
FEB											
24...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
MAR											
01...	--	--	--	--	--	--	--	--	--	--	--
APR											
15...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
JUL											
24...	<0.1	<1.0	<0.010	<0.1	<0.010	<0.1	<0.010	<0.1	<0.01	<0.1	<0.010

DATE	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)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
JAN											
08...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
FEB											
24...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
MAR											
01...	--	--	--	--	--	--	--	--	--	--	--
APR											
15...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
JUL											
24...	<0.1	<0.010	<0.1	<0.010	<0.1	<0.01	<0.1	<0.010	<0.1	<0.010	<0.1

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOTAL (UG/L)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)
JAN											
08...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
FEB											
24...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
MAR											
01...	--	--	--	--	--	--	--	--	--	--	--
APR											
15...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
JUL											
24...	<0.010	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01

DATE	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE TOTAL (UG/L)	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)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
JAN											
08...	--	--	--	--	--	--	--	--	--	1	0.00
19...	--	--	--	--	--	--	--	--	--	8	0.15
19...	--	--	--	--	--	--	--	--	--	5	0.08
22...	--	--	--	--	--	--	--	--	--	20	0.59
FEB											
24...	--	--	--	--	--	--	--	--	--	4	0.05
28...	--	--	--	--	--	--	--	--	--	61	3.3
28...	--	--	--	--	--	--	--	--	--	43	2.2
MAR											
01...	--	--	--	--	--	--	--	--	--	9	0.27
APR											
15...	--	--	--	--	--	--	--	--	--	3	0.01
16...	--	--	--	--	--	--	--	--	--	1	0.00
JUL											
24...	<0.1	<0.01	<0.1	<0.1	<1.00	<1	<10	<0.01	<0.1	--	--

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.

WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Records good. Diurnal fluctuation and some regulation at low flow caused by small powerplants upstream from station. Satellite data transmitter at station.

AVERAGE DISCHARGE.--57 years, 1,458 ft^3/s, 13.81 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 80,300 ft^3/s Sept. 18, 1945, gage height, 17.20 ft; minimum, 5.5 ft^3/s Oct. 10, 1954, gage height, 0.35 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 22	2200	15,900	7.70	Mar. 1	1100	*29,600	*10.25

Minimum discharge, 27 ft^3/s Oct. 8, 9, 21, gage height, 0.72 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	49	303	548	2340	26800	4250	621	245	187	56	58
2	35	70	310	2340	1940	21800	2390	639	151	217	55	53
3	34	150	559	3390	1710	23500	1660	557	271	359	52	48
4	34	82	1160	1710	1940	17200	2060	605	292	247	61	54
5	32	118	910	1110	1690	4470	2720	514	248	714	83	62
6	30	86	652	800	1340	1950	1950	470	231	1110	76	64
7	28	52	281	638	1000	1560	1460	521	325	652	271	66
8	27	46	349	663	1070	1390	1150	513	272	501	441	873
9	27	42	242	623	756	1380	1110	421	249	261	290	2870
10	29	37	310	462	863	1620	894	358	249	177	206	1440
11	29	224	308	475	513	2530	848	471	123	186	175	731
12	31	124	935	466	625	1930	781	334	110	213	179	1150
13	30	72	1960	588	487	1450	637	370	220	349	145	998
14	31	67	1260	535	632	1260	678	451	125	566	138	596
15	30	339	776	352	597	981	1230	910	155	475	111	440
16	28	205	649	360	547	982	6860	370	397	280	89	318
17	28	176	345	333	617	921	12300	506	158	171	199	199
18	31	386	405	697	756	769	12600	393	178	125	209	168
19	31	146	321	7120	792	1040	4710	339	174	151	73	139
20	29	298	403	12300	1170	2550	2540	1760	260	112	54	119
21	27	198	358	8230	2390	2260	1790	2430	386	117	54	109
22	109	360	193	8920	3280	1510	1440	1160	209	101	54	160
23	78	293	345	13500	7580	1210	1170	527	272	80	51	98
24	50	423	1990	7520	7320	961	1030	482	284	74	47	63
25	46	284	7430	2900	3940	896	1350	366	512	70	47	59
26	56	245	4360	2880	2510	702	3020	367	556	68	57	59
27	64	356	1900	3080	2540	831	2530	570	510	63	56	52
28	54	166	1190	1990	14900	1580	1540	506	358	62	54	59
29	47	589	854	1560	---	2560	1020	541	257	63	52	63
30	51	279	681	1360	---	1620	984	449	229	64	51	64
31	49	---	567	1290	---	4210	---	325	---	57	55	---
TOTAL	1241	5962	32306	88740	65845	134423	78702	18846	8006	7872	3541	11232
MEAN	40.0	199	1042	2863	2352	4336	2623	608	267	254	114	374
MAX	109	589	7430	13500	14900	26800	12600	2430	556	1110	441	2870
MIN	27	37	193	333	487	702	637	325	110	57	47	48
CFSM	.03	.14	.73	2.00	1.64	3.02	1.83	.42	.19	.18	.08	.26
IN.	.04	.15	.84	2.30	1.71	3.49	2.04	.49	.21	.20	.09	.29

CAL YR 1986 TOTAL 185378 MEAN 508 MAX 10400 MIN 27 CFSM .35 IN. 4.81
WTR YR 1987 TOTAL 456716 MEAN 1251 MAX 26800 MIN 27 CFSM .87 IN. 11.8

CAPE FEAR RIVER BASIN

02102000 DEEP RIVER AT MONCURE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/23	0945	WATER	0.1	1.02	79	199	7.10	13.0		9.6	220

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/23	0945	WATER	0.1	57	5	170					

CAPE FEAR RIVER BASIN

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.

WATER-DISCHARGE RECORDS

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 fair. Since Dec. 1, 1980, considerable regulation by Shearon Harris Main Reservoir (station 02102190).

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

AVERAGE DISCHARGE.--15 years, 67.8 ft^3/s, 12.07 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,920 ft^3/s Feb. 2, 1973, gage height, 20.02 ft; minimum, 0.01 ft^3/s Sept. 2, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,160 ft^3/s Jan.22, gage height, 8.27 ft; minimum, 0.32 ft^3/s Aug. 28, gage height, 1.23 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.54	e1.1	12	107	202	889	120	91	9.3	1.9	.66	.88
2	.65	e1.3	8.0	133	181	766	108	82	8.5	3.9	.70	.59
3	.66	e1.3	12	114	172	650	103	76	6.9	3.7	.71	1.3
4	.69	e1.2	6.8	107	156	560	104	74	5.8	3.7	.75	.47
5	.72	e1.2	6.5	102	142	481	98	68	6.9	2.5	.75	.62
6	1.4	e1.1	4.5	90	127	415	91	61	2.5	1.6	.73	.72
7	.95	e1.0	4.4	82	116	360	84	55	1.8	1.3	1.3	2.1
8	.53	e1.0	4.0	78	107	321	78	56	1.1	1.3	1.2	8.3
9	.66	e1.0	4.1	72	99	292	73	50	1.1	1.0	.93	1.5
10	2.6	e.99	4.4	70	84	280	67	43	1.5	.81	.92	1.4
11	3.3	e1.2	20	68	78	237	61	37	.89	4.2	1.1	.73
12	.78	e1.3	20	62	73	208	56	32	.85	7.9	.99	2.2
13	.59	e1.4	25	60	68	186	54	45	1.2	5.3	.77	19
14	.56	e1.2	16	55	63	166	49	62	2.8	2.1	.75	3.0
15	e.54	e1.5	14	52	61	152	107	54	2.2	1.5	1.9	1.1
16	e.52	e2.0	14	51	70	141	334	50	2.1	1.4	1.6	.77
17	e.50	e1.6	13	54	93	126	328	43	1.6	1.0	1.2	.68
18	e.49	e1.4	14	74	85	115	316	36	1.8	.80	.97	.65
19	e.48	e1.4	15	423	82	119	297	33	2.9	.77	.85	.61
20	e.48	1.7	15	393	83	117	265	41	3.0	.67	.91	.72
21	e.48	2.7	19	305	92	110	234	35	2.9	.56	10	.70
22	e.49	2.0	13	656	146	103	208	30	2.7	.55	1.6	.63
23	e.50	1.8	13	632	261	95	187	25	4.0	.47	.47	.57
24	e.50	1.9	39	540	282	88	182	22	9.4	.48	.43	.57
25	e.75	9.7	42	481	285	82	188	23	2.8	.53	.43	.55
26	e1.7	9.5	40	438	284	78	171	62	2.5	.58	.45	.52
27	e1.3	7.0	40	377	343	77	149	28	1.9	.56	.41	.53
28	e1.1	3.2	39	331	623	114	134	22	1.7	.57	.37	.53
29	e.98	3.0	37	293	---	118	113	19	1.4	.58	.42	.51
30	e.95	4.6	35	257	---	117	100	16	1.2	.57	.45	1.6
31	e.95	---	33	234	---	122	---	13	---	.59	.62	---
TOTAL	27.34	71.29	582.7	6791	4458	7685	4459	1384	95.24	53.39	35.34	54.05
MEAN	.88	2.38	18.8	219	159	248	149	44.6	3.17	1.72	1.14	1.80
MAX	3.3	9.7	42	656	623	889	334	91	9.4	7.9	10	19
MIN	.48	.99	4.0	51	61	77	49	13	.85	.47	.37	.47
CFSM	.01	.03	.25	2.87	2.09	3.25	1.95	.59	.04	.02	.01	.02
IN.	.01	.03	.28	3.31	2.17	3.75	2.17	.67	.04	.02	.01	.02

CAL YR 1986 TOTAL 13055.48 MEAN 35.8 MAX 766 MIN .19 CFSM .47 IN. 6.37
WTR YR 1987 TOTAL 25696.14 MEAN 70.4 MAX 889 MIN .37 CFSM .92 IN. 12.5

e Estimated

CAPE FEAR RIVER BASIN

02102192 BUCKHORN CREEK NEAR CORINTH, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/23	0855	WATER	0.1	.00	1	51	6.80	11.0		8.1	40
86/11/10	0920	WATER	0.1	.00	1						
86/12/03	1000	WATER	0.1	1.90	14	45		10.0		9.0	
87/01/22	0930	WATER	0.1	6.66	789	40	5.90	6.0		11.6	
87/02/26	0900	WATER	0.1	3.94	283	42		6.0	2.7	11.4	
87/03/25	1130	WATER	0.1	2.54	82	41	6.80	11.0		11.2	
87/04/08	0930	WATER	0.1	2.50	77	44	6.20	12.0		9.6	
87/05/18	0930	WATER	0.1	2.02	36	61		24.0	1.5	11.0	
87/07/07	1505	WATER	0.1	1.40	1	70		27.5		3.8	
87/09/24	1415	WATER	0.1	1.30	1	73	6.95	19.0		6.9	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/23	0855	WATER	0.1	32	3	70					
87/01/22	0930	WATER	0.1	12							
87/02/26	0900	WATER	0.1		12	82					
87/03/25	1130	WATER	0.1	18							
87/04/08	0930	WATER	0.1	1							
87/05/18	0930	WATER	0.1		13	41					
87/09/24	1415	WATER	0.1	26							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/02/26	0900	WATER	0.1	10K	10K	25K	14	50K	.2K	50K	36
87/05/18	0930	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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. Gage height telemeter and satellite data transmitter at the station.

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.

AVERAGE DISCHARGE.--63 years (water years 1924-87), 3,386 ft^3/s, 13.27 in/yr.

EXTREMES FOR PERIOD OF RECORD.--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; maximum daily, 140,000 ft^3/s Sept. 19, 1945; minimum discharge, 11 ft^3/s Oct. 14, 15, 1954, gage height, -0.17 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 30,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 1	1600	*36,500	*15.59	No other peak greater than base discharge.			

Minimum discharge, 363 ft^3/s Nov. 13, gage height, 1.26 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	634	681	542	1680	4650	33500	6420	5450	797	759	665	729
2	631	681	596	3860	5580	27800	4680	3640	748	842	669	714
3	636	727	687	4730	5920	26600	5260	2670	645	908	665	714
4	639	737	1310	2790	9380	27300	5320	1880	819	904	696	712
5	626	701	1390	1810	8870	19300	5010	1130	814	845	673	723
6	621	744	1110	1520	5910	17800	4490	1060	768	1730	677	747
7	610	631	696	2270	4500	17800	3750	1070	789	1240	748	771
8	620	682	589	2170	4320	17300	3440	1090	876	1090	1080	987
9	633	690	560	2190	3590	17100	3340	1000	800	931	886	2390
10	657	682	575	1910	1860	16900	3020	942	746	779	893	2530
11	644	549	664	1630	1140	14800	1870	932	733	771	794	1170
12	644	773	989	1440	1030	11800	1870	898	637	797	681	1120
13	634	433	2260	1540	1080	11000	1670	950	696	885	661	2110
14	635	546	1800	1250	969	10600	1620	1480	753	1030	676	1190
15	625	636	1270	1010	1010	10300	2720	1350	665	1060	752	867
16	618	880	1090	1030	1090	10100	8900	1220	869	943	709	720
17	614	653	749	974	1260	9600	13500	969	789	682	666	749
18	618	803	714	1450	1370	6300	15600	925	710	572	815	700
19	617	713	626	9410	2440	3030	11400	868	738	580	654	731
20	613	569	720	17100	2870	4410	13300	1770	798	603	658	749
21	580	689	656	14500	5450	4870	16500	4880	934	630	648	722
22	637	651	579	15900	6900	3540	17200	3220	959	680	768	703
23	655	723	553	21000	12700	3350	16600	2420	771	653	644	754
24	658	774	930	18800	14700	3680	15900	2260	998	694	627	671
25	653	892	7940	14900	11000	2200	12700	1830	931	689	735	685
26	743	676	6150	15700	12900	2030	13300	1310	1250	687	782	690
27	717	621	2840	15500	12200	2050	11700	1030	1020	679	729	692
28	675	585	1730	11500	20300	2850	9280	1020	1040	669	709	678
29	646	588	1250	7990	---	4240	8720	1100	849	669	709	675
30	654	770	1160	6230	---	3270	8310	1020	774	671	713	753
31	653	---	909	4530	---	4890	---	883	---	667	721	---
TOTAL	19840	20480	43634	208314	164989	350310	247390	52267	24716	25339	22503	28146
MEAN	640	683	1408	6720	5892	11300	8246	1686	824	817	726	938
MAX	743	892	7940	21000	20300	33500	17200	5450	1250	1730	1080	2530
MIN	580	433	542	974	969	2030	1620	868	637	572	627	671
CFSM	.18	.20	.41	1.94	1.70	3.26	2.38	.49	.24	.24	.21	.27
IN.	.21	.22	.47	2.24	1.77	3.76	2.66	.56	.27	.27	.24	.30

CAL YR 1986 TOTAL 476064 MEAN 1304 MAX 13500 MIN 433 CFSM .38 IN. 5.11
WTR YR 1987 TOTAL 1207930 MEAN 3309 MAX 33500 MIN 433 CFSM .96 IN. 13.0

CAPE FEAR RIVER BASIN

02102500 CAPE FEAR RIVER AT LILLINGTON, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/29	1435	WATER	0.1	1.71	645	224	7.00	16.0		8.2	10K
86/11/18	1450	WATER	0.1	1.97	847						
86/12/03	1050	WATER	0.1	1.83	735	282	7.00	11.0	6.0	8.7	
87/01/22	0930	WATER	0.1	8.59	12411						
87/01/28	1400	WATER	0.1	8.33	11742	104	7.10	7.0		11.0	
87/02/26	1510	WATER	0.1			69	6.10	6.0		10.6	
87/02/26	1515	WATER	0.1	8.71	12726						
87/03/26	1115	WATER	0.1	3.09	2015	100	6.80	13.0	15.0	9.5	
87/04/28	1445	WATER	0.1	7.26	9163	71	6.00	16.0		6.4	
87/05/22	1145	WATER	0.1	3.86	3083	98	6.60	23.0		6.6	
87/06/23	1515	WATER	0.1	1.80	747	135	7.10	25.0	12.0	6.0	
87/07/30	1010	WATER	0.1	1.69	671	80	6.80	24.0		6.5	
87/08/24	1030	WATER	0.1	1.63	630	166	7.00	24.0		5.2	
87/09/16	1000	WATER	0.1	1.79	740						
87/09/16	1000	WATER	0.15			100	6.90	23.0	40.0	6.5	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/29	1435	WATER	0.1	44	4	170					
86/12/03	1050	WATER	0.1	42	5	210					
87/01/28	1400	WATER	0.1	20							
87/02/26	1510	WATER	0.1	3							
87/03/26	1115	WATER	0.1	19	15	90					
87/04/28	1445	WATER	0.1	8							
87/06/23	1515	WATER	0.1	33	16	110					
87/07/30	1010	WATER	0.1	21							
87/09/16	1000	WATER	0.15	26	43	150					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/29	1435	WATER	0.1		2K			10K		10K	
86/12/03	1050	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/03/26	1115	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/06/23	1515	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/09/16	1000	WATER	0.15	10K	10K	25K	10K	50K	.2K	50K	24

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.

WATER-DISCHARGE RECORDS

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.

REMARKS.--No estimated daily discharges. Records good. Some diurnal fluctuation at low flow during growing season.

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

AVERAGE DISCHARGE.--19 years, 12.2 ft^3/s, 21.71 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 394 ft^3/s Apr. 1, 1973, gage height, 7.30 ft; minimum, 2.4 ft^3/s Feb. 12, 1969, July 19, 20, 21, 1986, due to regulation from unknown source; minimum unregulated, 2.6 ft^3/s July 15, 16, 1981, gage height, 0.74 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 60 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 19	1915	80	2.25	Mar. 1	0730	*134	*3.18
Jan. 22	1945	92	2.44	Apr. 16	0130	125	3.02

Minimum discharge, 3.0 ft^3/s Oct. 6, gage height, 0.72 ft, due to regulation from unknown source.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	5.8	12	21	13	97	17	13	8.4	7.4	6.6	8.5
2	3.9	6.5	14	31	13	77	15	13	11	8.1	5.8	6.4
3	3.6	6.2	15	12	13	27	15	12	8.2	13	5.3	6.1
4	3.7	5.8	9.1	9.7	12	18	24	13	7.9	21	4.8	5.5
5	3.4	5.9	7.9	9.2	12	17	16	13	8.3	10	4.5	8.3
6	3.4	6.0	7.5	8.7	12	17	15	12	7.2	8.2	5.2	12
7	3.6	5.9	7.3	8.5	16	16	14	11	6.8	7.3	14	20
8	4.0	6.0	7.2	8.2	14	18	14	11	6.2	7.4	9.8	17
9	5.8	5.7	7.2	8.1	12	19	13	11	6.0	6.5	6.3	8.6
10	9.4	5.5	7.6	14	11	17	13	10	6.0	6.2	6.3	8.1
11	9.8	5.5	16	14	11	15	13	9.9	6.0	6.0	6.8	6.8
12	8.5	6.8	20	9.7	11	15	12	9.5	6.1	6.8	6.1	6.5
13	6.4	7.7	17	8.8	10	15	12	15	6.4	8.5	5.2	12
14	6.4	6.1	9.6	8.5	10	14	12	22	8.7	7.3	5.1	7.7
15	5.8	13	8.6	8.6	11	14	35	14	7.6	11	13	6.2
16	5.3	13	8.1	8.6	12	14	84	11	7.4	8.9	9.8	5.6
17	5.1	7.7	7.6	12	17	14	26	10	7.4	6.8	6.6	5.5
18	5.0	7.1	7.6	15	18	13	21	9.7	12	6.3	5.4	5.3
19	5.0	6.8	7.6	57	19	21	20	9.3	29	6.0	5.5	5.3
20	4.9	7.5	7.2	38	18	19	18	12	11	5.7	14	5.7
21	5.0	8.6	7.0	16	20	15	17	11	8.8	5.4	8.0	5.6
22	5.0	6.8	6.9	59	22	14	16	10	7.7	5.2	13	5.1
23	4.8	6.5	7.0	42	32	13	15	9.8	7.3	5.0	6.7	4.8
24	4.7	6.4	15	18	20	14	20	8.7	40	5.0	5.6	4.8
25	5.1	15	15	17	16	13	19	8.3	31	5.0	5.7	4.7
26	14	25	8.7	20	14	13	17	8.6	23	4.8	5.9	4.6
27	8.8	9.9	8.0	16	26	16	15	8.9	12	4.7	5.1	4.6
28	6.2	7.9	7.6	15	59	44	14	9.0	8.6	4.8	4.8	4.6
29	5.7	7.3	7.5	14	---	20	14	8.9	8.0	6.7	5.0	4.7
30	5.7	7.1	7.3	15	---	19	13	7.8	7.3	5.5	6.0	6.9
31	5.4	---	7.2	14	---	23	---	7.1	---	5.6	8.0	---
TOTAL	177.5	241.0	301.3	556.6	474	681	569	339.5	331.3	226.1	219.9	217.5
MEAN	5.73	8.03	9.72	18.0	16.9	22.0	19.0	11.0	11.0	7.29	7.09	7.25
MAX	14	25	20	59	59	97	84	22	40	21	14	20
MIN	3.4	5.5	6.9	8.1	10	13	12	7.1	6.0	4.7	4.5	4.6
CFSM	.75	1.05	1.27	2.35	2.22	2.88	2.49	1.44	1.45	.96	.93	.95
IN.	.87	1.17	1.47	2.71	2.31	3.32	2.77	1.66	1.62	1.10	1.07	1.06

CAL YR 1986 TOTAL 2853.4 MEAN 7.82 MAX 47 MIN 2.9 CFSM 1.02 IN. 13.9
WTR YR 1987 TOTAL 4334.7 MEAN 11.9 MAX 97 MIN 3.4 CFSM 1.56 IN. 21.1

CAPE FEAR RIVER BASIN

02102908 FLAT CREEK NEAR INVERNESS, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/30	1510	WATER	0.1	.82	6	11	5.20	15.0		8.2	40
86/11/18	1300	WATER	0.1	.87	7	12	5.00	13.0		9.5	
86/12/03	0900	WATER	0.1	1.13	17	25	3.90	13.0	4.5	8.8	
87/01/28	1520	WATER	0.1	1.05	15	21	4.60	6.0		11.4	
87/02/25	1320	WATER	0.1	1.07	15	20	4.80	8.0		11.0	
87/03/26	1310	WATER	0.1	1.02	14	19	4.80	13.0	2.8	9.2	
87/04/28	1320	WATER	0.1	1.03	15	14	4.90	15.0		8.6	
87/05/27	0920	WATER	0.1	.92	9	13	5.00	19.0		8.0	
87/06/23	0830	WATER	0.1	.88	7	16	5.00	22.0	3.4	7.0	
87/07/30	1200	WATER	0.1	.84	6	10	4.50	23.0		7.3	
87/08/24	1145	WATER	0.1	.85	6	16	4.80	23.0		6.2	
87/09/16	1205	WATER	0.1	.86	6	11	5.00	23.0	3.9	7.4	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/30	1510	WATER	0.1	1	1	19					
86/11/18	1300	WATER	0.1	2							
86/12/03	0900	WATER	0.1		7	80					
87/01/28	1520	WATER	0.1	1							
87/02/25	1320	WATER	0.1	1							
87/03/26	1310	WATER	0.1	1	5	14					
87/04/28	1320	WATER	0.1	2							
87/05/27	0920	WATER	0.1	2							
87/06/23	0830	WATER	0.1	2	4	36					
87/08/24	1145	WATER	0.1	1							
87/09/16	1205	WATER	0.1	1	10	23					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/12/03	0900	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/03/26	1310	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/06/23	0830	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/09/16	1205	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

CAPE FEAR RIVER BASIN

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.

WATER-DISCHARGE RECORDS

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 28.968 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.

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

AVERAGE DISCHARGE.--50 years, 4,957 ft^3/s, 13.87 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined; maximum gage height, 43.44 ft Sept. 22, 1945; maximum daily discharge, 112,000 ft^3/s Sept. 21, 1945; minimum discharge, 170 ft^3/s Sept. 20, 1954; minimum daily, 208 ft^3/s Sept. 13, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 40,000 ft^3/s Mar. 2; maximum gage height, 24.45 ft Mar 3; minimum discharge, 790 ft^3/s July 26, gage height, 1.12 ft; minimum daily discharge, 810 ft^3/s Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	889	1030	1710	2990	6900	31300	8400	8860	1340	1280	946	1140
2	876	1040	1460	7120	7460	39100	8200	5820	1300	1210	1050	1100
3	869	1010	1610	8230	7640	37400	6760	4630	1310	1350	1060	1070
4	855	1130	1780	7380	9450	36200	7590	3600	1290	1470	1040	1060
5	844	1100	2330	5370	11500	33600	7090	3050	1490	1520	1250	1070
6	830	1070	2270	4150	9990	27700	6750	2270	1490	1640	1120	1150
7	815	1100	1890	3910	7370	24400	5840	2070	1240	2110	1280	1480
8	810	1020	1440	3940	6340	22500	5180	1960	1180	1730	1530	1730
9	821	1000	1350	3670	6250	21100	4890	1920	1180	1480	1690	2000
10	853	995	1460	3500	4850	20600	4730	1660	1130	1280	1620	3670
11	955	1010	1590	3360	3540	19200	3740	1560	1130	1110	1700	2870
12	1060	1020	1880	3260	2690	16300	3090	1710	1080	1130	1460	2050
13	1110	1320	2820	3250	2600	14100	2980	1670	987	1240	1220	3020
14	1160	1110	3720	3040	2490	12800	2710	2250	1050	1460	1160	2960
15	1150	1210	3290	2660	2330	12000	3610	2660	1120	1690	1380	2070
16	1010	1610	2740	2290	2450	11600	9410	2760	1050	1690	1450	1660
17	998	1710	2370	2330	3020	12000	17500	2250	1230	1430	1330	1420
18	1020	1660	1890	2400	3530	11300	19200	1930	1250	1140	1260	1260
19	953	1840	1820	6250	4280	7210	19100	1790	1520	936	1330	1180
20	908	1730	1690	19100	5270	5880	16000	1690	1610	891	1640	1150
21	888	1590	1550	20600	6490	6860	17000	3600	1490	890	1440	1150
22	861	1490	1440	21700	8570	6650	18800	5190	1740	884	1410	1120
23	931	1310	1320	28300	12900	5680	18600	3760	1600	903	1460	1150
24	937	1290	1510	30100	17500	5530	18200	2960	1620	868	1220	1190
25	957	1600	4160	27400	16900	4920	16900	2870	1960	876	1100	1030
26	1070	2230	8930	24800	15700	3930	15200	2450	2010	840	1120	984
27	1210	2170	6620	23400	16000	3840	14900	2360	2290	855	1170	984
28	1250	2090	4180	20000	19400	4790	12400	2190	1990	865	1110	986
29	1220	1910	3210	15100	---	6220	10800	1890	1970	854	1070	974
30	1170	1850	2590	10600	---	6560	10100	1690	1610	880	1170	997
31	1080	---	2310	9350	---	6040	---	1530	---	905	1160	---
TOTAL	30360	42245	78930	329550	223410	477310	315670	86600	43257	37407	39946	45675
MEAN	979	1408	2546	10630	7979	15400	10520	2794	1442	1207	1289	1522
MAX	1250	2230	8930	30100	19400	39100	19200	8860	2290	2110	1700	3670
MIN	810	995	1320	2290	2330	3840	2710	1530	987	840	946	974
CFSM	.20	.29	.52	2.19	1.64	3.17	2.17	.58	.30	.25	.27	.31
IN.	.23	.32	.61	2.53	1.71	3.66	2.42	.66	.33	.29	.31	.35

CAL YR 1986 TOTAL 727430 MEAN 1993 MAX 17800 MIN 771 CFSM .41 IN. 5.58
WTR YR 1987 TOTAL 1750360 MEAN 4796 MAX 39100 MIN 810 CFSM .99 IN. 13.4

CAPE FEAR RIVER BASIN

02105500 CAPE FEAR RIVER AT WILLIAM O. HUSKE LOCK NEAR TARHEEL, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/23	1510	WATER	0.1	1.27	947	174	7.20	13.0		8.4	40
86/11/13	1350	WATER	0.1	1.65	1381						
86/12/08	1550	WATER	0.1	1.63	1356	184	7.00	9.0	4.3	9.7	
87/01/08	1500	WATER	0.1	3.18	3827						
87/01/09	1510	WATER	0.1			76	6.10	6.0		11.8	
87/02/13	1525	WATER	0.1	2.50	2580	79	7.00	9.0		10.8	
87/03/18	1410	WATER	0.1	5.80	10840	134	6.80	8.0	19.0	12.1	
87/04/27	1440	WATER	0.1	9.50	22585	85	6.80	16.0		8.6	
87/05/22	1410	WATER	0.1	3.78	5160	98	7.00	22.0		7.2	
87/06/22	1450	WATER	0.1	1.99	1817	114	7.00	26.0	9.1	6.5	
87/07/22	1440	WATER	0.1	1.22	894	100	6.20	26.0		6.7	
87/08/21	1430	WATER	0.1	1.69	1430	130	6.60	27.0		6.5	
87/09/29	1000	WATER	0.1	1.29	969						
87/09/29	1000	WATER	0.15			120	6.90	23.0	8.1	6.5	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/23	1510	WATER	0.1	43	10	110					
86/12/08	1550	WATER	0.1	25	3	130					
87/01/09	1510	WATER	0.1	10							
87/02/13	1525	WATER	0.1	14							
87/03/18	1410	WATER	0.1	17	21	110					
87/04/27	1440	WATER	0.1	16							
87/06/22	1450	WATER	0.1	22	14	95					
87/07/22	1440	WATER	0.1	15							
87/09/29	1000	WATER	0.15	20	11	110					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/12/08	1550	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	14
87/03/18	1410	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/06/22	1450	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	15
87/09/29	1000	WATER	0.15	10K	10K	25K	10K	50K	.2K	50K	10K

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 fair. 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 13.7 ft^3/s for municipal water supply, most of which was returned as sewage downstream from station. Gage height telemeter at station.

AVERAGE DISCHARGE.--18 years, 5,629 ft^3/s, 14.55 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,700 ft^3/s Mar. 3, 1979, gage height, 24.92 ft from flood-marks; minimum, 380 ft^3/s Oct. 7, 1982, gage height, 14.50 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 44,500 ft^3/s Mar. 6, gage height, 23.61 ft; minimum, 861 ft^3/s July 29, gage height, 14.91 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1040	1150	1970	2810	12700	19200	7420	11600	1580	1560	949	1230
2	1020	1130	1800	5120	9410	22200	8890	9420	1460	1380	1080	1190
3	994	1110	1710	8030	8860	28200	8510	6590	1440	1450	1120	1160
4	976	1100	1780	8880	8800	36900	7780	5020	1460	1710	1170	1130
5	967	1160	2040	7800	10400	42600	8020	3920	1540	1710	1200	1160
6	954	1140	2370	5950	11500	44300	7600	3170	1610	1660	1250	1260
7	920	1140	2240	4850	10600	41800	7040	2500	1530	1910	1190	1510
8	920	1130	1900	4660	8380	36300	6150	2250	1390	2200	1390	1800
9	967	1080	1580	4390	7200	31100	5570	2120	1360	1820	1530	2010
10	1070	1050	1570	4080	6550	27100	5280	1940	1300	1560	1620	3130
11	1170	1060	1660	3940	5100	24100	4940	1760	1250	1360	1640	4000
12	1260	1060	1860	3720	3870	22200	3920	1700	1250	1250	1640	2910
13	1320	1250	2400	3650	3170	20600	3530	1790	1180	1430	1430	2570
14	1410	1340	3350	3610	2990	18500	3230	1970	1350	1480	1280	3340
15	1410	1280	3770	3250	2790	16500	3180	2610	1480	1570	1370	2830
16	1320	1510	3380	2880	2780	15100	5850	2840	1400	1700	1480	1990
17	1180	1800	2860	2750	3310	14000	10700	2850	1350	1640	1470	1590
18	1160	1790	2470	2850	3950	13400	14800	2270	1400	1410	1380	1470
19	1160	1840	2100	3820	4490	11800	17000	2040	1580	1200	1360	1350
20	1110	1930	1990	9520	5330	8410	18200	1900	1780	1030	1480	1290
21	1080	1830	1840	15000	6050	7300	18100	2150	1670	975	1520	1260
22	1050	1730	1720	17900	7550	7520	18000	4430	1650	951	1420	1230
23	1040	1570	1620	19600	9600	6900	18300	4840	1720	945	1450	1190
24	1080	1470	1760	21800	12800	6080	18700	3810	1620	936	1380	1240
25	1110	1470	2340	24900	15700	5900	18700	3180	1730	916	1240	1180
26	1160	1870	6130	28100	16600	5000	18500	2940	1870	918	1170	1070
27	1270	2250	8210	28800	16900	4380	17800	2580	2100	917	1180	1040
28	1320	2200	6370	27500	17500	4660	16900	2390	2110	914	1180	1040
29	1280	2120	4410	25200	---	5820	15500	2190	1910	894	1150	1030
30	1240	1970	3430	21600	---	6970	13300	1870	1800	898	1150	1040
31	1180	---	2810	17300	---	7100	---	1720	---	913	1200	---
TOTAL	35138	44530	85440	344260	234880	561940	331410	102360	46870	41207	41069	50240
MEAN	1133	1484	2756	11110	8389	18130	11050	3302	1562	1329	1325	1675
MAX	1410	2250	8210	28800	17500	44300	18700	11600	2110	2200	1640	4000
MIN	920	1050	1570	2750	2780	4380	3180	1700	1180	894	949	1030
CFSM	.22	.28	.52	2.11	1.60	3.45	2.10	.63	.30	.25	.25	.32
IN.	.25	.32	.60	2.44	1.66	3.98	2.35	.72	.33	.29	.29	.36

CAL YR 1986 TOTAL 782125 MEAN 2143 MAX 13800 MIN 766 CFSM .41 IN. 5.54
WTR YR 1987 TOTAL 1919340 MEAN 5258 MAX 44300 MIN 894 CFSM 1.00 IN. 13.6

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 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV											
20...	1000	1860	178	6.30	14.0	3.5	761	8.6	84	K32	K52
JAN											
29...	1130	25100	95	6.20	5.0	27	760	12.2	96	190	440
MAY											
12...	1145	1700	80	6.50	21.0	15	763	6.8	76	K68	K2500
SEP											
10...	1000	2910	115	7.10	27.0	4.1	771	6.5	81	--	--

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WHOLE IT-FLD (MG/L)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
NOV											
20...	26	1	6.3	2.5	26	64	2	4.5	32	26	28
JAN											
29...	18	11	4.3	1.8	7.0	42	0.7	2.2	10	8	17
MAY											
12...	18	0	4.3	1.8	7.7	45	0.8	2.1	27	22	15
SEP											
10...	20	0	4.7	2.0	17	61	2	3.2	17	14	19

CAPE FEAR RIVER BASIN

02105769 CAPE FEAR RIVER AT LOCK 1 NEAR KELLY, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRATE 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)
NOV 20...	19	0.30	5.3	128	110	0.17	642	0.880	0.890	0.130	0.190
JAN 29...	7.9	<0.10	8.6	66	54	0.09	4470	--	0.600	0.110	0.110
MAY 12...	7.1	0.10	6.6	64	59	0.09	294	0.570	0.610	0.240	--
SEP 10...	12	0.20	3.5	86	74	0.12	676	--	--	--	--

DATE	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)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)
NOV 20...	0.24	0.77	0.90	0.350	0.300	0.290	0.89	50	1	20
JAN 29...	0.14	0.49	0.60	0.140	0.030	0.040	0.12	340	<1	29
MAY 12...	--	1.1	1.3	0.150	0.120	0.100	0.31	250	<1	26
SEP 10...	--	--	--	--	--	--	--	50	<1	22

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 20...	<0.5	<1	<1	<3	4	260	<5	<4	61	0.4
JAN 29...	<0.5	<1	<1	<3	3	470	<5	<4	43	<0.1
MAY 12...	<0.5	<1	<1	<3	3	490	<5	<4	170	<0.1
SEP 10...	<0.5	3	<1	<3	2	240	<5	<4	49	<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. [2] FINER THAN .062 MM
NOV 20...	10	3	<1	<1	50	<6	19	29	145	100
JAN 29...	<10	<1	<1	<1	33	<6	20	45	3050	41
MAY 12...	<10	2	<1	<1	39	<6	8	14	64	96
SEP 10...	<10	2	<1	<1	40	<6	13	13	102	74

CAPE FEAR RIVER BASIN

02105769 CAPE FEAR RIVER AT LOCK 1 NEAR KELLY, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/23	1315	WATER	0.1	15.06	1034	97	7.10	19.0		8.0	10
86/11/13	1200	WATER	0.1	15.25	1274						
86/12/08	1320	WATER	0.1	15.69	1900	128	6.60	11.0	3.9	9.4	
87/01/08	1315	WATER	0.1	16.95	4679						
87/01/09	1315	WATER	0.1			69	6.30	6.0		11.6	
87/02/13	1200	WATER	0.1			95	7.00	7.0		11.2	
87/02/13	1300	WATER	0.1	16.32	3113						
87/03/18	1200	WATER	0.1	19.21	13486	145	6.80	9.0	17.0	11.2	
87/04/27	1315	WATER	0.1	20.06	17717	71	6.60	16.0		7.5	
87/05/22	1245	WATER	0.1	16.95	4879	82	6.80	23.0		6.9	
87/06/22	1300	WATER	0.1	15.55	1652	104	6.70	26.0	8.7	6.2	
87/07/22	1250	WATER	0.1	14.98	945	140	6.80	28.0		6.8	
87/08/21	1255	WATER	0.1	15.45	1530	100	6.70	28.0		6.4	
87/09/28	1230	WATER	0.1	15.05	1034						
87/09/28	1230	WATER	0.15			195	6.90	25.0	7.8	6.4	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/23	1315	WATER	0.1	28	10	160					
86/12/08	1320	WATER	0.1	16	14	91					
87/01/09	1315	WATER	0.1	8							
87/02/13	1200	WATER	0.1	15							
87/03/18	1200	WATER	0.1	17	28	110					
87/04/27	1315	WATER	0.1	13							
87/06/22	1300	WATER	0.1	18	8	110					
87/07/22	1250	WATER	0.1	21							
87/09/28	1230	WATER	0.15	23	9	140					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/23	1315	WATER	0.1		2K			10K	.2K	10K	
86/12/08	1320	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	11
87/03/18	1200	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/06/22	1300	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/09/28	1230	WATER	0.15	10K	10K	25K	10K	50K	.2K	50K	10K

CAPE FEAR RIVER BASIN

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.

WATER-DISCHARGE RECORDS

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 good.

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

AVERAGE DISCHARGE.--37 years, 117 ft^3/s, 17.12 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,400 ft^3/s Oct. 7, 1964; maximum gage height, 10.34 ft Sept. 15, 1984; minimum, 0.1 ft^3/s Sept. 13, 14, 27, 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,400 ft^3/s Mar. 3, gage height, 8.50 ft; minimum, 2.9 ft^3/s July 28, 29, gage height, 1.28 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	33	55	118	270	787	329	167	43	15	9.8	6.6
2	5.7	33	65	200	237	1110	285	163	36	17	7.6	6.2
3	5.3	31	79	213	223	1350	245	143	31	18	6.3	5.8
4	5.1	29	77	229	214	1010	223	133	54	18	5.5	5.6
5	4.6	27	74	298	202	675	206	125	64	17	4.8	7.4
6	4.2	25	68	285	191	525	187	133	70	15	8.5	13
7	3.9	24	61	230	192	438	174	136	88	14	14	20
8	4.0	24	56	197	196	385	162	128	110	14	31	57
9	5.1	24	53	171	191	354	149	111	102	10	39	55
10	10	23	51	151	189	335	135	95	57	8.6	48	65
11	24	21	60	138	188	315	122	83	38	8.6	55	66
12	32	26	80	126	182	299	112	74	30	9.9	47	58
13	28	43	108	117	171	288	103	68	25	19	30	68
14	40	48	106	116	159	265	94	105	40	18	19	62
15	42	67	109	114	149	233	118	115	42	32	28	54
16	32	92	110	110	146	212	360	115	38	38	35	41
17	26	84	102	118	172	197	509	115	33	31	32	28
18	21	88	90	130	191	188	612	89	29	21	23	24
19	18	84	81	187	206	185	663	67	54	15	16	26
20	16	73	73	321	222	188	541	61	84	11	17	26
21	14	67	67	400	237	183	445	61	98	8.5	19	23
22	13	58	62	807	241	179	387	59	84	6.8	19	23
23	13	52	59	933	268	177	339	56	54	5.4	15	19
24	12	48	84	921	286	170	298	51	38	4.4	12	16
25	12	48	108	934	284	160	276	46	37	3.9	10	14
26	41	64	108	748	292	152	247	51	36	3.4	9.0	12
27	55	66	113	569	315	144	229	66	31	3.1	8.1	11
28	46	64	121	458	416	176	215	65	25	3.0	7.0	9.7
29	49	60	120	400	---	212	194	78	20	4.9	5.9	9.1
30	50	54	108	358	---	278	171	89	16	15	6.1	9.4
31	41	---	92	312	---	342	---	62	---	13	6.3	---
TOTAL	678.7	1480	2600	10409	6230	11512	8130	2910	1507	421.5	593.9	840.8
MEAN	21.9	49.3	83.9	336	222	371	271	93.9	50.2	13.6	19.2	28.0
MAX	55	92	121	934	416	1350	663	167	110	38	55	68
MIN	3.9	21	51	110	146	144	94	46	16	3.0	4.8	5.6
CFSM	.24	.53	.90	3.62	2.40	4.00	2.92	1.01	.54	.15	.21	.30
IN.	.27	.59	1.04	4.17	2.50	4.61	3.26	1.17	.60	.17	.24	.34

CAL YR 1986 TOTAL 17034.6 MEAN 46.7 MAX 582 MIN 1.7 CFSM .50 IN. 6.83
WTR YR 1987 TOTAL 47312.8 MEAN 130 MAX 1350 MIN 3.0 CFSM 1.40 IN. 19.0

CAPE FEAR RIVER BASIN

LITTLE COHARIE CREEK NEAR ROSEBORO, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/23	0945	WATER	0.1	2.08	13	12	6.10	13.0		8.5	80
86/11/12	0910	WATER	0.1	2.53	21						
86/12/08	0930	WATER	0.1	3.83	56	66	5.60	7.0	1.3	9.4	
87/01/08	1000	WATER	0.1	6.01	198						
87/01/09	1000	WATER	0.1			62	5.10	5.0		10.8	
87/02/13	0945	WATER	0.1	5.72	172	51	5.90	7.0		10.8	
87/03/19	1400	WATER	0.1	5.82	186	74	5.70	8.0	1.7	9.6	
87/04/27	0945	WATER	0.1	6.15	230	47	5.40	13.0		5.7	
87/05/22	1030	WATER	0.1	3.91	60	55	6.20	20.0		5.8	
87/06/22	0930	WATER	0.1	4.62	87	51	5.90	25.0	2.9	5.0	
87/07/22	1000	WATER	0.1	1.79	7	80	6.50	25.0		5.7	
87/08/21	1000	WATER	0.1	2.52	19	72	6.20	24.0		6.1	
87/09/28	0910	WATER	0.1	1.88	10	80	6.10	18.0	3.1	7.0	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/23	0945	WATER	0.1	10	7	120					
86/12/08	0930	WATER	0.1	3	1	48					
87/01/09	1000	WATER	0.1	3							
87/02/13	0945	WATER	0.1	4							
87/03/19	1400	WATER	0.1	7	6	68					
87/04/27	0945	WATER	0.1	3							
87/06/22	0930	WATER	0.1	12	3	120					
87/07/22	1000	WATER	0.1	16							
87/09/28	0910	WATER	0.1	10	10	85					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/12/08	0930	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/03/19	1400	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/06/22	0930	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/09/28	0910	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Records good.

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

AVERAGE DISCHARGE.--36 years, 783 ft^3/s, 15.73 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,500 ft^3/s Sept. 17, 1984, gage height, 22.08 ft; minimum, 8.5 ft^3/s Oct. 13, 1954, gage height, 0.59 ft, present site and datum.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,440 ft^3/s Mar. 5, gage height, 18.33 ft; minimum, 49 ft^3/s Aug. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	211	327	866	2460	2270	1620	1900	362	118	69	168
2	76	190	382	1260	2110	2880	1630	1520	290	110	70	159
3	71	187	603	1500	1860	3870	1610	1220	234	210	67	137
4	69	178	670	1620	1670	5490	1580	993	233	637	65	119
5	65	168	630	1700	1520	6330	1490	876	368	623	58	117
6	60	161	568	1740	1400	5940	1370	828	450	511	54	173
7	55	154	510	1680	1320	4990	1220	794	427	312	52	414
8	53	147	466	1520	1310	3990	1090	748	414	217	125	699
9	53	146	435	1380	1310	3200	971	701	365	189	292	910
10	59	140	412	1280	1270	2670	867	629	318	148	233	1120
11	92	135	402	1220	1200	2280	782	558	257	130	323	1060
12	152	134	474	1130	1120	1990	715	501	200	146	669	788
13	215	235	712	1000	1050	1810	659	460	170	293	649	621
14	197	317	843	868	990	1660	603	465	208	332	557	714
15	199	313	825	771	949	1540	618	482	460	319	411	710
16	223	465	762	726	928	1420	1060	532	494	281	471	581
17	213	584	691	778	1070	1300	1460	545	380	252	515	428
18	184	567	641	947	1300	1180	1830	501	292	206	460	339
19	157	536	613	1190	1470	1100	2300	453	279	162	314	321
20	136	487	583	1420	1580	1110	2920	459	439	131	323	516
21	120	461	543	1580	1650	1120	3470	438	486	107	383	535
22	107	453	497	1850	1670	1100	3560	423	396	90	338	384
23	99	411	465	2310	1670	1050	3260	398	304	78	259	291
24	92	375	586	2860	1640	983	2860	365	246	70	196	232
25	89	355	1050	3870	1630	922	2580	327	200	62	218	197
26	92	344	1240	4870	1630	877	2440	295	177	58	444	174
27	127	352	1310	4990	1640	859	2500	276	165	54	305	156
28	223	360	1350	4620	1770	979	2680	346	169	54	195	140
29	270	349	1310	4020	---	1210	2630	376	154	70	150	128
30	262	335	1100	3400	---	1390	2340	416	134	66	140	130
31	241	---	890	2890	---	1530	---	416	---	64	159	---
TOTAL	4130	9250	21890	61856	41187	69040	54715	19241	9071	6100	8564	12461
MEAN	133	308	706	1995	1471	2227	1824	621	302	197	276	415
MAX	270	584	1350	4990	2460	6330	3560	1900	494	637	669	1120
MIN	53	134	327	726	928	859	603	276	134	54	52	117
CFSM	.20	.46	1.04	2.95	2.18	3.29	2.70	.92	.45	.29	.41	.61
IN.	.23	.51	1.20	3.40	2.27	3.80	3.01	1.06	.50	.34	.47	.69

CAL YR 1986 TOTAL 129545 MEAN 355 MAX 1620 MIN 49 CFSM .53 IN. 7.13
WTR YR 1987 TOTAL 317505 MEAN 870 MAX 6330 MIN 52 CFSM 1.29 IN. 17.5

CAPE FEAR RIVER BASIN

02106500 BLACK RIVER NEAR TOMAHAWK, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/23	1110	WATER	0.1	1.93	98	112	6.90	13.0		9.4	60
86/11/13	0945	WATER	0.1	2.88	219						
86/12/08	1110	WATER	0.1	4.52	466	95	6.30	7.0	1.8	10.4	
87/01/08	1145	WATER	0.1	9.60	1518						
87/01/09	1145	WATER	0.1			75	5.80	6.0		10.6	
87/02/13	1100	WATER	0.1	7.89	1049	75	6.20	7.0		10.6	
87/03/19	1520	WATER	0.1	8.60	1100	67	6.90	8.0	2.4	10.6	
87/04/27	1115	WATER	0.1	12.57	2478	50	5.80	14.0		6.1	
87/05/22	1140	WATER	0.1	4.70	424	72	6.40	22.0		6.7	
87/06/22	1100	WATER	0.1	4.45	398	81	6.70	23.0	4.9	6.3	
87/07/22	1120	WATER	0.1	2.17	91	98	6.60	26.0		6.0	
87/08/21	1120	WATER	0.1	4.18	387	90	6.40	25.0		5.9	
87/09/10	1045	WATER	0.15			90	6.80	19.0	3.6	5.8	
87/09/28	1045	WATER	0.1	2.49	139						

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/23	1110	WATER	0.1	22	4	130					
86/12/08	1110	WATER	0.1	10	3	69					
87/01/09	1145	WATER	0.1	4							
87/02/13	1100	WATER	0.1	5							
87/03/19	1520	WATER	0.1	8	9	79					
87/04/27	1115	WATER	0.1	10							
87/06/22	1100	WATER	0.1	12	7	100					
87/07/22	1120	WATER	0.1	17							
87/09/10	1045	WATER	0.15	16	10	85					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/12/08	1110	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	16
87/03/19	1520	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/06/22	1100	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/09/10	1045	WATER	0.15	10K	10K	25K	10K	50K	.2K	50K	10K

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 current year.

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

REMARKS.--Records good.

AVERAGE DISCHARGE.--5 years, 8.76 ft^3/s, 14.37 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 577 ft^3/s Sept. 14, 1984, gage height, 94.68 ft; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 25	0100	168	93.20	Apr. 15	2400	254	93.64
Jan. 22	1900	265	93.69	Apr. 18	0400	177	93.25
Mar. 01	1600	302	93.85	Apr. 25	0300	*416	*94.25

No flow several days in October, July, and August.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.79	2.9	21	11	223	16	11	2.8	1.0	.00	1.2
2	.00	1.3	2.9	78	10	122	11	9.9	2.6	1.4	.00	.86
3	.00	1.3	3.6	31	10	51	9.4	9.2	2.2	2.8	.00	.65
4	.00	1.1	3.0	17	9.4	27	9.0	8.9	5.7	4.3	.00	.48
5	.00	1.0	2.6	12	8.8	18	8.3	8.4	10	4.5	.00	.67
6	.00	.97	2.4	10	8.5	14	7.8	8.1	5.7	2.6	.00	1.3
7	.00	.77	2.3	9.2	11	12	7.4	7.4	4.3	1.7	1.1	1.8
8	.00	.79	2.3	8.6	13	11	7.2	6.9	3.5	1.2	1.9	17
9	.00	.78	2.3	8.1	10	11	7.0	6.6	2.7	.68	.65	9.0
10	.00	.73	2.4	8.2	8.8	11	6.8	6.0	2.2	.40	.36	4.5
11	1.9	.79	3.2	9.2	8.3	9.7	6.6	5.5	1.9	.19	2.4	3.3
12	3.2	1.9	4.6	8.4	8.1	9.5	6.5	5.2	1.7	.12	2.3	2.4
13	1.7	3.2	7.4	7.9	7.9	9.6	6.3	6.0	1.8	.16	.89	4.8
14	1.3	2.0	4.7	7.8	7.7	8.9	6.0	7.1	8.3	.06	.48	4.4
15	1.3	3.0	4.0	8.0	7.7	8.4	44	6.6	6.8	.00	2.2	2.8
16	1.1	4.5	3.7	7.7	8.0	8.1	166	5.8	4.3	.07	2.4	2.0
17	.87	3.2	3.6	12	18	7.9	66	5.0	3.5	.06	1.2	1.6
18	.74	3.1	3.5	15	22	7.7	129	4.6	3.6	.00	.62	1.4
19	.63	2.7	3.8	41	16	8.3	56	4.6	4.7	.00	1.9	1.3
20	.57	2.5	3.5	50	12	9.7	34	10	3.6	.00	42	3.0
21	.55	3.0	3.3	25	11	8.6	21	10	2.8	.00	4.6	2.2
22	.50	2.5	3.2	135	10	7.9	15	7.1	2.3	.00	2.5	1.7
23	.43	2.3	3.3	133	16	7.3	12	6.3	2.0	.00	1.9	1.2
24	.38	2.6	55	51	13	7.0	35	5.4	2.5	.00	1.4	1.0
25	.46	3.0	103	28	11	6.9	243	4.9	2.6	.00	1.3	.92
26	1.5	3.1	27	38	9.4	6.9	79	4.4	2.0	.00	1.3	.77
27	1.4	3.0	14	27	13	9.7	37	6.4	1.7	.00	.97	.68
28	.97	2.7	10	18	65	27	21	5.3	1.2	.00	.70	.62
29	.81	2.6	8.6	14	---	17	14	4.5	.77	.00	.53	.59
30	.87	2.5	7.9	13	---	12	12	3.8	.64	.00	1.0	1.3
31	.76	---	7.3	13	---	20	---	3.2	---	.00	e1.0	---
TOTAL	21.94	63.72	311.3	865.1	364.6	718.1	1099.3	204.1	100.41	21.24	77.60	75.44
MEAN	.71	2.12	10.0	27.9	13.0	23.2	36.6	6.58	3.35	.69	2.50	2.51
MAX	3.2	4.5	103	135	65	223	243	11	10	4.5	42	17
MIN	.00	.73	2.3	7.7	7.7	6.9	6.0	3.2	.64	.00	.00	.48
CFSM	.09	.26	1.21	3.36	1.57	2.79	4.41	.79	.40	.08	.30	.30
IN.	.10	.29	1.40	3.88	1.63	3.22	4.93	.91	.45	.10	.35	.34

CAL YR 1986 TOTAL 1021.89 MEAN 2.81 MAX 103 MIN .00 CFSM .34 IN. 4.58
WTR YR 1987 TOTAL 3922.93 MEAN 10.7 MAX 243 MIN .00 CFSM 1.29 IN. 17.6

e Estimated

CAPE FEAR RIVER BASIN

0210782005 NAHUNGA CREEK AT SECONDARY ROAD 1301 NEAR WARSAW, NC--Continued

WATER-QUALITY RECORDS

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

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

INSTRUMENTATION.--Water-quality monitor since October 1983.

REMARKS.--No flow Oct. 1-10, July 15, 18-31, Aug. 1-6. Station operated to define stream quantity and quality as part of the Grove Creek project.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 183 microsiemens Aug. 15; minimum, 16 microsiemens Sept. 8.
WATER TEMPERATURE: Maximum, 26.7°C Aug. 7; minimum, 2.3°C Jan. 29.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)
OCT											
22...	1200	0.50	80	6.00	11.0	6.5	766	9.6	87	1.5	--
NOV											
17...	1230	3.3	85	5.80	12.0	7.2	750	8.5	80	1.5	--
JAN											
02...	1030	90	80	5.70	7.5	18	755	10.0	84	1.8	--
19...	1100	36	78	5.90	9.0	12	750	9.6	84	1.6	K18000
22...	1100	92	60	5.80	6.5	6.5	742	11.2	94	1.6	22000
23...	0900	140	63	6.00	5.5	6.0	755	11.8	94	1.4	20000
MAR											
02...	1110	118	65	5.80	11.5	7.0	760	9.2	85	1.6	--
APR											
08...	1330	8.0	79	5.90	15.0	6.0	755	8.0	80	--	--
MAY											
05...	1040	7.3	65	6.10	14.5	2.4	765	7.8	76	1.9	--
JUN											
03...	1145	2.3	68	6.00	23.5	3.5	760	4.6	54	1.8	3200
17...	0930	3.6	74	6.30	23.5	3.0	760	5.8	68	2.0	--
JUL											
08...	1045	1.4	68	6.10	24.5	3.5	755	5.4	65	2.0	3400
AUG											
21...	0930	4.0	88	5.80	23.0	3.2	750	6.0	71	2.0	3500
SEP											
01...	1040	1.1	75	6.00	23.0	3.0	750	6.5	77	2.0	--
08...	1115	33	65	6.00	22.5	--	753	5.2	61	1.8	--

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	CALCIUM DIS-SOLVED (MG/L AS CA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	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, ORGANIC TOTAL (MG/L AS N)
OCT											
22...	--	4.6	3.4	19	5.0	74	--	<0.010	1.00	<0.010	--
NOV											
17...	--	5.8	3.4	19	15	79	--	<0.010	1.50	<0.010	--
JAN											
02...	--	5.0	3.1	15	13	75	--	<0.010	2.00	0.030	1.4
19...	K1200	5.4	2.7	14	12	60	--	<0.010	1.80	0.020	1.2
22...	K800	4.3	2.4	10	9.1	46	--	<0.010	1.70	0.050	0.45
23...	K1200	4.2	3.6	12	9.0	44	1.99	0.010	2.00	0.060	0.84
MAR											
02...	--	4.1	3.4	11	8.1	57	1.69	0.010	1.70	0.010	1.9
APR											
08...	--	7.4	2.1	13	11	51	--	<0.010	1.30	0.010	0.49
MAY											
05...	--	4.3	2.4	18	14	51	0.990	0.010	1.00	0.050	0.85
JUN											
03...	580	3.8	2.2	12	11	57	0.480	0.020	0.500	0.100	1.4
17...	--	4.4	2.7	11	12	72	--	<0.010	0.600	0.100	--
JUL											
08...	500	4.1	2.4	11	11	66	--	<0.010	0.300	0.070	0.83
AUG											
21...	480	5.3	3.0	16	11	74	--	<0.010	0.400	0.030	0.77
SEP											
01...	--	4.7	2.6	28	9.8	39	--	<0.010	0.200	0.040	0.26
08...	--	4.4	3.3	11	7.8	54	0.390	0.010	0.400	0.050	1.0

CAPE FEAR RIVER BASIN

0210782005 NAHUNGA CREEK AT SECONDARY ROAD 1301 NEAR WARSAW, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT										
22...	0.50	1.5	6.6	0.030	0.020	<0.010	--	5.4	2	0.00
NOV										
17...	0.50	2.0	8.9	0.030	0.040	0.010	0.03	6.6	0	0.0
JAN										
02...	1.4	3.4	15	0.050	0.070	0.030	0.09	13	13	3.2
19...	1.2	3.0	13	0.070	0.030	0.030	0.09	13	10	0.97
22...	0.50	2.2	9.7	0.060	0.040	0.010	0.03	11	6	1.5
23...	0.90	2.9	13	0.080	0.050	0.040	0.12	12	6	2.3
MAR										
02...	1.9	3.6	16	0.080	0.040	0.020	0.06	11	3	0.96
APR										
08...	0.50	1.8	8.0	0.030	0.010	0.010	0.03	9.1	2	0.04
MAY										
05...	0.90	1.9	8.4	0.050	0.050	0.030	0.09	9.1	7	0.14
JUN										
03...	1.5	2.0	8.9	0.120	0.060	0.040	0.12	12	7	0.04
17...	<0.20	--	--	0.100	0.050	0.030	0.09	11	9	0.09
JUL										
08...	0.90	1.2	5.3	0.060	0.070	0.040	0.12	17	10	0.04
AUG										
21...	0.80	1.2	5.3	0.060	0.060	0.030	0.09	12	--	--
SEP										
01...	0.30	0.50	2.2	0.100	0.070	0.060	0.18	11	4	0.01
08...	1.1	1.5	6.6	0.100	0.070	0.040	0.12	22	25	2.2

CAPE FEAR RIVER BASIN

0210782005 NAHUNGA CREEK AT SECONDARY ROAD 1301 NEAR WARSAW, NC--Continued

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	88	82	86	83	72	74	108	72	103
2	---	---	---	88	83	85	85	72	76	93	71	82
3	---	---	---	85	83	84	89	78	87	94	88	91
4	---	---	---	85	82	83	79	73	76	98	94	97
5	---	---	---	86	80	82	82	79	81	98	91	95
6	---	---	---	88	56	74	84	81	83	91	88	90
7	---	---	---	101	64	83	85	83	84	88	86	87
8	---	---	---	91	64	75	85	77	83	85	84	85
9	---	---	---	79	70	75	79	76	77	84	82	84
10	---	---	---	72	55	62	78	73	76	84	82	83
11	73	39	61	71	61	67	75	69	71	85	81	83
12	96	75	89	71	50	62	75	72	73	80	78	79
13	95	92	94	76	53	68	78	74	76	79	78	78
14	93	87	91	76	72	74	97	78	85	78	77	78
15	100	87	90	73	66	71	97	95	97	82	77	78
16	110	97	101	86	66	74	98	97	97	86	78	84
17	96	95	96	88	85	86	98	97	97	82	73	77
18	96	90	94	91	85	88	109	98	100	84	77	80
19	93	86	90	93	86	89	125	109	115	82	77	79
20	85	83	84	93	84	91	105	86	93	91	82	88
21	84	82	83	88	82	87	92	85	88	95	90	95
22	82	81	81	91	88	89	88	84	86	95	49	68
23	80	71	75	88	84	87	90	84	86	69	52	59
24	74	72	74	84	79	81	94	39	77	77	69	74
25	78	74	76	82	79	80	107	59	83	80	72	78
26	78	71	76	89	82	86	112	104	108	80	72	74
27	71	70	71	102	90	96	106	100	103	90	80	83
28	72	70	71	102	85	93	99	91	95	84	83	83
29	72	65	69	100	94	96	90	83	86	89	83	84
30	76	72	73	95	84	91	88	83	85	85	84	84
31	84	76	78	---	---	---	110	84	101	86	84	85
MONTH	---	---	---	102	50	81.5	125	39	87.1	108	49	82.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	84	83	84	62	45	54	99	64	78	---	---	---
2	85	84	84	61	46	55	84	72	79	---	---	---
3	86	83	84	67	64	65	86	77	80	---	---	---
4	83	82	83	72	67	70	88	80	85	---	---	---
5	82	82	82	74	71	73	94	84	88	65	63	65
6	83	82	82	76	73	74	89	77	83	66	64	65
7	82	73	77	77	75	76	87	79	82	67	64	66
8	81	75	78	78	75	77	91	78	83	67	64	66
9	82	81	82	77	74	76	78	77	77	67	66	66
10	83	82	82	76	74	75	78	77	77	67	64	66
11	84	82	82	78	54	65	77	76	77	68	65	67
12	83	81	82	55	54	55	77	71	76	67	66	67
13	82	80	81	57	55	56	77	71	75	67	62	65
14	91	80	81	58	57	58	75	73	74	69	66	68
15	80	78	79	60	58	59	90	36	71	69	67	68
16	79	78	78	60	59	60	65	37	52	69	68	68
17	73	70	71	61	60	61	70	66	68	68	67	67
18	78	72	75	62	60	61	67	51	58	69	68	68
19	82	78	80	63	58	60	70	67	68	68	65	67
20	82	81	82	61	59	60	73	70	71	70	59	65
21	81	80	81	64	62	63	74	72	73	76	70	73
22	80	77	79	65	63	64	75	73	74	77	75	76
23	77	72	74	67	65	66	74	73	73	76	75	76
24	79	75	78	67	66	66	74	32	65	76	74	75
25	79	78	79	68	66	67	50	33	41	74	73	73
26	82	78	80	71	67	69	55	51	53	72	71	72
27	86	77	81	82	68	75	59	56	57	80	70	77
28	92	62	77	81	58	69	62	58	60	78	73	75
29	---	---	---	80	63	69	63	61	62	74	72	73
30	---	---	---	107	83	95	67	61	64	73	71	72
31	---	---	---	92	60	77	---	---	---	71	70	70
MONTH	92	62	79.9	107	45	66.8	99	32	70.8	---	---	---

CAPE FEAR RIVER BASIN

0210782005 NAHUNGA CREEK AT SECONDARY ROAD 1301 NEAR WARSAW, NC--Continued

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	70	69	70	60	53	56	---	---	---	76	65	70
2	70	68	69	62	53	58	---	---	---	83	59	66
3	69	64	68	94	44	61	---	---	---	104	64	83
4	74	62	67	96	70	86	---	---	---	112	56	87
5	82	70	78	120	91	104	---	---	---	112	75	96
6	85	80	82	122	114	119	---	---	---	74	36	53
7	84	80	82	120	76	102	168	154	165	64	47	55
8	81	77	79	101	66	79	149	138	143	67	16	44
9	80	74	77	75	63	65	156	137	146	79	46	61
10	76	68	73	63	62	62	164	148	154	95	62	73
11	74	67	70	70	62	65	164	145	153	125	86	102
12	67	65	67	73	64	69	165	148	158	135	52	91
13	66	61	64	66	62	64	162	149	155	108	59	94
14	75	54	63	77	64	69	162	142	151	132	96	114
15	107	78	93	---	---	---	183	155	174	123	94	115
16	114	79	93	107	94	99	182	148	164	123	110	115
17	89	72	79	104	82	90	158	136	146	109	100	105
18	80	73	75	---	---	---	155	146	150	100	77	96
19	112	78	92	---	---	---	154	96	138	75	50	65
20	110	71	92	---	---	---	136	66	80	109	57	82
21	123	68	88	---	---	---	101	80	91	107	100	104
22	73	66	70	---	---	---	113	86	101	113	52	77
23	71	64	68	---	---	---	105	77	86	83	51	58
24	100	59	72	---	---	---	87	76	80	132	55	83
25	80	57	65	---	---	---	121	86	103	75	53	60
26	89	58	78	---	---	---	142	102	130	91	52	64
27	86	57	71	---	---	---	131	103	118	90	54	67
28	61	57	59	---	---	---	110	95	104	88	54	66
29	67	58	59	---	---	---	107	82	96	85	55	62
30	62	59	60	---	---	---	83	64	77	102	71	84
31	---	---	---	---	---	---	99	66	89	---	---	---
MONTH	123	54	74.1	---	---	---	---	---	---	135	16	79.7

TEMPERATURE, WATER, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	16.4	15.6	15.9	12.3	11.9	12.1	8.4	7.2	7.6
2	---	---	---	17.2	16.4	16.8	14.5	12.1	13.2	8.6	7.6	8.3
3	---	---	---	17.3	16.3	17.0	14.5	13.0	14.1	8.1	6.6	7.4
4	---	---	---	16.1	14.1	15.2	12.8	10.1	11.4	6.7	5.2	6.2
5	---	---	---	16.3	14.7	15.4	9.8	8.2	9.0	7.0	5.9	6.5
6	---	---	---	17.3	16.3	16.8	8.1	6.7	7.4	6.5	5.0	5.8
7	---	---	---	18.0	17.2	17.5	7.3	5.7	6.6	7.2	5.2	6.2
8	---	---	---	18.8	17.6	18.1	8.8	7.0	7.8	7.7	6.7	7.2
9	---	---	---	19.7	18.7	19.1	12.1	8.8	10	6.8	5.4	6.2
10	---	---	---	19.3	16.6	18.0	14.6	12.2	13.4	8.3	6.2	7.0
11	17.0	14.7	16.5	16.9	16.1	16.4	14.6	12.6	13.8	8.5	7.5	8.2
12	19.0	16.9	17.8	16.5	14.6	15.5	12.5	11.1	11.5	7.4	6.2	6.9
13	20.5	18.4	19.4	14.5	12.6	13.9	11.0	9.0	10.1	7.5	6.1	6.8
14	21.3	20.5	20.8	12.4	9.9	10.5	8.9	7.7	8.1	8.0	6.1	7.0
15	20.8	16.6	18.2	11.0	9.8	10.2	8.5	7.7	8.0	10.2	8.0	9.0
16	16.4	14.2	15.7	12.1	11.0	11.6	8.6	7.9	8.3	10.8	9.8	10.2
17	15.3	13.7	14.4	12.9	12.0	12.3	9.1	8.4	8.6	9.9	8.3	9.1
18	13.9	12.5	13.3	13.8	12.9	13.4	10.2	9.1	9.6	8.2	7.4	7.8
19	12.9	11.6	12.3	13.9	12.7	13.6	10.2	9.1	9.7	10.4	8.0	9.0
20	11.9	9.8	11.0	12.6	11.6	12.1	8.9	7.7	8.1	9.9	8.1	8.9
21	11.7	9.6	10.7	12.5	11.3	12.1	8.3	7.5	7.8	8.6	7.9	8.3
22	12.1	10.0	11.0	11.0	9.5	10.1	7.4	6.4	6.7	8.1	6.7	7.4
23	13.1	11.5	12.1	10.0	8.4	9.1	6.8	6.2	6.4	6.8	4.9	6.2
24	13.8	12.8	13.1	12.9	10.0	11.3	13.4	6.9	9.5	6.0	3.2	4.8
25	14.8	13.8	14.1	13.5	12.9	13.2	13.3	12.0	12.5	7.2	5.2	6.3
26	16.8	14.8	15.8	14.9	13.0	13.7	11.9	11.3	11.6	5.0	3.7	4.5
27	17.3	16.8	17.0	16.1	14.7	15.4	12.4	11.8	12.2	4.1	2.5	3.2
28	16.9	15.5	16.2	15.6	14.2	14.6	12.3	11.9	12.1	4.4	3.5	4.0
29	15.2	13.9	14.6	14.1	13.4	13.8	11.8	11.5	11.7	4.9	2.3	3.7
30	16.2	15.1	15.6	13.5	12.4	12.8	11.5	7.3	11.2	8.8	4.6	6.8
31	16.0	14.7	15.4	---	---	---	11.4	6.8	7.9	8.5	6.6	7.6
MONTH	---	---	---	19.7	8.4	14.2	14.6	5.7	10.0	10.8	2.3	6.91

CAPE FEAR RIVER BASIN

0210782005 NAHUNGA CREEK AT SECONDARY ROAD 1301 NEAR WARSAW, NC--Continued

TEMPERATURE, WATER, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.1	4.8	6.1	14.1	9.5	12.3	14.4	12.2	13.3	---	---	---
2	7.1	6.6	6.8	13.5	11.4	12.6	13.2	11.2	12.6	---	---	---
3	10.7	8.5	9.4	12.7	8.9	11.0	13.4	12.8	13.1	---	---	---
4	9.6	7.9	8.9	12.1	9.0	10.6	13.5	12.6	13.2	---	---	---
5	8.6	7.4	8.0	10.1	7.5	9.0	12.6	11.0	11.9	15.5	14.7	15.1
6	8.6	6.3	7.4	10.5	7.3	8.8	12.1	10.5	11.1	16.7	12.7	14.6
7	10.0	8.6	9.2	11.7	7.7	9.7	13.8	11.7	12.5	17.5	14.3	15.9
8	9.3	6.9	8.3	12.4	10.8	11.5	16.5	13.3	14.5	17.2	16.4	16.7
9	8.8	6.2	7.1	13.6	12.1	12.8	16.5	11.9	14.3	17.1	14.0	15.7
10	6.6	4.9	5.8	13.3	9.5	11.7	17.2	12.4	14.9	18.0	14.3	16.2
11	6.9	5.2	6.1	9.2	7.5	8.3	16.6	12.8	14.9	18.5	16.3	17.2
12	8.7	6.3	7.2	9.2	6.7	7.8	19.0	14.2	16.5	19.1	17.0	17.9
13	9.0	7.7	8.5	10.5	6.0	8.3	19.2	15.8	17.4	18.9	17.9	18.5
14	8.6	7.2	7.9	10.6	6.3	8.5	16.9	15.0	16.1	18.5	17.2	17.7
15	8.7	8.3	8.6	12.2	7.1	9.7	16.0	15.3	15.6	19.9	17.3	18.4
16	8.2	7.0	7.4	11.0	8.3	10	17.8	15.6	16.5	19.9	18.8	19.4
17	5.4	4.9	5.0	10.6	6.4	8.5	17.1	15.6	16.5	19.9	16.9	18.5
18	5.7	5.3	5.4	9.7	6.8	8.5	16.0	14.1	15.1	21.1	19.0	20.1
19	6.4	5.1	5.6	9.3	8.7	9.2	16.7	15.5	16.1	21.7	20.1	20.9
20	6.8	5.4	6.0	12.7	7.4	10	17.3	16.3	16.7	20.8	19.2	20.0
21	7.1	6.7	6.8	13.4	9.1	11.1	17.8	16.6	17.1	19.1	17.5	18.4
22	7.0	6.1	6.5	13.3	8.5	10.9	19.6	16.1	17.7	20.1	18.8	19.3
23	7.9	6.5	7.0	13.4	8.6	11.0	18.6	17.1	17.7	21.2	19.4	20.1
24	8.0	7.0	7.6	13.7	9.5	11.5	17.9	17.1	17.3	22.1	19.9	21.0
25	7.8	7.3	7.5	12.2	10.5	11.5	17.2	14.7	16.4	22.2	20.0	21.2
26	7.7	6.9	7.3	16.4	11.7	13.8	14.5	13.2	13.9	22.1	20.3	21.1
27	7.4	6.8	7.2	16.5	14.6	15.4	15.7	12.4	13.9	21.9	20.2	20.9
28	9.3	6.7	7.5	17.5	15.6	16.6	16.6	13.8	15.1	21.1	19.5	20.4
29	---	---	---	16.6	14.3	15.7	16.5	12.9	14.8	21.8	19.6	20.6
30	---	---	---	16.6	15.4	16.1	---	---	---	22.3	20.3	21.3
31	---	---	---	16.6	14.4	16.3	---	---	---	22.7	20.5	21.6
MONTH	10.7	4.8	7.22	17.5	6.0	11.2	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	23.1	21.7	22.5	23.7	22.6	23.1	---	---	---	22.9	22.3	22.7
2	24.3	22.2	23.1	24.8	23.1	23.8	---	---	---	22.4	20.9	21.8
3	24.7	22.2	23.5	24.6	22.8	23.8	---	---	---	22.1	20.8	21.6
4	23.1	21.9	22.4	24.3	22.5	23.1	---	---	---	21.9	20.8	21.4
5	22.3	20.7	21.5	24.3	23.0	23.5	---	---	---	22.1	20.3	21.0
6	21.5	19.2	20.3	24.3	23.0	23.7	---	---	---	23.4	21.8	22.4
7	21.7	19.4	20.4	24.8	23.9	24.2	26.7	25.0	25.8	24.2	22.8	23.2
8	22.5	20.5	21.5	25.2	23.4	24.3	25.1	23.5	24.5	24.5	22.4	23.7
9	23.3	21.6	22.5	26.5	24.6	25.3	24.3	23.6	24.1	23.8	22.8	23.4
10	22.9	20.7	22.3	25.8	24.6	25.2	24.8	23.1	24.1	22.8	22.2	22.5
11	20.4	18.5	19.6	26.4	25.0	25.6	24.8	23.7	24.4	23.1	22.5	22.7
12	22.3	19.2	20.4	26.0	24.5	25.2	24.3	22.9	23.7	23.3	22.4	22.9
13	22.8	21.9	22.3	25.2	23.8	24.5	23.7	22.8	23.2	22.7	21.3	22.1
14	21.8	20.8	21.3	25.6	24.3	24.8	23.1	22.4	22.8	23.3	21.6	22.4
15	22.7	21.1	21.7	---	---	---	22.9	22.3	22.7	23.1	22.0	22.5
16	23.4	22.3	22.7	23.4	22.5	22.9	23.5	22.7	23.0	22.5	21.2	21.8
17	24.3	22.9	23.5	23.1	22.1	22.6	23.7	22.9	23.4	22.1	21.4	21.9
18	23.9	22.7	23.4	---	---	---	24.3	23.4	23.9	22.8	22.2	22.5
19	22.7	22.1	22.4	---	---	---	24.6	23.7	24.2	22.7	21.9	22.4
20	23.2	22.3	22.7	---	---	---	24.6	23.0	23.6	22.3	21.5	21.9
21	24.5	23.0	23.4	---	---	---	24.3	22.8	23.5	22.0	21.0	21.6
22	24.6	23.8	24.2	---	---	---	24.3	22.3	23.1	21.4	20.2	20.6
23	24.5	23.7	24.1	---	---	---	24.5	23.3	23.8	20.1	19.0	19.5
24	24.2	23.3	23.7	---	---	---	23.6	22.0	22.6	19.0	17.0	18.2
25	23.2	22.0	22.4	---	---	---	21.9	21.2	21.6	18.1	16.4	17.2
26	23.3	22.3	22.7	---	---	---	22.6	21.3	22.0	18.8	17.1	17.8
27	24.6	23.1	23.5	---	---	---	24.7	22.6	23.6	18.8	17.1	18.0
28	23.1	21.2	22.3	---	---	---	25.3	24.3	24.7	18.8	17.5	18.2
29	22.2	19.6	21.0	---	---	---	25.1	24.0	24.9	18.8	17.1	17.9
30	22.9	20.8	21.8	---	---	---	24.2	23.1	23.8	19.3	18.6	18.9
31	---	---	---	---	---	---	23.3	22.4	22.8	---	---	---
MONTH	24.7	18.5	22.3	---	---	---	---	---	---	24.5	16.4	21.2

CAPE FEAR RIVER BASIN

0210787855 GROVE CREEK AT SECONDARY ROAD 1375 NEAR WARSAW, NC

LOCATION.--Lat 34°59'21", long 78°00'36", Duplin County, Hydrologic Unit 03030007, at bridge on Secondary Road 1375, and 4.0 miles east of Warsaw.

DRAINAGE AREA.--6.0 mi^2.

PERIOD OF RECORD.--September 1983 to current year.

REMARKS.--Station operated to define stream quantity and quality in the Grove Creek basin.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)
OCT											
22...	1230	0.50	95	6.00	10.5	6.5	766	8.2	73	1.2	--
NOV											
17...	1330	3.4	3	6.40	12.0	7.0	750	9.1	86	1.5	--
JAN											
02...	1120	55	72	6.00	7.5	20	755	10.2	86	1.9	--
19...	1140	31	78	6.10	9.0	13	750	10.0	88	1.8	19000
22...	1140	62	60	6.00	6.5	9.4	742	11.0	92	1.7	25000
23...	0940	75	70	6.00	5.5	9.0	755	12.0	96	1.5	20000
MAR											
02...	1140	80	74	6.00	11.5	7.0	760	10.0	92	1.5	--
APR											
08...	1415	6.0	80	6.20	15.0	6.0	755	8.0	80	--	--
MAY											
05...	1120	5.2	68	6.20	14.5	2.2	765	8.0	78	2.0	--
JUN											
03...	1210	1.4	75	6.20	24.0	3.6	760	5.5	66	1.9	2000
17...	1010	2.2	82	6.40	23.5	3.2	760	5.8	68	2.0	--
JUL											
08...	1115	1.5	76	6.10	24.0	3.6	755	4.9	59	1.9	3000
AUG											
21...	1010	6.5	82	6.00	23.5	3.2	750	6.0	72	1.9	2900
SEP											
01...	1110	2.0	82	6.30	23.0	3.1	750	6.8	81	1.9	--
08...	1200	40	67	5.80	25.0	--	754	5.8	71	1.8	--

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	CALCIUM DIS-SOLVED (MG/L AS CA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	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, ORGANIC TOTAL (MG/L AS N)
OCT											
22...	--	6.3	2.0	12	13	75	--	<0.010	0.200	<0.010	--
NOV											
17...	--	8.6	2.4	24	14	84	--	<0.010	1.00	<0.010	--
JAN											
02...	--	5.1	3.0	16	10	75	--	<0.010	1.60	0.020	0.88
19...	K1100	6.2	2.1	17	14	66	--	<0.010	1.50	0.020	1.2
22...	K800	4.5	2.1	12	8.0	54	--	<0.010	1.40	0.040	0.66
23...	K1300	6.0	2.8	15	11	54	1.89	0.010	1.90	0.040	0.76
MAR											
02...	--	5.5	3.1	13	10	67	1.99	0.010	2.00	0.020	0.48
APR											
08...	--	8.7	1.8	11	10	60	--	<0.010	1.40	<0.010	--
MAY											
05...	--	5.3	2.2	17	9.6	55	1.19	0.010	1.20	0.070	1.0
JUN											
03...	450	6.2	1.6	11	11	51	0.790	0.010	0.800	0.050	1.0
17...	--	6.6	2.6	10	12	67	0.980	0.020	1.00	0.180	0.32
JUL											
08...	500	6.5	2.3	33	11	64	--	<0.010	0.700	0.040	0.56
AUG											
21...	450	6.1	2.8	26	9.9	66	0.890	0.010	0.900	0.030	1.7
SEP											
01...	--	8.2	2.1	21	11	63	--	<0.010	0.700	0.040	0.16
08...	--	4.7	2.5	10	5.8	60	0.490	0.010	0.500	0.060	1.0

CAPE FEAR RIVER BASIN

0210787855 GROVE CREEK AT SECONDARY ROAD 1375 NEAR WARSAW, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT										
22...	0.30	0.50	2.2	0.080	0.070	0.060	0.18	4.2	1	0.00
NOV										
17...	0.40	1.4	6.2	0.070	0.070	0.020	0.06	7.0	0	0.0
JAN										
02...	0.90	2.5	11	0.080	0.060	0.040	0.12	13	8	1.2
19...	1.2	2.7	12	0.090	0.070	0.030	0.09	13	8	0.67
22...	0.70	2.1	9.3	0.080	0.050	0.030	0.09	11	8	1.3
23...	0.80	2.7	12	0.070	0.040	0.030	0.09	11	5	1.0
MAR										
02...	0.50	2.5	11	0.090	0.050	0.030	0.09	9.2	16	3.5
APR										
08...	0.60	2.0	8.9	0.050	0.030	0.020	0.06	9.0	1	0.02
MAY										
05...	1.1	2.3	10	0.080	0.090	0.040	0.12	6.9	2	0.03
JUN										
03...	1.1	1.9	8.4	0.150	0.080	0.060	0.18	7.3	2	0.01
17...	0.50	1.5	6.6	0.150	0.070	0.050	0.15	8.8	5	0.03
JUL										
08...	0.60	1.3	5.8	0.080	0.080	0.060	0.18	9.5	14	0.06
AUG										
21...	1.7	2.6	12	0.100	0.100	0.040	0.12	12	6	0.11
SEP										
01...	0.20	0.90	4.0	0.130	0.070	0.060	0.18	8.5	6	0.03
08...	1.1	1.6	7.1	0.130	0.090	0.060	0.18	20	24	2.6

CAPE FEAR RIVER BASIN

0210788875 GROVE CREEK AT SECONDARY ROAD 1301 NEAR KENANSVILLE, NC

LOCATION.--Lat 34°57'53", long 77°58'25", Duplin County, Hydrologic Unit 03030007, at bridge on Secondary Road 1301, and 1.0 mile west of Kenansville.

DRAINAGE AREA.--21.3 mi^2.

PERIOD OF RECORD.--September 1983 to current year.

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

INSTRUMENTATION.--Water-quality monitor since October 1983.

REMARKS.--Station operated to define stream quantity and quality in the Grove Creek basin.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 287 microsiemens Sept. 4; minimum, 38 microsiemens July 3.
WATER TEMPERATURE: Maximum, 27.3°C Aug. 15; minimum, 3.1°C Jan. 26, Mar. 11.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)
OCT											
22...	1255	2.0	110	6.10	10.5	6.0	766	9.2	82	1.6	--
NOV											
17...	1400	23	83	6.40	12.0	7.5	750	8.6	81	1.6	--
JAN											
02...	1200	174	70	6.00	7.5	20	755	10.3	87	1.6	--
19...	1210	77	75	6.00	9.5	13	750	10.0	89	1.8	K19000
22...	1210	183	58	6.00	6.5	9.0	742	11.0	92	1.6	27000
23...	1010	399	60	6.10	5.5	8.0	755	12.0	96	1.5	22000
MAR											
02...	1210	305	70	6.00	11.5	7.2	760	10.0	92	1.6	--
APR											
08...	1445	22	84	6.20	16.0	6.2	755	8.0	82	--	--
MAY											
05...	1200	15	70	6.20	14.5	2.1	765	8.0	78	1.9	--
JUN											
03...	1230	4.0	83	6.00	23.5	3.4	760	5.5	65	2.0	K1600
17...	1040	8.2	84	6.40	23.0	3.3	760	6.0	70	2.1	--
JUL											
08...	1200	11	86	6.10	24.0	3.8	755	5.5	66	2.1	2800
AUG											
21...	1100	43	72	6.20	23.5	3.3	750	6.3	75	1.9	2600
SEP											
01...	1130	11	85	6.30	23.0	3.0	750	6.8	81	1.9	--
08...	1230	88	60	5.90	24.0	--	754	5.9	71	1.9	--

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	CALCIUM DIS-SOLVED (MG/L AS CA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	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, ORGANIC TOTAL (MG/L AS N)
OCT											
22...	--	8.5	2.9	13	10	83	2.49	0.010	2.50	0.020	0.38
NOV											
17...	--	8.5	2.8	23	13	88	--	<0.010	0.900	<0.010	--
JAN											
02...	--	5.4	3.0	13	10	75	--	<0.010	1.70	0.030	1.3
19...	K1500	--	--	--	--	--	--	--	--	--	--
22...	K1400	4.3	2.2	11	7.0	47	1.39	0.010	1.40	0.050	0.95
23...	2000	5.1	2.3	14	7.2	53	1.39	0.010	1.40	0.040	0.86
MAR											
02...	--	4.8	2.3	13	7.0	60	1.29	0.010	1.30	0.040	1.4
APR											
08...	--	6.3	2.1	10	8.4	55	--	<0.010	1.70	0.030	0.47
MAY											
05...	--	6.5	2.2	21	9.0	64	1.69	0.010	1.70	0.070	3.1
JUN											
03...	K350	7.6	2.2	18	9.9	63	2.28	0.020	2.30	0.060	0.74
17...	--	8.1	2.4	10	14	77	1.99	0.010	2.00	0.070	1.1
JUL											
08...	500	9.5	3.1	10	10	75	1.59	0.010	1.60	0.130	0.97
AUG											
21...	400	6.3	2.3	11	8.6	66	--	<0.010	1.10	0.030	1.4
SEP											
01...	--	9.1	2.7	28	10	75	--	<0.010	1.50	0.050	1.7
08...	--	5.2	3.1	11	7.9	64	--	<0.010	0.500	0.060	0.84

CAPE FEAR RIVER BASIN

0210788875 GROVE CREEK AT SECONDARY ROAD 1301 NEAR KENANSVILLE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT										
22...	0.40	2.9	13	0.060	0.020	0.020	0.06	4.5	2	0.01
NOV										
17...	0.80	1.7	7.5	0.040	0.030	0.020	0.06	11	0	0.0
JAN										
02...	1.3	3.0	13	0.090	0.060	0.030	0.09	15	6	2.8
19...	--	--	--	--	--	--	--	--	5	1.0
22...	1.0	2.4	11	0.130	0.090	0.060	0.18	11	52	26
23...	0.90	2.3	10	0.090	0.050	0.030	0.09	13	8	8.6
MAR										
02...	1.4	2.7	12	0.090	0.050	0.030	0.09	14	5	4.1
APR										
08...	0.50	2.2	9.7	0.050	0.030	0.010	0.03	11	4	0.24
MAY										
05...	3.2	4.9	22	0.070	0.080	0.030	0.09	9.2	4	0.16
JUN										
03...	0.80	3.1	14	0.110	0.050	0.030	0.09	8.4	10	0.11
17...	1.2	3.2	14	0.120	0.050	0.040	0.12	8.5	8	0.18
JUL										
08...	1.1	2.7	12	0.170	0.160	0.120	0.37	13	38	1.1
AUG										
21...	1.4	2.5	11	0.070	0.040	0.030	0.09	17	2	0.23
SEP										
01...	1.8	3.3	15	0.070	0.050	0.040	0.12	8.1	6	0.18
08...	0.90	1.4	6.2	0.110	0.110	0.070	0.21	22	21	5.0

CAPE FEAR RIVER BASIN

0210788875 GROVE CREEK AT SECONDARY ROAD 1301 NEAR KENANSVILLE, NC--Continued

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	102	98	101	102	98	100	84	81	82	99	67	87
2	102	98	100	98	93	96	81	76	79	77	64	70
3	102	99	101	94	92	92	79	77	79	89	78	84
4	105	99	102	98	94	95	80	77	78	93	89	91
5	106	102	104	97	95	96	83	80	82	95	93	94
6	106	103	105	95	92	93	85	83	83	95	94	95
7	105	99	102	93	90	92	85	84	85	96	95	95
8	100	96	98	91	88	90	87	85	85	95	94	95
9	98	95	97	91	87	90	87	85	86	95	94	94
10	97	89	94	90	89	90	86	85	86	95	91	93
11	100	77	87	89	86	88	87	79	83	93	89	90
12	121	101	117	87	78	84	78	70	74	92	89	91
13	121	113	117	91	79	88	82	76	79	94	93	93
14	112	107	109	88	85	87	91	82	86	94	93	93
15	107	103	105	85	73	80	95	91	94	94	94	94
16	103	100	102	81	78	79	96	95	95	94	89	93
17	104	101	102	83	81	82	96	95	96	89	82	85
18	105	102	103	84	81	83	96	94	95	83	80	82
19	107	103	105	87	81	85	94	92	93	80	75	79
20	108	104	106	87	81	85	93	92	93	83	78	80
21	113	107	109	86	83	84	94	92	93	88	83	86
22	114	109	111	84	82	83	93	93	93	87	52	64
23	111	108	110	86	83	84	93	92	93	70	54	62
24	108	107	107	88	83	86	92	47	67	81	70	76
25	108	105	106	87	82	84	77	61	70	83	79	81
26	108	98	102	83	76	81	92	79	87	79	73	75
27	108	100	105	85	82	83	96	93	94	---	---	---
28	107	106	107	86	84	85	99	96	98	---	---	---
29	106	102	104	87	85	86	99	99	99	---	---	---
30	103	100	102	86	84	85	100	99	100	---	---	---
31	101	98	100	---	---	---	100	99	99	---	---	---
MONTH	121	77	104	102	73	87.2	100	47	87.3	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	74	65	70	70	69	69
2	---	---	---	---	---	---	80	75	78	71	69	70
3	---	---	---	---	---	---	82	80	81	72	69	71
4	---	---	---	---	---	---	83	82	82	73	70	71
5	---	---	---	79	77	78	83	82	82	71	70	70
6	---	---	---	81	78	79	85	83	84	73	71	72
7	---	---	---	82	80	81	85	84	84	76	73	75
8	---	---	---	83	81	82	86	84	85	79	75	78
9	---	---	---	82	80	81	87	84	85	80	77	78
10	---	---	---	81	78	79	86	84	85	83	78	81
11	---	---	---	81	78	79	86	83	85	85	81	83
12	---	---	---	82	80	81	86	84	85	87	82	84
13	---	---	---	81	79	80	85	83	84	85	64	78
14	---	---	---	83	81	82	85	82	84	69	63	65
15	---	---	---	85	82	83	85	54	77	73	69	71
16	---	---	---	85	83	84	63	52	57	76	72	75
17	---	---	---	84	83	84	70	63	67	81	76	78
18	---	---	---	85	83	84	70	64	66	82	78	80
19	---	---	---	85	80	83	71	65	68	84	80	81
20	---	---	---	79	76	77	74	71	72	85	65	72
21	---	---	---	81	78	80	74	73	74	71	65	68
22	---	---	---	83	81	82	76	74	75	76	72	74
23	---	---	---	84	82	83	76	75	75	77	75	76
24	---	---	---	86	84	85	77	43	70	81	77	79
25	---	---	---	86	84	85	54	40	46	81	78	80
26	---	---	---	87	84	86	59	53	57	82	58	78
27	---	---	---	87	63	81	65	59	62	65	54	60
28	---	---	---	65	56	61	67	64	66	76	66	71
29	---	---	---	75	65	70	68	67	67	82	76	80
30	---	---	---	78	76	77	70	68	69	85	81	83
31	---	---	---	79	63	72	---	---	---	86	81	84
MONTH	---	---	---	---	---	---	87	40	74.1	87	54	75.3

CAPE FEAR RIVER BASIN

0210788875 GROVE CREEK AT SECONDARY ROAD 1301 NEAR KENANSVILLE, NC--Continued

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	87	83	85	92	63	86	94	71	90	141	74	96
2	85	83	84	71	59	64	112	89	104	204	134	174
3	85	79	83	80	38	62	113	97	107	225	193	209
4	76	57	67	65	49	57	98	94	97	287	211	248
5	62	54	57	74	67	71	95	92	94	237	95	150
6	76	62	70	81	75	79	105	92	96	101	90	94
7	82	76	80	86	81	84	113	78	99	95	89	92
8	86	81	84	88	83	86	85	75	78	88	58	66
9	88	84	86	90	86	88	97	85	93	74	66	70
10	88	85	86	92	88	90	98	80	95	77	69	72
11	87	85	86	93	88	92	85	63	72	86	78	84
12	88	86	87	89	71	77	76	65	70	102	87	91
13	88	83	87	84	78	81	85	76	81	106	99	103
14	83	59	68	91	83	87	96	84	90	120	102	109
15	77	60	67	92	90	91	84	73	77	133	112	124
16	83	78	81	91	87	88	76	61	69	118	95	109
17	87	83	85	92	87	89	85	76	81	94	88	90
18	88	82	85	92	90	91	91	85	88	94	88	91
19	74	57	63	96	92	94	96	73	89	96	92	94
20	80	69	76	96	93	95	74	66	69	97	92	95
21	87	81	85	96	94	95	81	74	78	93	91	92
22	93	85	88	97	94	96	84	80	82	97	91	93
23	97	92	95	97	94	96	85	82	83	93	90	91
24	95	76	91	96	94	96	83	80	82	94	89	91
25	80	69	74	97	94	96	81	74	78	95	90	92
26	86	81	84	98	95	97	75	72	73	98	92	95
27	92	80	84	98	95	96	73	69	72	95	94	95
28	88	81	85	97	94	95	70	67	68	96	93	95
29	91	87	89	94	87	91	68	65	66	96	92	94
30	91	87	89	89	85	87	67	49	58	92	87	91
31	---	---	---	93	89	91	74	46	59	---	---	---
MONTH	97	54	81.0	98	38	86.7	113	46	81.9	287	58	106

TEMPERATURE, WATER, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	25.0	22.4	23.6	17.6	16.0	16.7	12.7	12.0	12.4	7.7	5.8	6.7
2	25.9	23.2	24.5	19.6	17.2	18.3	16.4	12.4	14.6	8.0	7.2	7.7
3	25.2	22.6	24.1	19.1	16.2	18.1	16.0	12.9	14.9	7.6	5.4	6.5
4	26.1	23.6	24.7	16.9	13.8	15.5	12.5	9.4	11.0	5.8	3.6	4.9
5	25.8	23.7	24.7	17.4	15.0	16.1	9.6	7.5	8.6	6.2	4.5	5.3
6	24.7	20.6	22.4	19.3	17.1	18.1	8.4	5.8	7.1	6.0	3.3	4.6
7	20.3	17.3	18.8	19.9	18.5	19.2	8.3	4.4	6.5	7.1	4.0	5.5
8	20.0	17.2	18.7	20.6	19.0	19.8	10.3	7.1	8.7	7.6	5.5	6.5
9	20.3	19.2	19.8	22.4	19.7	20.8	14.3	9.6	11.9	6.4	3.5	5.0
10	20.0	17.7	19.4	20.8	16.5	18.7	17.2	14.4	15.8	8.3	4.9	6.7
11	17.4	16.2	16.9	18.7	15.7	16.9	15.1	11.5	13.6	8.3	6.2	7.6
12	19.5	17.3	18.3	17.4	14.8	15.8	11.2	9.5	10.1	7.2	4.4	5.9
13	21.6	19.1	20.2	14.8	11.8	14.0	9.4	5.6	7.9	7.6	4.6	6.1
14	22.5	21.1	21.8	11.8	8.5	9.7	6.3	3.7	5.2	8.3	4.3	6.4
15	21.8	16.7	18.9	11.0	9.5	10.2	8.1	5.6	6.7	10.2	7.8	9.0
16	16.7	14.5	15.7	12.2	11.0	11.7	8.6	5.7	7.2	10.9	9.7	10.2
17	15.7	12.1	14.0	13.5	11.9	12.6	9.2	6.8	8.0	9.5	7.6	8.6
18	14.5	11.8	13.3	14.8	13.5	14.2	11.1	8.8	9.9	7.5	6.7	7.1
19	14.1	11.6	12.9	14.9	12.4	14.1	9.8	7.1	8.5	10.5	7.3	9.0
20	13.6	9.6	11.7	13.3	11.3	12.2	8.3	5.1	6.8	9.7	7.6	8.3
21	13.8	9.5	11.8	13.0	10.8	12.3	7.2	5.2	6.5	7.9	7.3	7.6
22	14.4	10.1	12.3	10.9	8.5	9.8	6.1	3.6	4.8	7.2	6.2	6.6
23	15.7	12.1	13.9	10.8	7.9	9.4	7.0	3.9	5.3	6.1	4.5	5.7
24	16.1	13.7	14.9	14.9	10.8	13.0	12.9	7.0	10.5	5.2	2.6	4.1
25	16.5	15.1	15.7	14.8	13.8	14.5	12.8	11.5	12.0	6.6	4.5	5.7
26	19.0	16.4	17.7	16.9	13.8	15.2	11.5	10.0	10.9	6.2	3.1	4.6
27	19.5	17.7	18.9	17.7	16.2	16.9	9.8	8.2	9.0	---	---	---
28	17.4	15.3	16.5	16.0	14.4	15.1	8.2	6.4	7.4	---	---	---
29	16.2	13.9	15.2	15.2	13.4	14.3	6.8	4.6	5.8	---	---	---
30	17.3	15.8	16.4	13.7	12.5	13.1	7.8	5.7	6.6	---	---	---
31	16.8	14.8	15.8	---	---	---	6.7	4.5	5.8	---	---	---
MONTH	26.1	9.5	17.9	22.4	7.9	14.9	17.2	3.6	9.03	---	---	---

CAPE FEAR RIVER BASIN

0210788875 GROVE CREEK AT SECONDARY ROAD 1301 NEAR KENANSVILLE, NC--Continued

TEMPERATURE, WATER, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	12.0	8.6	10.5	19.3	15.6	17.5
2	---	---	---	---	---	---	13.3	7.3	10.4	20.6	17.4	19.0
3	---	---	---	---	---	---	13.4	9.3	11.6	21.1	18.9	19.9
4	---	---	---	---	---	---	11.8	8.6	10.3	20.1	16.5	19.0
5	---	---	---	8.4	4.9	6.6	9.1	6.5	8.1	16.3	14.4	15.3
6	---	---	---	9.2	3.9	6.5	13.1	6.8	9.8	16.2	12.7	14.5
7	---	---	---	11.2	4.5	8.0	15.1	8.4	11.6	17.4	14.4	15.9
8	---	---	---	11.7	8.9	10.4	17.2	10.6	13.5	17.2	16.2	16.8
9	---	---	---	13.9	10.8	12.2	17.6	11.2	14.1	17.0	14.0	15.7
10	---	---	---	11.6	4.5	8.0	18.4	11.6	14.8	18.3	14.5	16.3
11	---	---	---	7.0	3.1	5.2	17.1	11.9	14.5	18.9	16.0	17.5
12	---	---	---	7.5	4.5	5.7	19.7	13.9	16.6	19.4	17.0	18.3
13	---	---	---	9.3	3.7	6.3	19.8	14.9	17.2	19.8	18.5	19.1
14	---	---	---	9.6	3.9	6.6	16.3	14.4	15.5	18.9	17.4	18.3
15	---	---	---	11.4	4.8	8.0	15.2	14.4	14.8	20.1	18.0	19.0
16	---	---	---	9.2	6.3	8.2	17.1	14.7	15.7	20.5	19.3	19.8
17	---	---	---	9.6	4.1	6.7	16.8	15.1	15.9	20.1	16.8	18.7
18	---	---	---	8.9	4.2	6.6	15.4	13.8	14.6	22.1	19.3	20.5
19	---	---	---	7.4	6.8	7.3	16.1	14.7	15.3	22.5	20.1	21.1
20	---	---	---	11.5	5.4	8.2	17.5	15.5	16.3	20.8	19.6	20.4
21	---	---	---	12.8	7.4	9.7	17.6	15.9	16.6	19.5	18.2	18.9
22	---	---	---	12.7	6.2	9.3	20.3	15.8	18.0	20.4	19.3	19.8
23	---	---	---	13.2	6.1	9.5	19.1	17.3	18.3	21.8	19.7	20.6
24	---	---	---	13.7	7.0	10.2	19.0	17.4	18.0	22.6	20.2	21.3
25	---	---	---	11.3	8.1	10	17.5	15.1	16.4	22.5	20.0	21.3
26	---	---	---	16.2	9.9	12.7	14.9	13.3	14.0	22.1	20.1	21.2
27	---	---	---	16.7	13.4	14.8	15.2	12.3	13.8	21.4	20.3	20.9
28	---	---	---	16.6	14.5	15.6	16.3	13.8	15.0	21.7	19.9	20.8
29	---	---	---	15.3	13.0	14.5	16.0	12.6	14.5	22.1	19.9	21.0
30	---	---	---	15.4	13.7	14.6	19.1	14.9	16.8	22.6	20.2	21.5
31	---	---	---	15.1	12.2	14.5	---	---	---	23.1	20.4	21.8
MONTH	---	---	---	---	---	---	20.3	6.5	14.4	23.1	12.7	19.1

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	23.7	21.2	22.5	24.2	22.7	23.5	24.9	23.6	24.3	24.3	22.9	23.6
2	24.3	22.1	23.1	25.2	23.9	24.5	24.8	23.1	24.0	23.9	22.2	23.0
3	24.5	22.1	23.3	24.6	23.4	24.1	26.4	24.3	25.2	23.7	22.0	22.8
4	22.6	22.1	22.4	24.7	23.2	23.9	27.0	24.9	25.7	22.7	21.6	22.4
5	22.2	21.0	21.8	25.1	24.3	24.7	27.3	25.2	26.1	22.8	21.4	22.1
6	21.6	19.3	20.5	24.9	23.8	24.5	26.7	25.2	26.0	24.4	22.7	23.5
7	22.1	19.5	20.8	25.4	24.3	24.8	26.0	24.1	24.9	25.2	23.8	24.5
8	23.2	20.5	21.8	25.8	23.7	24.7	25.0	23.8	24.4	25.2	23.8	24.8
9	24.0	21.6	22.8	26.6	24.7	25.5	25.5	24.2	24.9	25.5	24.0	24.9
10	22.9	20.9	22.4	26.9	24.7	25.7	26.7	25.0	25.6	24.4	23.0	23.8
11	20.9	18.6	20.0	26.8	24.7	25.6	25.1	24.6	24.9	25.0	23.7	24.4
12	22.7	19.4	21.0	25.4	23.8	24.7	24.8	23.8	24.4	25.2	24.0	24.7
13	23.0	21.6	22.4	25.2	23.7	24.5	24.6	23.2	24.0	24.7	23.7	24.3
14	22.5	21.4	22.0	25.4	24.0	24.7	23.4	22.4	22.9	24.8	23.7	24.4
15	23.4	22.3	22.8	24.7	22.7	23.7	24.8	22.9	23.8	24.3	22.2	23.3
16	24.3	22.9	23.5	24.0	22.3	23.1	25.3	24.9	25.1	23.6	21.4	22.7
17	24.7	23.4	24.0	23.9	21.2	22.6	25.9	24.8	25.3	24.3	22.2	23.1
18	24.0	23.1	23.6	23.6	19.9	21.6	26.6	25.0	25.7	25.1	23.4	24.2
19	23.4	22.5	22.9	23.7	19.5	21.5	26.6	24.8	25.5	24.3	22.7	23.4
20	24.3	22.7	23.4	24.6	20.6	22.5	25.2	24.4	24.8	24.0	22.8	23.3
21	24.8	23.3	24.1	25.5	22.0	23.6	25.1	24.0	24.7	23.5	22.3	22.8
22	24.8	24.1	24.5	26.5	23.1	24.7	25.1	23.2	24.2	22.6	20.2	21.5
23	24.7	23.9	24.4	26.7	23.5	25.1	25.4	24.4	24.9	20.4	18.7	19.6
24	24.6	23.4	24.0	26.0	22.7	24.6	24.6	22.6	23.4	19.8	16.7	18.4
25	23.6	22.1	22.8	25.5	23.7	24.8	22.8	21.8	22.4	19.9	16.7	18.4
26	24.4	22.4	23.3	26.7	23.0	24.9	24.0	21.7	22.9	20.4	17.8	19.2
27	24.8	23.4	24.0	26.4	24.5	25.2	25.7	23.7	24.6	20.5	18.2	19.5
28	23.6	21.5	22.7	25.2	22.9	24.2	26.7	24.8	25.7	20.7	18.6	19.7
29	23.3	20.0	21.8	25.2	23.6	24.3	26.8	24.6	25.8	20.7	18.1	19.5
30	23.7	21.2	22.6	24.5	21.3	23.0	24.7	24.0	24.4	20.5	19.8	20.1
31	---	---	---	25.2	22.0	23.6	23.7	22.8	23.4	---	---	---
MONTH	24.8	18.6	22.7	26.9	19.5	24.1	27.3	21.7	24.6	25.5	16.7	22.4

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 current year.

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

REMARKS.--Records good.

AVERAGE DISCHARGE.--5 years, 28.4 ft^3/s, 17.06 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,880 ft^3/s June 8, 1983, gage height, 69.25 ft; minimum, 0.78 ft^3/s July 10, 11, 1985, gage height, 65.58 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 275 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gageheight (ft)
Dec. 25	0900	377	67.90	Apr. 16	1400	388	67.92
Jan. 23	0500	545	68.16	Apr. 25	1300	524	68.13
Mar. 01	2200	*629	*68.27	Jul. 04	0400	308	67.77

Minimum discharge, 1.1 ft^3/s Oct. 7, gage height 65.63 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	3.1	9.0	43	30	427	e54	28	6.6	6.6	3.9	11
2	1.4	4.3	11	169	27	383	e43	25	5.9	30	17	9.2
3	1.3	6.3	15	100	26	132	e36	21	5.2	58	8.4	7.6
4	1.3	7.2	15	49	24	72	e34	19	22	204	3.9	6.6
5	1.2	5.3	11	34	22	49	e31	18	53	46	2.9	8.9
6	1.2	4.7	9.0	27	21	40	e30	18	27	25	2.9	13
7	1.2	4.5	8.0	23	29	34	e29	16	12	16	13	16
8	1.2	4.3	7.6	21	44	32	e27	15	8.7	12	82	85
9	1.3	4.2	7.4	19	33	34	25	14	6.6	9.3	32	84
10	1.7	4.3	7.9	19	24	32	23	13	5.2	7.1	11	71
11	6.1	4.1	11	26	21	e28	21	11	4.3	6.5	75	44
12	17	5.6	21	23	20	e27	20	11	4.1	15	122	26
13	14	17	38	19	19	e27	19	18	4.0	12	37	39
14	7.0	16	25	17	18	e25	17	39	30	7.9	17	48
15	5.2	14	16	16	18	e24	36	25	48	6.6	56	29
16	4.1	29	13	16	20	e23	283	18	17	7.0	90	18
17	3.3	22	12	29	50	e22	179	13	11	5.1	40	14
18	2.8	15	11	42	63	e21	137	11	8.7	3.7	21	12
19	2.3	13	11	80	47	e23	117	9.3	33	3.1	20	10
20	2.2	11	11	97	34	e27	73	22	24	2.6	107	14
21	2.1	12	9.6	64	28	e24	53	29	13	2.2	53	14
22	2.0	12	8.6	202	26	e22	42	18	9.3	2.0	26	10
23	1.8	9.3	8.8	394	43	e21	34	15	7.8	1.9	17	8.1
24	1.8	8.7	101	129	41	e20	51	11	7.8	1.7	13	6.9
25	2.0	9.0	309	68	30	e19	380	9.1	16	1.6	12	6.3
26	5.6	10	113	94	25	e19	187	8.4	9.2	1.6	12	5.8
27	7.4	10	50	74	35	e25	88	49	11	1.5	10	5.7
28	5.1	9.4	33	48	129	e80	55	28	7.4	1.5	8.2	5.4
29	3.6	8.5	25	39	---	e52	40	14	4.8	2.4	7.2	5.2
30	3.2	8.2	22	35	---	e35	32	10	4.2	2.5	15	6.1
31	2.9	---	20	33	---	e66	---	8.0	---	1.9	13	---
TOTAL	114.7	292.0	969.9	2049	947	1865	2196	563.8	426.8	504.3	948.4	639.8
MEAN	3.70	9.73	31.3	66.1	33.8	60.2	73.2	18.2	14.2	16.3	30.6	21.3
MAX	17	29	309	394	129	427	380	49	53	204	122	85
MIN	1.2	3.1	7.4	16	18	19	17	8.0	4.0	1.5	2.9	5.2
CFSM	.16	.43	1.38	2.92	1.50	2.66	3.24	.80	.63	.72	1.35	.94
IN.	.19	.48	1.60	3.37	1.56	3.07	3.61	.93	.70	.83	1.56	1.05

CAL YR 1986 TOTAL 3861.5 MEAN 10.6 MAX 309 MIN .96 CFSM .47 IN. 6.36
WTR YR 1987 TOTAL 11516.6 MEAN 31.6 MAX 427 MIN 1.2 CFSM 1.40 IN. 19.0

e Estimated

CAPE FEAR RIVER BASIN

0210789100 GROVE CREEK AT KENANSVILLE, NC--Continued

WATER-QUALITY RECORDS

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

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

INSTRUMENTATION.--Water-quality monitor since October 1983.

REMARKS.--Station operated to define stream quantity and quality in the Grove Creek basin.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 198 microsiemens June 29; minimum, 38 microsiemens April 25.
WATER TEMPERATURE: Maximum, 27.6°C Aug. 5; minimum, 1.0°C Jan. 28.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)
OCT											
22...	1340	2.2	135	6.20	11.5	6.0	766	8.4	77	1.9	--
NOV											
17...	1445	26	85	6.20	12.0	7.3	750	7.8	74	1.4	--
JAN											
02...	1240	193	72	6.00	7.5	17	755	10.2	86	1.5	--
19...	1240	86	72	6.10	9.5	12	750	10.1	90	1.4	K16000
22...	1240	203	60	6.00	6.5	7.8	742	11.0	92	1.5	20000
23...	1050	443	60	6.10	5.5	8.0	755	12.0	96	1.4	18000
MAR											
02...	1240	339	55	6.00	12.5	6.8	760	9.8	92	1.6	--
APR											
08...	1545	24	85	6.30	16.0	6.1	755	8.0	82	--	--
MAY											
05...	1230	17	80	6.30	15.0	1.9	765	8.1	80	1.6	--
JUN											
03...	1245	4.5	97	6.00	23.5	3.4	760	4.8	57	2.0	K1400
17...	1120	9.1	94	6.40	23.0	3.3	760	6.0	70	1.9	--
JUL											
08...	1245	12	94	6.40	24.0	3.4	755	5.0	60	1.9	2800
AUG											
21...	1130	48	72	6.10	23.5	3.4	750	6.5	78	1.8	2400
SEP											
01...	1210	12	90	6.40	23.0	3.0	750	6.8	81	1.8	--
08...	1300	98	58	6.00	23.5	--	755	5.7	68	1.8	--

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	CALCIUM DIS-SOLVED (MG/L AS CA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	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, ORGANIC TOTAL (MG/L AS N)
OCT											
22...	--	11	3.0	12	14	133	1.88	0.020	1.90	0.070	0.53
NOV											
17...	--	8.9	2.9	24	13	89	--	<0.010	0.600	<0.010	--
JAN											
02...	--	5.4	3.0	15	9.6	71	--	<0.010	1.50	0.030	0.77
19...	K1500	--	--	--	--	--	--	--	--	--	--
22...	K800	5.3	1.8	12	7.1	47	--	<0.010	1.50	0.040	0.66
23...	K1400	5.0	2.3	15	6.7	59	1.19	0.010	1.20	0.040	0.96
MAR											
02...	--	4.8	2.4	19	7.9	61	1.19	0.010	1.20	0.030	1.7
APR											
08...	--	7.5	2.0	10	8.6	61	1.39	0.010	1.40	0.050	0.65
MAY											
05...	--	7.5	2.4	21	9.1	74	1.58	0.020	1.60	0.050	0.55
JUN											
03...	K300	9.8	2.4	11	11	68	1.78	0.020	1.80	0.130	0.87
17...	--	8.8	2.4	10	10	79	1.99	0.010	2.00	0.080	1.0
JUL											
08...	500	8.1	2.9	10	9.9	79	--	<0.010	2.10	0.090	0.81
AUG											
21...	380	6.5	2.4	12	8.0	45	--	<0.010	0.800	0.040	1.2
SEP											
01...	--	11	2.8	28	11	78	--	<0.010	1.50	0.050	0.15
08...	--	5.8	2.7	10	6.1	60	0.290	0.010	0.300	0.060	0.84

CAPE FEAR RIVER BASIN

0210789100 GROVE CREEK AT KENANSVILLE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT										
22...	0.60	2.5	11	0.410	0.290	0.290	0.89	4.9	4	0.02
NOV										
17...	0.60	1.2	5.3	0.100	0.040	0.050	0.15	11	0	0.0
JAN										
02...	0.80	2.3	10	0.090	0.060	0.040	0.12	15	5	2.6
19...	--	--	--	--	--	--	--	--	5	1.2
22...	0.70	2.2	9.7	0.070	0.050	0.030	0.09	11	11	6.0
23...	1.0	2.2	9.7	0.090	0.050	0.030	0.09	14	26	31
MAR										
02...	1.7	2.9	13	0.100	0.050	0.020	0.06	12	3	2.7
APR										
08...	0.70	2.1	9.3	0.080	0.060	0.040	0.12	12	3	0.19
MAY										
05...	0.60	2.2	9.7	0.170	0.080	0.060	0.18	11	4	0.18
JUN										
03...	1.0	2.8	12	0.290	0.170	0.150	0.46	8.6	5	0.06
17...	1.1	3.1	14	0.110	0.040	0.030	0.09	9.7	9	0.22
JUL										
08...	0.90	3.0	13	0.180	0.190	0.140	0.43	11	5	0.16
AUG										
21...	1.2	2.0	8.9	0.110	0.060	0.050	0.15	17	10	1.3
SEP										
01...	0.20	1.7	7.5	0.070	0.040	0.030	0.09	11	5	0.16
08...	0.90	1.2	5.3	0.100	0.060	0.040	0.12	20	5	1.3

CAPE FEAR RIVER BASIN

0210789100 GROVE CREEK AT KENANSVILLE, NC--Continued

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	135	118	128	120	109	115	107	78	94
2	---	---	---	126	106	116	113	98	107	84	70	77
3	---	---	---	110	102	107	111	103	106	100	85	92
4	---	---	---	112	100	106	107	101	103	107	100	103
5	---	---	---	121	106	113	118	105	109	110	107	108
6	---	---	---	120	105	113	120	110	114	112	109	111
7	---	---	---	121	103	113	120	112	117	114	111	112
8	---	---	---	116	101	110	125	112	119	114	113	114
9	---	---	---	114	100	109	122	108	117	116	112	114
10	---	---	---	117	102	110	117	106	112	115	108	112
11	---	---	---	118	104	113	113	100	105	110	106	108
12	---	---	---	116	96	108	100	86	92	110	105	107
13	---	---	---	96	85	92	96	86	92	113	109	111
14	---	---	---	100	91	93	105	96	100	116	112	113
15	---	---	---	99	82	89	112	105	108	118	113	116
16	---	---	---	82	80	81	115	109	112	118	112	115
17	146	131	141	90	73	83	115	109	112	111	105	108
18	146	129	139	100	85	96	117	109	112	105	97	101
19	145	131	140	122	99	113	110	107	109	101	73	88
20	151	130	142	123	117	120	111	106	109	94	90	92
21	158	138	148	121	114	118	112	108	110	92	89	90
22	159	132	151	119	113	116	115	108	112	88	48	64
23	160	131	145	120	116	118	114	107	112	69	49	58
24	173	136	154	121	109	117	107	53	78	86	71	79
25	173	138	155	121	113	117	77	64	71	90	85	87
26	143	105	119	118	106	114	98	78	89	86	80	83
27	119	103	110	120	112	116	105	98	101	90	82	86
28	129	114	121	124	112	118	107	104	105	94	90	92
29	133	115	125	122	114	118	108	106	107	101	94	97
30	132	113	124	120	115	118	107	105	107	102	95	98
31	136	113	126	---	---	---	108	106	107	102	96	99
MONTH	---	---	---	135	73	109	125	53	105	118	48	97.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	101	97	99	76	65	72	79	71	75	77	71	74
2	99	97	98	85	65	70	85	78	81	79	71	76
3	99	97	98	79	75	76	86	83	85	82	77	79
4	99	97	98	110	77	91	86	83	85	81	77	79
5	100	99	99	113	107	109	86	83	85	82	77	80
6	106	100	103	110	108	109	90	84	87	85	79	82
7	106	96	100	110	107	109	87	82	85	86	81	83
8	95	90	92	109	105	107	86	82	85	88	83	85
9	101	94	97	107	101	104	86	83	85	89	84	86
10	105	101	102	105	102	104	86	83	85	91	86	88
11	106	104	105	104	100	102	88	84	85	98	88	92
12	108	105	106	105	101	103	87	84	86	100	91	94
13	108	106	107	106	100	103	88	84	86	98	74	90
14	108	106	108	107	102	105	89	86	87	76	69	72
15	108	106	108	107	104	106	88	60	80	81	75	78
16	117	103	109	111	106	108	61	49	53	86	78	82
17	109	94	99	107	103	106	68	58	64	93	84	87
18	99	94	95	108	102	105	72	63	66	93	86	90
19	106	99	102	107	98	104	71	62	66	96	89	93
20	110	106	107	99	90	94	73	70	72	94	74	82
21	111	109	110	98	92	94	77	72	73	77	70	73
22	112	109	110	100	94	98	81	75	78	85	76	80
23	108	104	106	101	95	98	80	76	78	88	79	84
24	107	103	105	101	94	98	78	47	70	91	83	87
25	112	108	110	102	96	99	54	38	43	93	86	89
26	115	89	110	103	93	99	60	47	54	95	86	92
27	116	99	108	102	78	92	66	59	63	82	61	67
28	98	77	89	78	63	68	73	65	68	79	66	72
29	---	---	---	80	68	74	72	67	70	87	78	82
30	---	---	---	83	78	81	77	71	75	91	82	86
31	---	---	---	82	71	79	---	---	---	93	87	90
MONTH	117	77	103	113	63	95.7	90	38	75.2	100	61	83.0

CAPE FEAR RIVER BASIN

0210789100 GROVE CREEK AT KENANSVILLE, NC--Continued

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	98	88	93	---	---	---	167	97	137	91	85	88
2	103	91	97	---	---	---	138	103	126	99	88	93
3	103	93	99	---	---	---	139	132	136	106	93	99
4	98	71	82	---	---	---	136	118	128	110	100	104
5	73	65	68	---	---	---	133	110	124	104	92	98
6	90	70	80	---	---	---	144	114	127	93	87	90
7	101	90	96	---	---	---	146	93	126	92	86	88
8	112	98	106	---	---	---	89	80	83	85	57	67
9	122	108	115	---	---	---	109	86	98	70	61	65
10	131	117	124	---	---	---	118	97	110	72	67	69
11	137	125	131	---	---	---	95	59	76	83	73	78
12	140	129	135	---	---	---	74	59	66	92	82	87
13	146	136	140	---	---	---	91	76	83	91	78	83
14	142	71	110	---	---	---	109	91	98	90	78	83
15	109	70	80	---	---	---	94	71	80	100	90	96
16	127	81	93	110	98	104	71	57	65	105	96	100
17	141	88	115	119	99	108	83	72	78	108	99	104
18	142	90	121	124	108	116	95	84	89	112	103	108
19	111	77	84	127	115	123	101	76	92	113	106	110
20	124	77	87	135	112	123	74	59	63	111	102	105
21	129	79	87	139	113	126	79	65	73	109	100	104
22	84	81	82	148	118	135	89	80	85	115	105	110
23	84	80	82	154	122	138	94	88	91	124	108	115
24	139	78	85	163	128	148	98	91	95	125	112	118
25	112	65	93	164	127	150	100	94	97	127	114	121
26	121	110	115	162	135	152	97	91	94	126	117	121
27	118	107	113	163	138	156	101	93	97	128	116	122
28	126	108	114	169	134	156	106	94	100	129	118	123
29	198	129	162	174	120	143	106	92	101	129	115	122
30	194	140	165	143	105	123	95	80	85	128	113	120
31	---	---	---	163	126	140	89	78	83	---	---	---
MONTH	198	65	105	---	---	---	167	57	96.3	129	57	99.7

TEMPERATURE, WATER, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	16.9	15.3	15.9	11.6	11.1	11.5	7.6	5.8	6.7
2	---	---	---	18.0	16.8	17.4	15.2	11.5	13.5	9.5	7.1	8.3
3	---	---	---	18.0	15.6	17.3	15.1	11.8	13.9	8.8	6.8	7.9
4	---	---	---	15.4	13.4	14.6	11.4	8.5	9.9	7.1	5.1	6.4
5	---	---	---	16.5	14.6	15.4	8.3	6.8	7.6	7.6	5.8	6.6
6	---	---	---	17.8	16.6	17.3	7.0	5.0	6.1	7.3	4.7	6.0
7	---	---	---	18.3	17.6	18.0	6.8	3.9	5.5	8.4	5.3	6.9
8	---	---	---	19.2	18.0	18.5	9.1	6.4	7.7	8.8	7.1	7.9
9	---	---	---	20.2	18.7	19.5	13.3	8.9	10.6	7.6	5.0	6.5
10	---	---	---	19.6	16.2	18.0	15.7	13.4	14.6	9.5	6.5	7.9
11	---	---	---	17.0	15.2	16.1	15.4	11.6	13.7	9.5	7.6	8.9
12	---	---	---	16.4	13.8	15.2	11.4	9.5	10.1	8.4	5.9	7.3
13	---	---	---	13.7	11.0	13.0	9.4	5.9	7.9	8.8	6.1	7.5
14	---	---	---	10.6	7.7	8.8	6.2	3.9	5.3	9.6	5.7	7.7
15	---	---	---	9.9	8.6	9.2	8.0	5.4	6.7	11.5	9.3	10.3
16	---	---	---	11.1	10.0	10.6	8.4	5.6	7.2	12.2	11.0	11.5
17	14.3	12.5	13.4	13.7	10.9	11.9	9.1	6.8	8.0	11.1	9.0	10
18	13.2	12.0	12.8	13.8	12.7	13.1	10.9	8.9	9.9	8.9	8.0	8.4
19	12.7	11.6	12.3	13.3	11.5	12.8	9.9	7.4	8.5	10.2	8.5	9.4
20	11.8	10.0	11.2	12.1	10.4	11.1	8.0	5.3	6.9	9.7	8.2	8.7
21	12.1	9.8	11.1	11.9	9.9	11.3	7.6	5.5	6.6	8.2	7.6	8.0
22	12.7	10.4	11.7	9.5	7.4	8.7	5.7	3.8	4.9	7.5	6.4	6.9
23	13.9	11.8	12.9	9.9	7.1	8.4	7.0	4.0	5.2	6.4	4.9	6.1
24	15.0	13.4	14.2	13.5	10.0	11.7	12.7	7.1	10.4	5.3	3.3	4.6
25	15.6	14.6	15.0	13.7	13.0	13.5	12.5	11.5	12.1	6.7	4.8	5.9
26	17.8	15.5	16.6	15.8	12.7	14.0	11.5	10.0	10.9	6.3	3.4	4.8
27	18.1	17.5	17.8	16.9	15.2	16.0	9.9	8.3	9.1	3.4	1.9	2.7
28	17.3	15.1	15.9	15.3	13.7	14.3	8.1	6.4	7.4	3.8	1.0	2.4
29	15.2	13.8	14.5	14.0	12.7	13.4	6.7	4.7	5.8	4.5	1.3	3.0
30	16.2	15.0	15.5	13.1	11.7	12.3	7.6	5.7	6.5	9.2	4.1	6.9
31	15.4	14.5	15.1	---	---	---	6.6	4.5	5.8	8.7	6.3	7.7
MONTH	---	---	---	20.2	7.1	13.9	15.7	3.8	8.70	12.2	1.0	7.09

CAPE FEAR RIVER BASIN

0210789100 GROVE CREEK AT KENANSVILLE, NC--Continued

TEMPERATURE, WATER, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.4	4.2	6.0	14.0	7.8	10.6	12.1	9.4	10.9	19.3	16.2	17.8
2	8.9	6.4	7.6	13.9	11.8	13.0	13.2	7.9	10.6	20.7	17.5	19.2
3	11.7	8.7	10.0	12.5	10.0	11.6	13.8	9.7	11.8	21.6	18.9	20.1
4	10.4	7.8	9.2	11.9	7.7	10.2	12.0	8.9	10.6	20.2	16.9	19.1
5	8.7	6.8	7.7	8.3	5.0	6.7	9.3	6.8	8.4	16.7	14.4	15.6
6	9.3	5.0	7.3	9.0	3.9	6.4	12.8	7.0	9.9	16.7	12.6	14.8
7	10.8	8.6	9.5	10.9	4.4	7.8	15.0	8.6	12.0	17.8	14.3	16.2
8	9.9	6.3	8.3	11.5	8.7	10.2	16.4	10.8	13.5	17.4	16.5	17.0
9	8.1	4.7	6.1	14.1	10.5	12.1	16.7	10.5	13.6	17.3	13.9	16.0
10	5.9	2.9	4.5	11.8	4.8	8.4	17.5	11.0	14.3	18.5	14.6	16.7
11	6.7	2.5	4.6	6.6	3.1	5.0	16.4	11.3	14.0	18.9	16.5	17.7
12	9.1	4.3	6.6	7.1	4.3	5.5	18.6	13.4	16.1	19.5	17.2	18.5
13	9.2	5.8	7.6	8.8	3.5	6.1	18.8	14.5	16.6	19.8	18.7	19.3
14	8.6	4.9	7.0	9.1	3.8	6.5	15.6	14.2	14.9	19.1	17.5	18.4
15	8.3	6.2	7.4	10.9	4.5	7.8	14.6	14.1	14.3	20.3	17.9	19.0
16	6.0	2.0	3.5	9.4	6.3	8.1	15.3	14.0	14.7	20.9	19.3	20.1
17	2.9	2.2	2.6	9.1	4.0	6.6	15.3	14.6	15.0	20.4	17.2	19.0
18	3.8	2.7	3.2	8.3	4.1	6.4	14.5	13.2	14.1	22.5	19.6	20.9
19	5.9	2.0	3.9	7.9	6.6	7.1	15.0	14.1	14.5	22.9	20.7	21.9
20	6.8	2.4	4.6	11.1	5.2	8.1	16.4	14.7	15.4	22.2	20.2	21.2
21	6.3	4.9	5.5	12.5	7.3	9.7	16.6	15.1	15.7	20.0	18.8	19.4
22	5.6	3.6	4.6	12.4	6.3	9.4	19.2	15.0	17.2	20.8	19.5	20.0
23	8.8	4.8	6.7	12.6	6.1	9.5	18.0	16.4	17.4	22.1	19.7	20.9
24	7.8	4.6	6.3	13.5	7.1	10.3	17.9	16.3	17.0	22.7	20.3	21.5
25	7.1	5.1	6.1	11.3	8.3	10.1	16.2	14.1	15.5	22.5	20.3	21.6
26	6.6	3.9	5.4	15.7	10.1	12.8	13.8	12.6	13.0	22.1	20.6	21.5
27	6.1	3.6	4.5	16.7	14.0	15.0	14.0	11.4	12.8	21.3	20.3	20.8
28	7.7	4.4	5.6	16.1	14.7	15.3	16.3	12.8	14.3	22.1	19.8	20.9
29	---	---	---	15.3	14.1	14.9	16.4	12.7	14.8	22.3	19.9	21.1
30	---	---	---	15.3	14.3	14.8	19.1	14.8	17.0	22.6	20.3	21.5
31	---	---	---	15.4	12.4	14.7	---	---	---	22.8	20.5	21.9
MONTH	11.7	2.0	6.14	16.7	3.1	9.70	19.2	6.8	14.0	22.9	12.6	19.3

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	23.4	21.6	22.6	---	---	---	25.3	24.4	24.9	23.7	22.4	23.1
2	24.0	22.4	23.2	---	---	---	25.4	23.8	24.7	23.2	21.6	22.6
3	24.1	22.4	23.3	---	---	---	26.9	24.8	25.8	22.9	21.6	22.5
4	23.1	22.0	22.4	---	---	---	27.5	25.6	26.6	22.7	21.6	22.3
5	22.1	20.8	21.5	---	---	---	27.6	26.1	27.0	22.5	20.8	21.7
6	21.8	19.3	20.6	---	---	---	27.5	26.5	27.0	24.2	22.3	23.1
7	22.2	19.3	20.8	---	---	---	27.1	24.3	25.8	25.0	23.4	24.1
8	23.0	20.5	21.7	---	---	---	25.1	23.9	24.5	24.7	23.6	24.4
9	23.4	21.9	22.7	---	---	---	26.3	24.3	25.3	25.3	23.9	24.6
10	23.1	21.5	22.6	---	---	---	27.1	25.1	26.0	23.7	22.7	23.3
11	21.0	19.3	20.1	---	---	---	25.4	24.4	24.8	24.8	22.9	23.9
12	22.3	19.7	20.8	---	---	---	24.6	23.3	24.2	24.9	23.3	24.2
13	22.8	22.1	22.4	---	---	---	24.8	23.0	24.1	24.3	22.9	23.6
14	22.5	21.2	22.0	---	---	---	23.7	22.4	23.0	24.5	22.9	23.7
15	23.4	22.3	22.8	---	---	---	24.3	22.8	23.4	23.7	21.6	22.8
16	24.6	19.3	23.4	24.6	22.8	23.6	24.9	24.0	24.5	23.1	20.7	22.2
17	24.5	23.4	24.1	24.1	22.2	23.1	25.4	24.1	24.8	23.7	21.1	22.6
18	24.2	22.9	23.6	23.3	21.4	22.4	26.5	24.5	25.3	24.5	22.7	23.6
19	23.2	22.0	22.9	23.0	20.8	22.1	26.4	24.0	25.1	23.6	22.3	23.0
20	24.3	22.7	23.4	24.3	21.5	22.9	24.5	23.2	24.0	23.4	22.4	22.8
21	24.8	23.4	23.8	25.1	22.9	24.0	24.7	23.0	23.9	22.8	21.5	22.3
22	24.8	23.4	24.4	26.3	23.9	25.1	24.8	22.4	23.6	21.9	19.9	21.0
23	24.7	24.4	24.5	26.5	24.5	25.5	25.0	23.4	24.4	20.5	18.6	19.4
24	24.6	23.0	24.0	26.2	24.0	25.2	23.9	22.2	22.9	19.1	17.0	18.2
25	22.7	22.5	22.6	26.6	24.3	25.4	22.6	20.9	21.9	19.0	17.0	18.1
26	22.9	21.1	21.9	26.5	24.3	25.5	23.6	20.8	22.3	19.5	17.7	18.8
27	23.7	21.7	22.7	26.9	25.0	25.8	25.2	22.8	24.0	19.6	18.3	19.1
28	22.5	20.7	21.7	25.6	24.5	25.0	26.4	24.3	25.2	19.7	18.5	19.3
29	22.6	19.8	21.3	25.2	24.1	24.8	26.3	24.7	25.4	19.7	18.1	19.1
30	23.0	21.4	22.2	24.5	22.9	23.7	24.6	23.3	24.0	20.0	19.4	19.7
31	---	---	---	25.0	22.9	24.0	23.4	22.2	22.9	---	---	---
MONTH	24.8	19.3	22.5	---	---	---	27.6	20.8	24.6	25.3	17.0	22.0

CAPE FEAR RIVER BASIN

0210789120 GROVE CREEK NEAR KENANSVILLE, NC

LOCATION.--Lat 34°58'25", long 77°54'50", Duplin County, Hydrologic Unit 03030007, 3.0 miles above mouth, and 2.7 miles east of Kenansville.

DRAINAGE AREA.--35.5 mi^2.

PERIOD OF RECORD.--September 1983 to current year.

REMARKS.--Station operated to define stream quantity and quality in the Grove Creek basin.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)
OCT											
22...	1435	3.5	140	6.20	11.5	6.0	766	7.6	69	2.0	--
NOV											
17...	1600	42	83	6.50	12.0	7.6	750	7.8	74	1.5	--
JAN											
02...	1330	305	74	6.00	7.5	15	755	10.0	84	1.6	--
19...	1330	135	75	6.10	9.5	12	750	10.0	89	1.7	K16000
22...	1340	318	60	6.00	6.5	11	742	11.0	92	1.6	24000
23...	1140	695	58	6.10	5.5	9.0	755	12.0	96	1.6	22000
MAR											
02...	1330	530	58	6.00	12.5	7.2	760	9.5	89	1.7	--
APR											
08...	1640	38	82	6.40	16.0	6.2	755	8.7	89	--	--
MAY											
05...	1330	27	82	6.30	15.0	2.4	765	7.8	77	2.0	--
JUN											
03...	1330	7.0	83	6.00	23.0	3.2	760	4.7	55	2.1	K1500
17...	1220	14	96	6.40	23.0	3.5	760	5.7	67	2.1	--
JUL											
08...	1345	19	88	6.40	24.0	3.5	755	4.9	59	2.0	3100
AUG											
21...	1230	75	72	6.10	23.5	3.5	750	6.4	77	1.9	2800
SEP											
01...	1310	19	92	6.40	23.0	3.2	750	6.8	81	1.8	--
08...	1400	154	85	6.80	24.0	--	755	5.1	61	1.8	--

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	CALCIUM DIS-SOLVED (MG/L AS CA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	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, ORGANIC TOTAL (MG/L AS N)
OCT											
22...	--	11	4.4	12	13	132	--	<0.010	2.10	0.010	0.69
NOV											
17...	--	8.6	3.2	26	13	92	--	<0.010	0.300	<0.010	--
JAN											
02...	--	5.4	3.0	15	8.2	70	--	<0.010	1.50	0.040	0.56
19...	K1500	--	--	--	--	--	--	--	--	--	--
22...	K1600	2.4	1.3	15	7.1	46	--	<0.010	1.20	0.020	0.48
23...	2100	4.5	2.3	15	6.5	54	1.19	0.010	1.20	0.040	0.86
MAR											
02...	--	4.9	2.4	12	6.4	58	1.19	0.010	1.20	0.030	0.47
APR											
08...	--	9.0	2.3	11	8.8	56	1.28	0.020	1.30	0.130	0.77
MAY											
05...	--	7.3	3.2	10	9.3	80	1.62	0.080	1.70	0.830	2.1
JUN											
03...	K340	8.2	2.5	11	11	72	1.18	0.020	1.20	0.080	1.7
17...	--	9.0	2.4	10	10	93	1.99	0.010	2.00	0.080	1.2
JUL											
08...	540	9.7	3.1	11	10	75	1.59	0.010	1.60	0.130	0.97
AUG											
21...	400	6.7	2.2	12	8.1	76	--	<0.010	0.800	0.040	1.5
SEP											
01...	--	10	2.7	28	10	78	--	<0.010	1.50	0.050	--
08...	--	8.8	3.5	22	9.4	78	0.480	0.020	0.500	0.110	0.49

CAPE FEAR RIVER BASIN

0210789120 GROVE CREEK NEAR KENANSVILLE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT										
22...	0.70	2.8	12	0.190	0.140	0.140	0.43	5.8	2	0.02
NOV										
17...	0.60	0.90	4.0	0.080	0.090	0.040	0.12	14	0	0.0
JAN										
02...	0.60	2.1	9.3	0.090	0.060	0.040	0.12	15	5	4.1
19...	--	--	--	--	--	--	--	--	5	1.8
22...	0.50	1.7	7.5	0.070	0.040	0.030	0.09	12	29	25
23...	0.90	2.1	9.3	0.100	0.050	0.030	0.09	14	30	56
MAR										
02...	0.50	1.7	7.5	0.110	0.050	0.030	0.09	12	5	7.2
APR										
08...	0.90	2.2	9.7	0.090	0.070	0.040	0.12	11	3	0.31
MAY										
05...	2.9	4.6	20	0.150	0.120	0.100	0.31	13	7	0.51
JUN										
03...	1.8	3.0	13	0.360	0.130	0.110	0.34	13	9	0.17
17...	1.3	3.3	15	0.120	0.040	0.030	0.09	9.6	10	0.39
JUL										
08...	1.1	2.7	12	0.150	0.160	0.120	0.37	13	5	0.25
AUG										
21...	1.5	2.3	10	0.110	0.070	0.050	0.15	17	8	1.6
SEP										
01...	<0.20	--	--	0.070	0.040	0.030	0.09	11	5	0.26
08...	0.60	1.1	4.9	0.170	0.150	0.110	0.34	16	16	6.7

CAPE FEAR RIVER BASIN

0210797940 LIMESTONE CREEK AT NC 24 NEAR HADLEY, NC

LOCATION.--Lat 34°54'55", long 77°41'35", Duplin County, Hydrologic Unit 03030007, at downstream side of culvert on NC 24, 1.2 mi east of Hadley.

DRAINAGE AREA.--1.61 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1986 to current year.

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

REMARKS.--No estimated daily discharges. Records fair.

EXTREMES FOR CURRENT PERIOD.--April to September 1986: Peak discharges greater than base discharge of 80 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug. 20	2130	*88	*5.11	No other peak greater than base discharge.			

No flow several days each month.

Water Year 1987

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	2300	92	5.24	Mar. 1	1530	90	5.16
Jan. 22	1730	*95	*5.33				

No flow several days in October, June, July, August and September.

DISCHARGE, IN CUBIC FEET PER SECOND, APRIL 1986 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	1.7	.00	1.4	5.0	.98	2.0
2	---	---	---	---	---	---	1.5	.00	.78	23	.68	1.4
3	---	---	---	---	---	---	1.4	.00	.67	49	1.5	1.1
4	---	---	---	---	---	---	1.2	.00	.50	31	4.8	.87
5	---	---	---	---	---	---	1.1	.00	.29	14	4.2	.66
6	---	---	---	---	---	---	1.0	.00	.42	7.0	2.2	.62
7	---	---	---	---	---	---	.94	.00	.63	3.7	1.2	.46
8	---	---	---	---	---	---	.84	.00	.52	2.2	.48	.28
9	---	---	---	---	---	---	.82	.00	2.1	1.3	.09	1.7
10	---	---	---	---	---	---	.76	.00	.98	2.6	.00	2.4
11	---	---	---	---	---	---	.63	.00	.47	25	.00	1.6
12	---	---	---	---	---	---	.55	.00	.20	16	.00	1.0
13	---	---	---	---	---	---	.46	.00	.02	7.2	.01	.60
14	---	---	---	---	---	---	.42	.00	.00	3.3	.27	.32
15	---	---	---	---	---	---	.38	.00	.00	1.9	.40	.15
16	---	---	---	---	---	---	1.1	.00	.22	1.5	1.1	.03
17	---	---	---	---	---	---	.98	.00	.24	1.1	1.1	.00
18	---	---	---	---	---	---	.82	.00	.22	.79	2.0	.00
19	---	---	---	---	---	---	.68	.00	.01	.38	22	.00
20	---	---	---	---	---	---	.53	.00	.00	.08	62	.00
21	---	---	---	---	---	---	.51	1.4	.00	.00	65	.02
22	---	---	---	---	---	---	.57	3.1	.00	.00	33	1.2
23	---	---	---	---	---	---	.42	1.3	.00	.00	18	.66
24	---	---	---	---	---	---	.31	.65	.00	.93	11	.30
25	---	---	---	---	---	---	.22	.35	.00	.74	7.8	.12
26	---	---	---	---	---	---	.17	.24	.00	.58	5.3	.02
27	---	---	---	---	---	---	.10	.17	.00	1.3	3.8	.00
28	---	---	---	---	---	---	.03	.08	.48	3.4	3.2	.00
29	---	---	---	---	---	---	.00	.25	19	4.2	2.9	.00
30	---	---	---	---	---	---	.00	3.8	9.5	3.3	2.2	.00
31	---	---	---	---	---	---	---	2.4	---	1.7	2.2	---
TOTAL	---	---	---	---	---	---	20.14	13.74	38.65	212.20	259.41	17.51
MEAN	---	---	---	---	---	---	.67	.44	1.29	6.85	8.37	.58
MAX	---	---	---	---	---	---	1.7	3.8	19	49	65	2.4
MIN	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
CFSM	---	---	---	---	---	---	.42	.28	.80	4.25	5.20	.36
IN.	---	---	---	---	---	---	.47	.32	.89	4.90	5.99	.40

CAPE FEAR RIVER BASIN

0210797940 LIMESTONE CREEK AT NC 24 NEAR HADLEY, NC--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.23	3.6	19	8.6	76	6.8	4.1	.09	.00	.00	.48
2	.00	.38	6.0	58	7.6	56	5.7	3.5	.00	.02	.00	.31
3	.00	.42	11	30	7.0	30	5.1	3.1	.00	2.2	.00	.11
4	.00	.32	9.0	17	6.2	19	5.2	2.8	.28	8.1	.00	.00
5	.00	.24	6.0	12	5.6	13	4.9	2.5	.70	4.1	.00	.06
6	.00	.23	4.5	9.2	5.2	10	4.6	2.2	.53	2.7	.00	.32
7	.00	.21	3.5	7.8	6.3	8.8	4.3	2.0	.22	2.0	.00	.62
8	.00	.22	3.0	7.0	7.0	7.8	4.2	2.0	.05	1.5	.12	1.2
9	.00	.19	2.7	6.2	6.1	7.8	4.1	2.0	.00	1.0	.04	1.4
10	.00	.09	2.6	6.0	5.3	7.9	3.9	1.7	.00	.65	.02	4.7
11	.00	.05	3.9	6.6	4.7	6.9	3.8	1.4	.00	.29	.00	2.8
12	.03	.21	10	6.2	4.4	6.2	3.8	1.3	.00	.06	.00	1.9
13	.17	.64	25	5.8	4.1	5.7	3.7	1.4	.00	.00	.00	4.0
14	.72	.50	16	5.5	3.8	5.2	3.5	3.3	2.1	.00	.00	4.4
15	2.1	1.8	10	5.4	3.7	4.7	16	4.4	2.7	.00	.00	6.8
16	1.1	4.5	7.7	5.8	4.5	4.2	57	3.5	1.6	.00	.00	4.6
17	.48	3.3	6.0	12	15	3.9	33	2.6	1.0	.00	.00	2.8
18	.25	2.9	5.0	19	16	3.6	19	2.0	1.7	.00	.00	2.1
19	.16	2.6	4.8	32	12	4.7	14	1.5	8.9	.00	.56	1.8
20	.08	2.8	4.1	32	9.5	7.1	12	4.6	4.8	.00	5.4	1.6
21	.02	5.2	3.4	20	8.0	6.4	9.7	7.0	2.8	.00	3.1	1.4
22	.00	4.0	2.8	64	7.4	5.4	7.9	4.8	1.9	.00	1.8	1.1
23	.00	3.0	2.5	64	10	4.8	6.4	3.4	1.4	.00	1.2	.91
24	.00	3.4	33	36	9.4	4.1	6.3	2.4	1.2	.00	.87	.70
25	.06	4.6	66	24	7.8	3.7	11	1.8	.93	.00	1.3	.42
26	1.7	4.0	35	28	6.6	3.6	13	1.3	.70	.00	1.9	.28
27	1.9	3.7	21	21	9.3	3.6	11	.99	.94	.00	1.4	.19
28	1.2	3.2	13	16	32	5.0	8.1	.74	.61	.00	.95	.09
29	.71	2.8	8.8	13	---	5.0	6.1	.60	.24	.00	.60	.06
30	.48	2.6	7.0	11	---	5.8	4.9	.45	.00	.00	.57	.14
31	.27	---	5.8	10	---	7.5	---	.27	---	.00	.55	---
TOTAL	11.43	58.33	342.7	609.5	233.1	343.4	299.0	75.65	35.39	22.62	20.38	47.29
MEAN	.37	1.94	11.1	19.7	8.32	11.1	9.97	2.44	1.18	.73	.66	1.58
MAX	2.1	5.2	66	64	32	76	57	7.0	8.9	8.1	5.4	6.8
MIN	.00	.05	2.5	5.4	3.7	3.6	3.5	.27	.00	.00	.00	.00
CFSM	.23	1.21	6.87	12.2	5.17	6.88	6.19	1.52	.73	.45	.41	.98
IN.	.26	1.35	7.92	14.1	5.39	7.93	6.91	1.75	.82	.52	.47	1.09

CAL YR 1986 TOTAL 974.10 MEAN 3.54 MAX 66 MIN .00 CFSM 2.20 IN. 22.5
WTR YR 1987 TOTAL 2098.77 MEAN 5.75 MAX 76 MIN .00 CFSM 3.57 IN. 48.5

CAPE FEAR RIVER BASIN

0210797940 LIMESTONE CREEK AT NC 24 NEAR HADLEY, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1986 to current year.

REMARKS.--Station is part of district's Natural Quality Network for determining the quality of streams relatively unaffected by man. Samples are collected approximately 0.7 mi upstream from gage.

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

WATER QUALITY DATA, APRIL TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	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, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
JUN										
12...	1345	0.21	--	--	--	--	--	--	--	--
AUG										
04...	1330	5.4	--	--	--	--	--	--	--	--
19...	1058	25	36	4.00	0.200	0.020	0.220	0.050	0.75	0.80
19...	1155	25	--	--	--	--	--	--	--	--
20...	1200	55	42	3.90	0.050	0.010	0.060	0.040	0.61	0.65
21...	1115	66	--	--	--	--	--	--	--	--
21...	1605	58	--	--	--	--	--	--	--	--
25...	1200	8.0	--	--	0.050	0.010	0.060	0.020	0.59	0.61

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	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)
JUN										
12...	--	--	--	--	--	--	--	--	--	--
AUG										
04...	--	--	--	--	--	--	--	--	--	--
19...	1.0	4.5	0.080	0.040	1700	<1	<1	2	<1	3
19...	--	--	--	--	--	--	--	--	--	--
20...	0.71	3.1	0.030	0.030	1300	<1	<1	2	<1	4
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
25...	0.67	3.0	0.020	0.020	1300	<1	<1	6	<1	<1

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)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
JUN									
12...	--	--	--	--	--	--	--	9	0.01
AUG									
04...	--	--	--	--	--	--	--	13	0.19
19...	1100	<5	20	0.10	3	<1	10	44	3.0
19...	--	--	--	--	--	--	--	35	2.4
20...	730	<5	20	<0.10	4	<1	20	11	1.6
21...	--	--	--	--	--	--	--	4	0.71
21...	--	--	--	--	--	--	--	5	0.78
25...	1000	<5	40	0.70	4	<1	--	3	0.06

CAPE FEAR RIVER BASIN

0210797940 LIMESTONE CREEK AT NC 24 NEAR HADLEY, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	PRES-SURE (MM OF HG)	HARD-NESS (MG/L AS CACO3)	NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)
DEC											
04...	1545	8.2	--	--	--	--	--	--	--	--	--
JAN											
19...	1350	34	64	4.40	11.5	--	--	--	--	--	--
21...	1230	19	--	--	--	--	--	--	--	--	--
APR											
16...	1245	61	--	--	--	--	--	--	--	--	--
16...	1300	60	43	4.30	20.0	150	8.5	--	5	0	1.2
16...	1320	60	--	--	--	--	--	--	--	--	--
MAY											
28...	1300	0.72	--	--	--	--	--	--	--	--	--
AUG											
20...	1130	6.4	--	--	22.0	57	7.1	761	7	6	1.7
SEP											
08...	1600	1.3	--	--	24.0	58	6.1	753	10	0	2.2

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	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)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
DEC											
04...	--	--	--	--	--	--	--	--	--	--	--
JAN											
19...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
APR											
16...	--	--	--	--	--	--	--	--	--	--	--
16...	0.55	2.5	46	0.5	0.80	14	4.4	<0.10	4.1	52	--
16...	--	--	--	--	--	--	--	--	--	--	--
MAY											
28...	--	--	--	--	--	--	--	--	--	--	--
AUG											
20...	0.76	2.4	38	0.4	1.0	21	3.8	0.10	3.3	41	35
SEP											
08...	1.0	3.4	38	0.5	1.9	17	8.3	0.10	2.4	43	--

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)
DEC											
04...	--	--	--	--	--	--	--	--	--	--	--
JAN											
19...	--	--	<0.190	<0.010	0.200	0.040	1.2	1.2	1.4	6.2	0.020
21...	--	--	--	--	--	--	--	--	--	--	--
APR											
16...	--	--	--	--	--	--	--	--	--	--	--
16...	0.07	8.4	<0.190	<0.010	0.200	0.090	0.71	0.80	1.0	4.4	0.050
16...	--	--	--	--	--	--	--	--	--	--	--
MAY											
28...	--	--	--	--	--	--	--	--	--	--	--
AUG											
20...	0.06	0.71	--	<0.010	0.100	0.050	0.95	1.0	1.1	4.9	0.070
SEP											
08...	0.06	0.15	--	<0.010	0.300	0.030	0.37	0.40	0.70	3.1	0.020

CAPE FEAR RIVER BASIN

0210797940 LIMESTONE CREEK AT NC 24 NEAR HADLEY, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	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)
DEC										
04...	--	--	--	--	--	--	--	--	--	--
JAN										
19...	0.020	1000	<1	<1	<1	<1	2	340	<5	10
21...	--	--	--	--	--	--	--	--	--	--
APR										
16...	--	--	--	--	--	--	--	--	--	--
16...	0.020	1100	<1	<1	9	<1	3	220	<5	10
16...	--	--	--	--	--	--	--	--	--	--
MAY										
28...	--	--	--	--	--	--	--	--	--	--
AUG										
20...	0.010	990	<1	<1	<1	1	<1	390	<5	10
SEP										
08...	<0.010	750	<1	<1	1	<1	1	570	<5	<10

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PCB, TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)
DEC										
04...	--	--	--	--	--	--	--	--	--	--
JAN										
19...	<0.10	2	<1	<10	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
APR										
16...	--	--	--	--	--	--	--	--	--	--
16...	0.30	<1	<1	<10	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
MAY										
28...	--	--	--	--	--	--	--	--	--	--
AUG										
20...	--	<1	1	<10	<0.1	<0.10	<0.010	<0.1	<0.010	<0.010
SEP										
08...	0.40	<1	<1	<10	<0.1	<0.10	<0.010	<0.1	<0.010	<0.010

CAPE FEAR RIVER BASIN

0210797940 LIMESTONE CREEK AT NC 24 NEAR HADLEY, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	DDT, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)
DEC										
04...	--	--	--	--	--	--	--	--	--	--
JAN										
19...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
APR										
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
MAY										
28...	--	--	--	--	--	--	--	--	--	--
AUG										
20...	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01
SEP										
08...	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01

DATE	METH-OXY-CHLOR, TOTAL (UG/L)	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)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
DEC										
04...	--	--	--	--	--	--	--	--	4	0.09
JAN										
19...	--	--	--	--	--	--	--	--	7	0.64
21...	--	--	--	--	--	--	--	--	2	0.10
APR										
16...	--	--	--	--	--	--	--	--	12	2.0
16...	--	--	--	--	--	--	--	--	1	0.16
MAY										
28...	--	--	--	--	--	--	--	--	15	0.03
AUG										
20...	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	8	0.14
SEP										
08...	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<0.01	7	0.02

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.

WATER-DISCHARGE RECORDS

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.

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

AVERAGE DISCHARGE.--47 years, 721 ft^3/s, 16.35 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,400 ft^3/s July 6, 1962, gage height, 20.16 ft; minimum, 5.3 ft^3/s Oct. 10, 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,260 ft^3/s Jan. 25, gage height, 13.57 ft; minimum discharge, 19 ft^3/s July 30, 31, Aug. 1; minimum gage heigh, 1.20 ft Oct. 7, 8, 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	136	256	1660	1760	2180	2160	2040	206	77	26	118
2	31	124	278	1970	1500	3920	1940	1510	188	103	72	116
3	30	127	396	2320	1310	4960	1750	1100	154	223	65	103
4	28	133	501	2450	1150	5040	1550	797	142	1040	56	91
5	27	134	520	2410	1010	4860	1330	625	175	1270	48	91
6	24	130	500	2210	896	4440	1110	533	225	1150	38	108
7	22	125	450	1920	849	3650	915	480	244	764	55	137
8	21	121	392	1650	895	2680	771	435	207	454	131	196
9	21	116	353	1400	912	1930	665	397	176	255	196	275
10	23	111	332	1190	886	1490	582	350	156	157	177	570
11	30	104	334	1020	830	1250	517	307	127	133	203	760
12	93	102	460	894	758	1110	467	267	103	115	434	611
13	201	116	789	805	690	1020	425	247	96	109	536	522
14	208	161	946	730	630	947	386	302	438	103	371	536
15	170	204	964	664	587	876	420	381	763	106	285	502
16	203	303	929	613	563	810	1210	488	692	98	392	421
17	309	388	841	693	795	743	1740	516	501	87	413	317
18	444	422	732	909	1040	679	2020	540	367	79	360	224
19	449	422	641	1260	1120	646	2260	472	446	69	268	177
20	364	406	566	1590	1150	725	2390	465	439	58	595	157
21	292	407	512	1780	1140	771	2280	576	331	50	816	149
22	224	398	465	2230	1090	750	2130	531	233	43	737	138
23	164	376	428	3700	1110	700	1930	535	164	37	510	127
24	129	349	700	4920	1150	638	1640	459	134	33	311	108
25	112	328	1740	5220	1150	579	1710	360	159	28	273	93
26	124	308	2690	5090	1100	536	2100	325	140	26	330	82
27	190	295	3130	4690	1070	522	2560	661	141	23	261	73
28	218	282	3190	4150	1350	884	2880	389	134	22	188	65
29	200	269	2900	3440	---	1530	2930	297	106	20	133	60
30	179	260	2390	2690	---	2140	2600	242	85	19	113	60
31	156	---	1930	2130	---	2290	---	209	---	20	108	---
TOTAL	4719	7157	31255	68398	28491	55296	47368	16836	7472	6771	8501	6987
MEAN	152	239	1008	2206	1018	1784	1579	543	249	218	274	233
MAX	449	422	3190	5220	1760	5040	2930	2040	763	1270	816	760
MIN	21	102	256	613	563	522	386	209	85	19	26	60
CFSM	.25	.40	1.68	3.68	1.70	2.98	2.64	.91	.42	.36	.46	.39
IN.	.29	.44	1.94	4.25	1.77	3.43	2.94	1.05	.46	.42	.53	.43

CAL YR 1986 TOTAL 128791 MEAN 353 MAX 3190 MIN 21 CFSM .59 IN. 8.00
WTR YR 1987 TOTAL 289251 MEAN 792 MAX 5220 MIN 19 CFSM 1.32 IN. 18.0

CAPE FEAR RIVER BASIN

02108000 NORTHEAST CAPE FEAR RIVER NEAR CHINQUAPIN, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/13	1235	WATER	0.1	2.78	208	475	7.30	20.0		7.3	330
86/11/13	1400	WATER	0.1	2.11	114	299	6.90	18.0		7.8	
86/12/15	1145	WATER	0.1			162	6.00	7.0		9.6	
86/12/16	1145	WATER	0.1	6.48	933						
87/01/05	1320	WATER	0.1	10.68	2408	93	5.80	6.0	5.2	9.6	
87/02/03	1205	WATER	0.1			106	6.60	8.0		9.7	
87/03/04	1145	WATER	0.1			73	5.30	11.0		7.3	
87/04/02	1240	WATER	0.1			86	5.60	12.0	5.0	7.5	
87/05/04	1330	WATER	0.1			102	6.50	20.0		6.6	
87/06/18	1535	WATER	0.1			160		24.0		6.1	
87/07/28	1605	WATER	0.1			263	6.80	28.0	2.7	8.0	
87/08/27	1345	WATER	0.1			380	5.50	26.0		5.1	
87/09/29	1321	WATER	0.1			334	6.90	21.0		7.4	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/13	1235	WATER	0.1		5	320					
86/11/13	1400	WATER	0.1	29	1K	230					
86/12/15	1145	WATER	0.1	8	2	120					
87/01/05	1320	WATER	0.1	5	2	100	1.30	.050	.500	.060	.030
87/02/03	1205	WATER	0.1	4	1K	110					
87/03/04	1145	WATER	0.1	3	3	120					
87/04/02	1240	WATER	0.1	4	3	94	.76	.100	.500	.100	.050
87/05/04	1330	WATER	0.1	13	7	130					
87/06/18	1535	WATER	0.1		9	140					
87/07/28	1605	WATER	0.1		6	160	.72	.050	.300	.180	.090
87/08/27	1345	WATER	0.1		8	160					
87/09/29	1321	WATER	0.1		3	200					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/01/05	1320	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/04/02	1240	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	19
87/07/28	1605	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.--No estimated daily discharges. Records good. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--11 years, 10.3 ft^3/s, 17.86 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 361 ft^3/s July 3, 1987, gage height, 7.92 ft; no flow June 19, 22, Sept. 27-30, Oct. 10-28, Nov. 1-3, 7, 20-22, 1978, Oct. 14-16, 20-23, 1981, Oct. 21, Nov. 3, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 170 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	2115	275	6.68	Mar. 1	1445	270	6.61
Jan. 2	0145	181	5.09	July 3	2100	*361	*7.92
Jan. 22	1730	320	7.33	Sept. 10	0700	180	5.07

Minimum discharge, 0.09 ft^3/s Oct. 7, 8, gage height, 2.15 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	1.5	1.3	55	15	225	22	9.1	1.0	19	7.4	.88
2	.13	.82	2.8	113	12	103	14	9.1	.73	11	7.0	.73
3	.14	.59	2.7	44	11	50	11	8.1	.65	141	4.5	.54
4	.13	.43	2.9	31	10	35	11	5.1	6.6	179	1.8	.61
5	.76	.46	2.5	23	8.9	26	10	3.7	3.1	60	.91	4.9
6	.53	.48	2.1	17	8.1	20	7.8	3.0	3.3	36	.57	7.8
7	.11	.87	1.8	14	13	16	6.3	2.5	2.7	23	17	24
8	.10	1.3	1.5	12	15	17	5.6	3.7	.72	16	27	56
9	.11	1.6	1.4	10	12	15	5.0	4.2	.46	11	13	39
10	1.5	.64	1.5	11	9.1	14	4.4	4.4	.35	7.7	5.1	113
11	.27	.41	3.3	11	8.0	13	4.3	1.8	.28	5.6	7.4	47
12	.35	2.1	9.1	9.2	7.3	12	5.4	1.3	.26	6.2	6.5	28
13	.35	.70	18	8.1	6.7	11	3.1	.98	7.8	3.2	3.9	30
14	2.6	.97	11	7.2	6.0	9.9	2.5	1.6	28	2.5	4.3	28
15	.22	5.8	7.2	6.5	6.6	10	20	1.2	21	1.7	7.0	27
16	.21	4.5	5.7	8.0	12	8.4	70	1.9	8.7	1.4	8.1	16
17	.27	3.4	4.7	25	29	7.6	38	3.0	4.5	1.0	3.6	11
18	.37	2.1	4.3	38	25	6.8	29	.91	2.7	.74	1.8	8.3
19	.57	1.5	4.1	59	18	9.5	24	13	4.8	2.2	3.7	6.5
20	.39	3.0	3.6	56	13	13	16	47	25	.47	3.3	7.7
21	.23	2.2	3.5	33	11	11	12	18	15	.33	4.3	5.1
22	.22	2.8	3.7	194	14	11	10	9.9	7.1	.27	3.3	3.9
23	.18	2.3	3.9	128	21	8.0	8.6	7.6	4.3	.25	2.3	2.7
24	.19	2.5	120	55	19	6.6	26	6.9	2.8	.22	.94	1.7
25	.92	1.9	120	44	13	5.8	106	3.7	2.1	.21	1.4	1.3
26	2.5	1.7	40	63	11	5.5	48	7.5	2.0	1.7	.63	2.1
27	.78	1.6	28	42	22	7.3	31	12	3.2	.33	.49	3.5
28	.65	1.4	21	30	103	11	22	6.5	3.1	.28	.39	1.2
29	.84	1.3	16	24	---	12	15	3.4	2.8	.27	4.1	.81
30	.82	1.9	13	20	---	13	11	2.4	9.7	.26	3.3	2.9
31	.86	---	11	18	---	24	---	3.3	---	.26	1.3	---
TOTAL	17.44	52.77	471.6	1209.0	459.7	737.4	599.0	206.79	174.75	533.09	156.33	482.17
MEAN	.56	1.76	15.2	39.0	16.4	23.8	20.0	6.67	5.82	17.2	5.04	16.1
MAX	2.6	5.8	120	194	103	225	106	47	28	179	27	113
MIN	.10	.41	1.3	6.5	6.0	5.5	2.5	.91	.26	.21	.39	.54
CFSM	.07	.23	1.95	5.00	2.10	3.05	2.56	.86	.75	2.20	.65	2.06
IN.	.08	.25	2.25	5.77	2.19	3.52	2.86	.99	.83	2.54	.75	2.30

CAL YR 1986 TOTAL 1570.53 MEAN 4.30 MAX 120 MIN .08 CFSM .55 IN. 7.49
WTR YR 1987 TOTAL 5099.99 MEAN 14.0 MAX 225 MIN .10 CFSM 1.79 IN. 24.3

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.

WATER-DISCHARGE RECORDS

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

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

AVERAGE DISCHARGE.--48 years, 710 ft^3/s, 14.18 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,200 ft^3/s Sept. 25, 1955; maximum gage height, 16.63 ft Sept. 26, 1955; minimum discharge, 0.1 ft^3/s Aug. 30, Sept. 9, 10, 28, Oct. 4-14, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,380 ft^3/s Mar. 6, gage height, 15.58 ft; minimum daily discharge, 30 ft^3/s June 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	119	379	2130	4140	2590	797	785	41	135	39	421
2	98	211	400	2280	3720	3630	798	699	38	123	39	591
3	90	276	506	2460	3310	4670	782	616	35	114	39	726
4	82	310	582	2650	2930	5650	758	540	35	126	37	831
5	72	e340	639	2730	2630	6220	719	468	49	145	33	1010
6	63	e320	666	2750	2380	6330	683	409	63	145	32	1260
7	56	e300	662	2760	2260	6160	646	361	62	132	34	1510
8	53	e280	637	2700	2130	5800	616	323	56	113	52	1630
9	54	e260	611	2580	2020	5330	587	292	47	94	90	1660
10	67	e240	587	2440	1920	4770	559	262	38	79	95	1710
11	108	e220	568	2280	1800	4200	532	234	33	64	81	1760
12	126	e200	602	2130	1690	3680	509	209	31	53	83	1830
13	138	e180	745	2000	1570	3210	482	184	30	48	93	1950
14	144	e160	889	1870	1470	2800	453	168	32	45	98	2010
15	160	e170	1020	1740	1370	2490	450	152	45	42	107	2020
16	158	e240	1090	1630	1320	2220	633	134	55	40	115	2020
17	154	e340	1120	1560	1300	2030	813	120	54	40	120	2060
18	147	e440	1120	1540	1330	1850	1010	108	64	38	115	2090
19	135	504	1120	1630	1380	1740	1130	96	125	37	104	2070
20	122	520	1100	1760	1400	1660	1260	90	158	36	92	1990
21	110	519	1080	1890	1410	1570	1340	91	172	39	87	1880
22	99	509	1050	e3000	1420	1490	1330	94	168	44	86	1750
23	89	494	1000	e3700	1460	1410	1230	97	153	52	82	1620
24	82	479	969	e4500	1490	1270	1170	95	134	59	104	1480
25	76	469	1250	e4900	1510	1120	1150	87	131	60	214	1280
26	80	460	1540	e5200	1510	1050	1120	75	130	56	260	1070
27	110	450	1820	e5400	1580	984	1090	64	143	49	290	949
28	122	435	2030	e5200	1840	924	1040	58	159	41	312	818
29	119	414	2110	e5000	---	866	965	53	158	38	316	707
30	116	389	2110	4900	---	827	874	49	148	37	313	610
31	109	---	2070	4580	---	806	---	45	---	38	317	---
TOTAL	3242	10248	32072	91890	54290	89347	25526	7058	2587	2162	3879	43313
MEAN	105	342	1035	2964	1939	2882	851	228	86.2	69.7	125	1444
MAX	160	520	2110	5400	4140	6330	1340	785	172	145	317	2090
MIN	53	119	379	1540	1300	806	450	45	30	36	32	421
CFSM	.15	.50	1.52	4.36	2.85	4.24	1.25	.33	.13	.10	.18	2.12
IN.	.18	.56	1.75	5.03	2.97	4.89	1.40	.39	.14	.12	.21	2.37

CAL YR 1986 TOTAL 163320 MEAN 447 MAX 2110 MIN 23 CFSM .66 IN. 8.93
WTR YR 1987 TOTAL 365614 MEAN 1002 MAX 6330 MIN 30 CFSM 1.47 IN. 20.0

e Estimated

WACCAMAW RIVER BASIN

02109500 WACCAMAW RIVER AT FREELAND, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/07	1305	WATER	0.1	2.49	54	170	5.30	23.0		7.4	10
86/11/18	1235	WATER	0.1	8.25	486	108	4.80	18.0		6.7	
86/12/17	1330	WATER	0.1	11.80	1116	63	4.40	9.0		7.8	
87/01/07	1345	WATER	0.1	13.97	2760	103	4.90	6.0	2.0	8.8	
87/02/04	1245	WATER	0.1			60	6.00	8.0		8.6	
87/03/11	1500	WATER	0.1			64	4.10	11.0		7.1	
87/04/07	1250	WATER	0.1			57	4.90	12.0	1.5	8.2	
87/05/06	1515	WATER	0.1			60	5.60	17.0		5.9	
87/06/17	1545	WATER	0.1			70	7.00	29.0		6.4	
87/07/27	1345	WATER	0.1			159	6.50	30.0	3.2	6.0	
87/08/25	1400	WATER	0.1			261	3.70	31.0		4.2	
87/09/23	1625	WATER	0.1			62	5.10	23.0		3.3	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/07	1305	WATER	0.1	4	4	130					
86/11/18	1235	WATER	0.1	2	14	1200					
86/12/17	1330	WATER	0.1		1	120					
87/01/07	1345	WATER	0.1	3	7	67	.28	.060	.500	.010	.010K
87/02/04	1245	WATER	0.1	5	1	91					
87/03/11	1500	WATER	0.1		4	92					
87/04/07	1250	WATER	0.1	2	5	78	.01K	.030	.500	.020	.010K
87/05/06	1515	WATER	0.1	12	3	96					
87/06/17	1545	WATER	0.1		3	84					
87/07/27	1345	WATER	0.1		7	49	.06	.020	.800	.030	.010K
87/08/25	1400	WATER	0.1		6	110					
87/09/23	1625	WATER	0.1	4	6	150					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/01/07	1345	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/04/07	1250	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/27	1345	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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 mi downstream from Walnut Branch, and at mile 416.

DRAINAGE AREA.--28.8 mi^2.

WATER-DISCHARGE RECORDS

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.

REMARKS.--No estimated daily discharges. Records good. U. S. Army Corps of Engineers rain gage and gage height radio telemetry and satellite data transmitter at station.

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

AVERAGE DISCHARGE.--48 years, 49.5 ft^3/s, 23.34 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,200 ft^3/s Aug. 13, 1940, gage height, 12.70 ft, datum then in use, 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 observed, 3.0 ft^3/s May 15, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	1300	506	3.25	Apr. 24	0100	705	3.87
Mar. 1	0200	*1,190	*4.97	June 26	0100	486	3.18

Minimum discharge, 10 ft^3/s Oct. 6, 7, 8, 9, gage height, 0.79 ft; minimum daily, 10 ft^3/s Oct. 6, 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	19	38	43	46	637	114	82	45	42	23	14
2	17	26	109	42	61	292	89	75	43	49	36	14
3	13	19	95	36	72	209	88	70	49	45	29	13
4	12	17	66	34	66	155	84	68	42	85	25	13
5	11	17	52	33	56	118	75	64	38	114	22	31
6	10	18	44	32	51	99	72	60	35	110	28	51
7	10	41	39	32	47	86	71	57	33	67	40	49
8	10	54	37	32	43	79	67	55	32	55	27	36
9	11	36	39	31	40	83	64	52	31	62	25	24
10	12	29	52	30	37	80	60	50	30	81	23	51
11	11	26	69	29	36	69	58	49	30	67	22	76
12	11	26	68	28	36	64	55	47	29	53	21	49
13	24	23	54	27	34	59	52	46	31	76	21	40
14	27	22	47	26	33	55	51	45	32	71	20	29
15	16	23	42	27	33	52	190	51	31	53	19	25
16	14	22	39	27	35	51	219	49	33	46	19	23
17	13	21	36	27	36	48	217	44	41	40	18	23
18	12	20	36	53	33	46	149	42	92	38	18	22
19	12	19	33	87	32	62	113	47	76	36	18	21
20	12	26	31	69	35	51	98	46	47	34	18	21
21	12	26	29	55	42	48	86	43	43	32	17	20
22	11	22	28	56	60	45	77	41	71	31	17	19
23	11	21	29	46	80	44	104	71	47	30	16	18
24	11	23	289	44	64	43	347	85	44	29	15	17
25	26	25	159	43	54	50	228	55	57	29	15	17
26	56	178	95	42	48	47	185	46	206	27	15	17
27	25	100	71	37	55	46	143	76	95	25	15	17
28	19	59	60	35	291	48	117	53	67	23	15	17
29	17	45	51	34	---	44	101	52	54	22	15	17
30	16	37	45	40	---	92	90	59	47	22	15	17
31	15	---	42	50	---	190	---	46	---	25	14	---
TOTAL	493	1040	1924	1227	1556	3092	3464	1726	1551	1519	641	801
MEAN	15.9	34.7	62.1	39.6	55.6	99.7	115	55.7	51.7	49.0	20.7	26.7
MAX	56	178	289	87	291	637	347	85	206	114	40	76
MIN	10	17	28	26	32	43	51	41	29	22	14	13
CFSM	.55	1.20	2.16	1.37	1.93	3.46	4.01	1.93	1.80	1.70	.72	.93
IN.	.64	1.34	2.49	1.58	2.01	3.99	4.47	2.23	2.00	1.96	.83	1.03

CAL YR 1986 TOTAL 10762 MEAN 29.5 MAX 289 MIN 7.6 CFSM 1.02 IN. 13.9
WTR YR 1987 TOTAL 19034 MEAN 52.1 MAX 637 MIN 10 CFSM 1.81 IN. 24.6

PEE DEE RIVER BASIN

02111000 YADKIN RIVER AT PATTERSON, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/29	1230	WATER	0.1	.95	17	44	6.30	12.0		10.3	680
86/11/18	1300	WATER	0.1	.97	20	41	6.40	10.0	1.0	11.1	
86/12/10	1320	WATER	0.1	1.37	57	38	6.10	11.0		11.0	
87/01/15	1400	WATER	0.1	1.12	28	41	6.20	7.0		11.8	
87/02/23	1400	WATER	0.1	1.54	76	33	6.10	7.0	2.5	12.1	
87/03/12	1415	WATER	0.1	1.44	64	42	6.20	7.0		12.2	
87/04/09	1300	WATER	0.1	1.44	64	37	6.50	11.0		11.6	
87/05/13	1340	WATER	0.1	1.27	46	36	6.60	20.0	1.5	8.6	
87/06/15	1330	WATER	0.1	1.11	30	39	6.60	22.0		9.0	
87/07/20	1320	WATER	0.1	1.16	34	42	6.60	22.0		8.7	
87/08/17	1220	WATER	0.1	.93	18	51	6.70	21.0	4.2	8.4	
87/09/17	1340	WATER	0.1	.99	23	46	6.60	21.0		9.2	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/29	1230	WATER	0.1	14	4	53	.03	.010	.100K	.020	.010
86/11/18	1300	WATER	0.1	14	3	45					
86/12/10	1320	WATER	0.1	9	5	31					
87/01/15	1400	WATER	0.1	12	2	45					
87/02/23	1400	WATER	0.1	9	1	47					
87/03/12	1415	WATER	0.1	11	3	53					
87/04/09	1300	WATER	0.1	11	1	36					
87/05/13	1340	WATER	0.1	11	10	45					
87/06/15	1330	WATER	0.1	13	9	45					
87/07/20	1320	WATER	0.1	13	11	60					
87/08/17	1220	WATER	0.1	14	4	48					
87/09/17	1340	WATER	0.1	15	4	50					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/18	1300	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/23	1400	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/13	1340	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/17	1220	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	18

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.

WATER DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Datum of gage is 1,082.40 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. U. S. Army Corps of Engineers rain gage and gage height radio telemetry and satellite data transmitter at station.

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

AVERAGE DISCHARGE.--22 years, 102 ft^3/s, 28.80 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft^3/s Nov. 6, 1977, 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, 11 ft^3/s Jan. 5, 1981, result of freezeup; minimum daily, 14 ft^3/s Aug. 27-31, 1981.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	1700	720	2.53	Apr. 24	0130	1,360	3.36
Dec. 24	1430	1,890	3.97	June 21	2300	735	2.55
Mar. 1	0230	*2,980	*5.04	July 3	2100	2,370	4.47
Apr. 15	1300	1,260	3.24	July 5	2130	757	2.58

Minimum discharge, 16 ft^3/s Oct. 8, 9, gage height, 0.77 ft; minimum daily, 18 ft^3/s Oct. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	33	66	78	91	1590	237	161	86	82	55	27
2	27	50	253	79	98	629	175	146	86	101	104	26
3	22	42	240	70	115	389	158	138	79	299	63	25
4	21	37	146	64	122	278	152	131	75	424	53	25
5	20	35	106	62	111	215	133	124	72	332	49	53
6	19	35	86	59	98	175	130	113	69	263	50	96
7	19	62	75	58	91	153	137	109	66	161	53	100
8	19	103	69	59	84	143	137	104	64	139	53	76
9	18	68	68	59	77	156	137	99	64	113	51	50
10	21	54	86	58	68	184	131	96	62	107	49	44
11	21	47	118	56	64	151	121	93	59	120	47	61
12	21	46	140	53	64	136	114	91	57	137	45	68
13	38	43	111	52	64	118	108	93	57	101	43	66
14	47	37	91	48	64	104	104	94	57	96	43	51
15	31	37	83	47	64	97	584	94	57	86	40	45
16	25	37	76	47	62	91	527	91	60	81	40	46
17	24	36	70	47	68	84	493	87	98	75	40	43
18	23	35	68	98	66	82	293	86	156	73	37	40
19	23	33	65	169	64	103	218	84	148	70	35	38
20	23	38	61	151	64	91	181	89	85	64	34	38
21	23	44	58	116	75	85	157	86	131	62	32	37
22	22	38	55	108	96	81	142	84	281	59	32	35
23	22	37	54	90	147	78	165	85	118	57	31	34
24	22	37	864	80	121	76	672	105	92	55	30	33
25	35	37	438	78	97	82	503	89	197	55	30	33
26	115	295	207	78	86	81	375	79	262	53	29	33
27	51	216	149	69	91	77	274	227	182	53	29	33
28	38	112	112	69	609	82	226	116	120	52	27	37
29	34	82	96	62	---	77	193	99	98	50	27	41
30	32	68	85	67	---	165	177	103	86	60	27	40
31	30	---	77	94	---	414	---	89	---	72	27	---
TOTAL	919	1874	4273	2325	2921	6267	7154	3285	3124	3552	1305	1374
MEAN	29.6	62.5	138	75.0	104	202	238	106	104	115	42.1	45.8
MAX	115	295	864	169	609	1590	672	227	281	424	104	100
MIN	18	33	54	47	62	76	104	79	57	50	27	25
CFSM	.62	1.30	2.87	1.56	2.17	4.20	4.96	2.20	2.16	2.38	.88	.95
IN.	.71	1.45	3.30	1.80	2.26	4.85	5.53	2.54	2.42	2.75	1.01	1.06

CAL YR 1986 TOTAL 21280 MEAN 58.3 MAX 864 MIN 17 CFSM 1.21 IN. 16.5
WTR YR 1987 TOTAL 38373 MEAN 105 MAX 1590 MIN 18 CFSM 2.19 IN. 29.7

PEE DEE RIVER BASIN

02111180 ELK CREEK AT ELKVILLE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/16	1310	WATER	0.1	.88	24	36	7.30	15.0	2.0	9.7	110
86/11/17	1140	WATER	0.1	.95	37	26	7.70	11.0	1.0	11.5	
87/02/05	1400	WATER	0.1	1.33	110	28	6.90	6.0	1.0K	10.0	
87/04/14	1025	WATER	0.1	1.32	105	27	6.30	14.0	1.5	10.4	
87/07/09	1405	WATER	0.1	1.33	113	30	6.70	25.0	3.0	8.4	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/16	1310	WATER	0.1	14	4	31	.06	.010	.100K	.020	.010K
86/11/17	1140	WATER	0.1	5	1	36					
87/02/05	1400	WATER	0.1	8	1K	28					
87/04/14	1025	WATER	0.1	15	4	32					
87/07/09	1405	WATER	0.1	10	6	32					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/16	1310	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
86/11/17	1140	WATER	0.1	10K	10K	25K	18	50K	.2K	50K	17
87/02/05	1400	WATER	0.1	10K	10K	25K	97	50K	.2K	50K	12
87/04/14	1025	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/09	1405	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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 mi^2.

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.--No estimated daily discharges. Records good. Slight diurnal fluctuation at low flow during growing season. Several observations of water temperature were taken during the year.

AVERAGE DISCHARGE.--48 years, 144 ft^3/s, 21.92 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft^3/s Aug. 14, 1940, gage height, 22.02 ft, from rating curve extended above 5,600 ft^3/s on basis of computation of peak flow over dam; minimum, 22 ft^3/s Aug. 17, 1954, gage height, 0.63 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	1330	2,560	6.60	Apr. 15	1100	3,560	8.11
Mar. 1	0300	*4,690	*9.56				

Minimum discharge, 43 ft^3/s Oct.6, 7, 8; minimum daily, 44 ft^3/s Oct. 6, 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	75	107	150	161	2530	353	270	179	137	97	72
2	61	110	307	148	170	801	275	261	176	268	112	65
3	50	82	282	135	182	513	258	254	163	266	114	64
4	48	76	184	130	185	382	274	255	184	345	99	62
5	46	76	148	126	166	309	238	244	166	303	94	102
6	44	83	130	124	155	267	234	234	153	212	93	156
7	44	138	119	123	149	244	228	226	148	174	101	170
8	44	171	114	124	141	234	216	218	144	161	103	148
9	47	118	122	119	131	254	204	208	141	152	97	92
10	52	98	148	119	127	256	195	205	139	145	91	92
11	49	92	209	117	126	220	190	202	137	165	89	216
12	50	94	204	113	125	207	187	199	139	145	90	130
13	75	87	160	111	121	198	182	198	141	146	86	159
14	84	81	137	110	121	190	177	201	140	143	85	112
15	60	83	127	113	122	184	1180	198	133	128	85	91
16	53	83	119	110	129	183	748	193	146	126	92	87
17	50	79	114	110	132	175	583	185	155	121	87	86
18	49	77	114	181	124	170	387	181	199	120	81	81
19	48	76	107	249	126	215	321	181	235	118	80	79
20	48	85	103	205	144	185	288	198	160	114	76	85
21	48	89	100	168	167	175	268	185	152	112	73	77
22	46	80	98	173	189	168	253	181	145	110	73	73
23	46	78	97	150	260	164	314	196	135	108	71	72
24	46	83	1160	142	197	161	907	215	130	106	70	71
25	62	81	484	145	170	179	882	232	384	103	71	71
26	186	373	263	147	158	172	521	243	293	101	74	70
27	92	273	203	131	176	168	386	198	216	104	71	70
28	77	157	177	131	863	171	337	186	161	101	68	89
29	71	126	162	127	---	160	306	186	145	97	69	77
30	69	110	152	147	---	343	287	195	137	97	66	76
31	67	---	141	178	---	804	---	177	---	98	68	---
TOTAL	1877	3314	6092	4356	5017	10382	11179	6505	5076	4626	2626	2895
MEAN	60.5	110	197	141	179	335	373	210	169	149	84.7	96.5
MAX	186	373	1160	249	863	2530	1180	270	384	345	114	216
MIN	44	75	97	110	121	160	177	177	130	97	66	62
CFSM	.68	1.24	2.20	1.58	2.01	3.75	4.18	2.35	1.90	1.67	.95	1.08
IN.	.78	1.38	2.54	1.82	2.09	4.33	4.66	2.71	2.12	1.93	1.10	1.21

CAL YR 1986 TOTAL 33101 MEAN 90.7 MAX 1160 MIN 26 CFSM 1.02 IN. 13.8
WTR YR 1987 TOTAL 63945 MEAN 175 MAX 2530 MIN 44 CFSM 1.96 IN. 26.7

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.

WATER-DISCHARGE RECORDS

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.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by W. Kerr Scott Reservoir 5.5 mi. upstream since 1962 (station 02111391). U. S. Army Corps of Engineers gage height radio telemeter, gage height telephone telemeter and satellite telemeter at station.

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

AVERAGE DISCHARGE.--72 years (1903-8, 1920-87), 823 ft^3/s, 22.18 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 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, 86 ft^3/s Dec. 4, 1965; minimum daily, 110 ft^3/s Sept. 18, 19, 1956.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,980 ft^3/s Mar. 1, gage height, 12.18 ft; minimum, 264 ft^3/s Oct. 24, gage height, 1.81 ft; minimum daily, 270 ft^3/s Oct. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	329	387	586	700	901	4330	2510	1270	769	627	522	421
2	322	450	1070	741	934	2580	1710	1160	877	1000	543	394
3	304	366	1270	697	1080	5250	1430	1120	870	980	541	348
4	307	349	1160	632	1120	5900	1340	1130	771	1270	531	346
5	313	349	970	582	954	5620	1300	1060	755	1610	539	415
6	304	357	797	560	822	3970	1140	1020	678	1470	534	480
7	301	454	727	566	827	2400	1090	998	633	1150	529	568
8	302	480	626	572	756	1670	1090	967	664	795	531	492
9	307	390	644	580	697	1380	1060	939	648	815	530	457
10	313	354	692	589	665	1360	952	903	608	859	515	545
11	313	358	849	559	603	1200	909	878	605	854	514	662
12	316	374	988	540	608	1090	945	960	607	816	499	565
13	376	404	936	512	609	1000	914	1030	656	717	483	572
14	385	407	824	510	614	942	560	896	664	699	482	533
15	330	416	748	517	620	941	2000	902	629	679	487	533
16	315	413	639	514	637	940	2540	899	697	619	499	554
17	311	409	576	529	698	886	3850	848	900	593	487	550
18	312	416	576	749	668	864	3950	837	969	588	480	537
19	312	411	553	993	618	1070	2570	829	1180	580	482	532
20	306	419	517	1210	640	1040	1800	833	1010	553	466	533
21	304	410	511	1190	717	909	1450	820	754	537	450	502
22	303	422	501	1060	870	895	1200	793	869	536	451	482
23	293	418	504	891	1230	823	1260	897	975	534	451	480
24	270	419	2260	654	1290	832	3020	1040	803	532	446	479
25	322	419	2390	684	969	918	2750	1120	1280	533	447	477
26	485	777	3280	805	798	927	4110	1070	1580	531	447	468
27	331	874	2380	681	845	823	5210	966	1610	534	424	457
28	310	906	1690	629	1930	874	3310	984	1080	528	421	491
29	309	746	917	624	---	875	1690	862	717	524	425	468
30	319	541	754	659	---	1300	1350	861	743	524	423	468
31	323	---	705	798	---	2490	---	799	---	525	420	---
TOTAL	9947	13895	31640	21527	23720	56099	59010	29691	25601	23112	14999	14809
MEAN	321	463	1021	694	847	1810	1967	958	853	746	484	494
MAX	485	906	3280	1210	1930	5900	5210	1270	1610	1610	543	662
MIN	270	349	501	510	603	823	560	793	605	524	420	346
CFSM	.64	.92	2.03	1.38	1.68	3.59	3.90	1.90	1.69	1.48	.96	.98
IN.	.73	1.03	2.34	1.59	1.75	4.14	4.36	2.19	1.89	1.71	1.11	1.09

CAL YR 1986 TOTAL 179950 MEAN 493 MAX 3280 MIN 251 CFSM .98 IN. 13.3
WTR YR 1987 TOTAL 324050 MEAN 888 MAX 5900 MIN 270 CFSM 1.76 IN. 23.9

PEE DEE RIVER BASIN

02112000 YADKIN RIVER AT WILKESBORO, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/16	1205	WATER	0.1	1.93	316	38	7.00	17.0	10.0	8.0	520
86/11/17	1225	WATER	0.1	2.11	403	39	7.00	12.0		10.2	
86/12/29	1045	WATER	0.1	2.93	897	34	7.00	9.0		11.6	
87/02/05	1215	WATER	0.1	3.09	994	36	6.50	5.0	6.1	10.6	
87/02/26	1020	WATER	0.1			39	7.40	6.0		12.9	
87/03/19	1035	WATER	0.1	3.27	1128	33	7.10	9.0		11.3	
87/04/14	1115	WATER	0.1	2.08	389	35	5.60	12.0	17.0	10.0	
87/05/19	1045	WATER	0.1	2.83	838	33	6.30	20.0		9.2	
87/06/01	1200	WATER	0.1	2.76	794	35	6.50	20.0		8.3	
87/07/09	1325	WATER	0.1	2.79	813	34	6.50	26.0	39.0	8.0	
87/08/06	1120	WATER	0.1	2.31	532	49	6.75	24.0		7.0	
87/09/02	1140	WATER	0.1	2.03	408	41	6.73	24.0		7.2	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/16	1205	WATER	0.1	14	13	49	.21	.070	.100	.030	.010
86/11/17	1225	WATER	0.1	9	11	66					
86/12/29	1045	WATER	0.1	4	26	84					
87/02/05	1215	WATER	0.1	10	6	39					
87/02/26	1020	WATER	0.1	17	3	47					
87/03/19	1035	WATER	0.1	10	37	75					
87/04/14	1115	WATER	0.1	10	16	67					
87/05/19	1045	WATER	0.1	15	14	21					
87/06/01	1200	WATER	0.1	13	3	27					
87/07/09	1325	WATER	0.1	12	32	67					
87/08/06	1120	WATER	0.1	14	26	92					
87/09/02	1140	WATER	0.1	15	45	73					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/16	1205	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/05	1215	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/04/14	1115	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/09	1325	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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.

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

AVERAGE DISCHARGE.--23 years, 191 ft^3/s, 20.26 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,600 ft^3/s Oct. 17, 1975, gage height, 22.54 ft, from floodmark in gage well, from rating curve extended above 2,400 ft^3/s on basis of slope-area measurement of peak flow, and at gage heights 14.40 ft, and 10.83 ft; minimum, 32 ft^3/s July 21, 22,1986; minimum daily, 33 ft^3/s July 21, 1986.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	1500	3,920	7.59	Apr. 25	0530	2,080	5.17
Mar. 1	0330	*9,750	*13.54	July 3	2100	2,940	6.36
Apr. 24	0100	2,780	6.15				

Minimum discharge, 55 ft^3/s Oct.6-8, gage height, 1.21 ft; minimum daily, 55 ft^3/s Oct. 6-8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	81	124	167	173	4290	391	310	173	154	130	79
2	63	178	316	172	184	1090	304	291	162	772	136	71
3	60	102	312	153	209	675	278	278	145	844	122	70
4	59	89	204	142	217	502	281	284	174	810	175	69
5	58	91	164	137	190	397	242	262	152	603	115	109
6	55	106	145	132	173	330	228	245	133	444	119	193
7	55	182	134	130	164	293	218	232	128	311	135	555
8	55	214	131	130	155	275	206	219	125	249	120	362
9	60	145	139	125	145	288	194	206	125	217	110	257
10	66	120	179	125	139	287	184	201	120	222	104	413
11	63	110	283	120	136	242	177	195	117	312	101	262
12	63	113	280	116	133	226	173	191	120	217	101	249
13	96	104	202	113	129	211	170	240	122	237	96	435
14	117	98	167	112	129	198	159	204	125	221	94	240
15	77	101	153	115	131	190	818	197	115	187	95	155
16	66	100	142	113	135	189	952	188	168	169	102	133
17	63	95	134	112	146	179	745	177	181	162	97	131
18	62	92	133	210	135	171	486	177	194	158	90	117
19	61	90	124	309	136	246	380	166	162	152	88	112
20	61	101	119	249	157	199	323	176	158	142	84	122
21	61	107	114	190	189	181	289	169	145	139	81	110
22	60	95	110	202	237	170	264	162	133	136	80	105
23	60	92	110	171	374	162	339	176	122	133	78	103
24	60	97	1480	162	265	155	1450	206	120	125	75	98
25	77	95	608	158	209	187	1410	194	557	122	77	98
26	171	359	324	163	187	184	753	268	529	119	82	96
27	93	304	244	e130	217	173	533	191	353	118	78	94
28	77	180	204	e143	1120	179	446	180	202	119	75	98
29	72	147	180	e143	---	162	384	298	169	111	75	98
30	70	130	166	152	---	462	343	180	152	162	72	110
31	68	---	153	188	---	660	---	162	---	125	74	---
TOTAL	2203	3918	7278	4784	5914	13153	13120	6625	5381	7992	3061	5144
MEAN	71.1	131	235	154	211	424	437	214	179	258	98.7	171
MAX	171	359	1480	309	1120	4290	1450	310	557	844	175	555
MIN	55	81	110	112	129	155	159	162	115	111	72	69
CFSM	.56	1.02	1.83	1.21	1.65	3.31	3.42	1.67	1.40	2.01	.77	1.34
IN.	.64	1.14	2.12	1.39	1.72	3.82	3.81	1.93	1.56	2.32	.89	1.49

CAL YR 1986 TOTAL 40244 MEAN 110 MAX 1480 MIN 33 CFSM .86 IN. 11.7
WTR YR 1987 TOTAL 78573 MEAN 215 MAX 4290 MIN 55 CFSM 1.68 IN. 22.8

e Estimated

PEE DEE RIVER BASIN

02112120 ROARING RIVER NEAR ROARING RIVER, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/16	1050	WATER	0.1	1.28	66	31	7.20	13.0	3.8	9.8	300
86/11/17	1310	WATER	0.1	1.42	94	28	7.20	12.0	1.9	11.2	
87/02/05	1115	WATER	0.1	1.77	190	28	6.50	5.0	3.0	10.3	
87/04/14	1205	WATER	0.1	1.74	158	24	7.10	14.0	2.6	9.7	
87/07/09	1210	WATER	0.1	.00	217	32	6.40	25.0	9.4	8.6	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/16	1050	WATER	0.1	12	5	33	.18	.020	.100	.030	.100K
86/11/17	1310	WATER	0.1	8	6	53	.21	.020	.100K	.020	.010K
87/02/05	1115	WATER	0.1	8	4	23	.43	.010K	.100	.010	.010K
87/04/14	1205	WATER	0.1	9	2	40	.26	.010	.100	.010	.010K
87/07/09	1210	WATER	0.1	8	10	38	.35	.010	.200	.040	.010

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/16	1050	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
86/11/17	1310	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	18
87/02/05	1115	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/04/14	1205	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/09	1210	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Considerable regulation by W. Kerr Scott Reservior (station 02111391). U. S. Army Corps of Engineers gage-height radio telemeter and satellite telemeter at station.

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

AVERAGE DISCHARGE.--23 years, 1,411 ft^3/s, 22.05 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,700 ft^3/s Apr. 10, 1983, gage height, 24.88 ft, from graph based on hourly gage-height readings and floodmark; minimum, 239 ft^3/s Aug. 31, 1981.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,800 ft^3/s Mar. 1, gage height, 17.04 ft; minimum, 439 ft^3/s Oct. 24, 25, gage height, 0.89 ft; minimum daily 447 ft^3/s Oct, 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	648	565	873	1040	1400	13900	3830	2300	1270	1110	870	605
2	550	946	1120	1140	1550	5500	2640	2130	1370	3010	885	590
3	482	710	2190	1080	1750	6580	2260	1980	1420	1950	930	546
4	471	625	1890	986	1820	7040	2150	1980	1340	2640	1000	531
5	468	605	1630	907	1610	6730	2040	1950	1380	2800	857	615
6	453	623	1360	882	1350	5380	1880	1810	1230	2440	886	965
7	447	691	1170	874	1330	3440	1760	1790	1100	2190	888	1620
8	447	1170	1070	880	1250	2710	1740	1710	1080	1450	873	1940
9	450	829	995	875	1150	2220	1700	1640	1090	1380	852	873
10	471	709	1060	881	1100	2250	1610	1590	1030	1440	817	1240
11	474	668	1220	865	1040	2010	1480	1530	1010	1580	795	1570
12	473	703	1780	836	1010	1830	1510	1540	1010	1360	789	1070
13	555	684	1640	800	1000	1710	1510	2030	1030	1340	741	1400
14	749	678	1420	792	986	1590	1300	1630	1110	1250	730	1180
15	601	668	1250	793	1000	1550	3280	1570	1050	1200	734	946
16	516	690	1150	796	1000	1540	4390	1560	996	1110	775	934
17	495	677	1000	795	1110	1500	5730	1530	1520	1040	759	936
18	486	665	952	1120	1100	1400	5550	1470	1520	1010	728	903
19	483	661	937	1760	1050	1760	4210	1430	1590	1010	713	858
20	473	655	885	1860	1090	1750	e2500	1430	1670	965	701	861
21	473	751	846	1760	1290	1540	e2190	1410	1270	918	671	836
22	473	692	825	1620	1420	1450	e1870	1380	1180	904	665	773
23	470	682	815	1480	2360	1390	2430	1320	1430	896	660	755
24	450	675	2020	1110	2070	1310	10700	1660	1310	890	640	745
25	463	683	6650	1060	1660	1460	9000	1830	2710	865	634	743
26	923	906	4090	1240	1360	1560	5600	1810	2820	858	642	742
27	680	1860	3600	1100	1400	1400	7070	1510	2800	845	634	719
28	551	1510	2780	1030	3270	1420	5220	1630	1990	878	611	727
29	527	1310	1840	999	---	1410	3200	1580	1190	835	604	769
30	520	1070	1250	1040	---	2540	2480	1450	1230	896	602	754
31	520	---	1100	1320	---	3700	---	1380	---	872	599	---
TOTAL	16242	24361	51408	33721	39526	91570	102830	51560	42746	41932	23285	27746
MEAN	524	812	1658	1088	1412	2954	3428	1663	1425	1353	751	925
MAX	923	1860	6650	1860	3270	13900	10700	2300	2820	3010	1000	1940
MIN	447	565	815	792	986	1310	1300	1320	996	835	599	531
(†)	-13	+107	0	+6	+140	-81	-50	-3	0	-13	-67	+32
MEAN‡	511	919	1658	1094	1552	2873	3378	1660	1425	1340	684	957
CFSM‡	0.59	1.06	1.91	1.26	1.79	3.31	3.89	1.91	1.64	1.54	0.79	1.10
IN‡	0.68	1.19	2.20	1.45	1.86	3.81	4.34	3.20	1.83	1.78	0.91	1.23

CAL YR 1986	TOTAL	292235	MEAN	801	MAX	6650	MIN	356	MEAN‡	802	CFSM‡	0.92	IN‡	12.53
WTR YR 1987	TOTAL	546927	MEAN	1496	MAX	13900	MIN	447	MEAN‡	1502	CFSM‡	1.73	IN‡	23.48

e Estimated
† 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.

PEE DEE RIVER BASIN

02112250 YADKIN RIVER AT ELKIN, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/16	0940	WATER	0.1	1.08	516	50	7.00	16.0	8.3	8.4	930
86/11/17	1410	WATER	0.1	1.45	678	43	7.10	13.0	9.0	10.2	
87/02/05	1015	WATER	0.1	3.27	1611	42	6.60	5.0	8.2	10.0	
87/04/14	1315	WATER	0.1	2.87	1401	37	5.70	13.0	8.1		
87/07/09	1120	WATER	0.1	2.81	1368	50	6.70	25.0	18.0	7.4	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/16	0940	WATER	0.1	16	18	68	.64	.120	.400	.160	.090
86/11/17	1410	WATER	0.1	16	24	68	.33	.040	.200	.070	.010K
87/02/05	1015	WATER	0.1	11	18	48	.61	.050	.200	.060	.010
87/04/14	1315	WATER	0.1	9	19	45	.45	.060	.200	.060	.020
87/07/09	1120	WATER	0.1	12	53	93	.59	.170	.300	.150	.020

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/16	0940	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
86/11/17	1410	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	16
87/02/05	1015	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/04/14	1315	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/09	1120	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.--No estimated daily discharges. Records good except those for March to September, which are fair. Several measurements of water temperatures were made during the year.

AVERAGE DISCHARGE.--23 years, 129 ft^3/s, 22.23 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,470 ft^3/s Sept. 22, 1979, gage height, 16.42 ft; minimum, 16 ft^3/s July 22, 1986, gage height, 1.53 ft; minimum daily, 24 ft^3/s Aug. 30, 31, 1981.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	1500	2,400	5.92	Apr. 25	0630	1,670	4.80
Mar. 1	0415	*4,700	*10.09	July 10	2015	1,680	4.82
Apr. 24	0200	2,580	6.22	Sept. 10	0845	2,820	6.63

Minimum discharge, 32 ft^3/s Oct. 6-9, gage height, 1.72 ft; minimum daily, 32 ft^3/s Oct. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	60	73	108	108	2520	231	264	120	89	65	39
2	37	112	174	117	109	679	192	255	114	368	65	36
3	37	72	175	102	125	392	169	236	111	357	66	35
4	36	64	118	96	138	289	184	248	117	326	72	35
5	35	62	97	93	127	244	152	225	112	246	60	110
6	34	70	86	87	119	205	145	192	103	187	58	159
7	32	98	81	83	116	185	143	211	102	136	72	294
8	32	138	78	86	110	172	137	190	91	147	70	275
9	33	91	81	81	103	181	121	168	99	113	64	109
10	38	76	94	80	93	177	118	154	88	368	59	880
11	38	70	146	79	91	148	113	154	81	280	57	258
12	37	72	152	75	92	140	112	196	93	147	56	190
13	54	67	116	74	90	133	112	235	92	199	53	215
14	78	60	101	73	89	124	103	172	86	171	49	155
15	53	60	93	73	89	121	378	179	82	145	50	125
16	43	63	86	73	94	123	558	227	81	138	59	112
17	42	60	84	73	109	118	469	220	80	108	54	120
18	41	59	83	124	96	113	295	194	102	114	50	106
19	40	57	77	173	93	171	256	154	104	104	49	104
20	40	62	74	145	101	137	210	162	86	96	45	105
21	40	71	72	117	120	131	186	146	86	94	42	93
22	40	61	70	127	150	115	169	138	80	84	41	87
23	40	59	68	110	266	105	220	135	71	88	40	83
24	39	58	890	102	183	107	1270	140	69	82	38	84
25	45	58	389	100	145	122	1170	153	322	78	39	84
26	135	182	201	107	131	120	550	132	183	77	41	82
27	70	161	151	110	144	118	393	123	147	78	40	80
28	56	103	132	106	683	124	331	127	94	62	38	79
29	51	87	120	100	---	115	274	122	91	60	39	76
30	50	78	111	95	---	443	259	125	80	83	37	93
31	48	---	102	114	---	430	---	124	---	68	37	---
TOTAL	1431	2391	4375	3083	3914	8302	9020	5501	3167	4693	1605	4303
MEAN	46.2	79.7	141	99.5	140	268	301	177	106	151	51.8	143
MAX	135	182	890	173	683	2520	1270	264	322	368	72	880
MIN	32	57	68	73	89	105	103	122	69	60	37	35
CFSM	.59	1.01	1.79	1.26	1.77	3.40	3.82	2.25	1.34	1.92	.66	1.82
IN.	.68	1.13	2.07	1.46	1.85	3.92	4.26	2.60	1.50	2.22	.76	2.03

CAL YR 1986 TOTAL 27918 MEAN 76.5 MAX 890 MIN 26 CFSM .97 IN. 13.2
WTR YR 1987 TOTAL 51785 MEAN 142 MAX 2520 MIN 32 CFSM 1.80 IN. 24.4

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.

AVERAGE DISCHARGE.--56 years, 183 ft^3/s, 19.42 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,200 ft^3/s Sept. 22, 1979, gage height, 19.61 ft 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, 12 ft^3/s Aug. 30, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	1530	4,550	9.08	Apr. 24	0430	5,200	9.83
Mar. 1	Unknown	*8,570	*12.65	Apr. 24	1530	3,700	8.01
Mar. 30	1400	2,340	6.31	Apr. 25	0630	3,460	7.71

Minimum discharge, 32 ft^3/s Oct. 7, 8, gage height, 1.93 ft; minimum daily, 33 ft^3/s Oct. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	65	99	143	165	e5800	378	286	e150	124	87	51
2	43	141	195	157	168	e1200	290	270	e160	729	101	47
3	40	99	259	138	193	e700	260	258	e150	550	117	47
4	39	81	166	129	226	412	270	257	e180	498	131	44
5	38	78	134	124	193	326	238	253	160	282	88	115
6	35	87	119	120	170	280	219	230	145	210	84	298
7	33	108	111	117	160	253	208	220	141	167	86	839
8	33	202	107	115	152	237	197	207	135	146	89	576
9	36	128	114	112	137	240	187	197	125	136	84	173
10	42	103	132	110	124	237	177	192	122	421	79	456
11	42	97	240	107	124	209	170	186	121	528	74	405
12	41	99	255	102	121	198	166	181	123	205	75	265
13	56	92	175	99	114	185	168	219	126	238	69	320
14	108	83	145	94	112	177	157	196	126	227	65	190
15	77	85	131	96	113	171	652	190	117	156	67	143
16	54	89	121	96	118	170	1050	180	119	142	81	127
17	48	83	115	100	139	165	813	e170	121	134	74	127
18	46	80	112	152	128	158	457	e165	227	130	66	117
19	45	76	106	284	123	235	341	e160	176	123	63	112
20	45	82	101	233	144	198	288	e180	175	116	61	128
21	44	98	95	167	181	174	258	e170	136	108	55	107
22	44	84	91	166	237	160	239	e160	122	104	54	99
23	43	80	90	156	337	152	271	e165	e118	103	52	94
24	44	80	1840	133	302	148	3060	e210	114	100	48	92
25	50	79	638	141	223	172	2200	e200	466	98	48	90
26	171	204	289	149	195	190	872	e290	257	91	53	86
27	102	247	215	138	208	163	526	e190	290	90	52	87
28	73	145	180	141	e1300	170	414	e270	151	88	46	85
29	63	121	158	142	---	155	352	e180	128	82	45	87
30	61	107	144	126	---	903	315	e170	120	96	44	96
31	57	---	133	178	---	791	---	e150	---	89	45	---
TOTAL	1697	3203	6810	4265	5907	14729	15193	6352	4801	6311	2183	5503
MEAN	54.7	107	220	138	211	475	506	205	160	204	70.4	183
MAX	171	247	1840	284	1300	5800	3060	290	466	729	131	839
MIN	33	65	90	94	112	148	157	150	114	82	44	44
CFSM	.43	.83	1.72	1.07	1.65	3.71	3.96	1.60	1.25	1.59	.55	1.43
IN.	.49	.93	1.98	1.24	1.72	4.28	4.42	1.85	1.40	1.83	.63	1.60

CAL YR 1986 TOTAL 37923 MEAN 104 MAX 1840 MIN 17 CFSM .81 IN. 11.0
WTR YR 1987 TOTAL 76954 MEAN 211 MAX 5800 MIN 33 CFSM 1.65 IN. 22.4

e Estimated

PEE DEE RIVER BASIN

02113500 YADKIN RIVER AT SILOAM, NC

LOCATION.--Lat 35°16'55", long 80°33'46", Yadkin County, Hydrologic Unit 03040101, on right bank at upstream side of bridge on Secondary Road 1003, at Siloam, 70 ft upstream from Hagan Creek, and 339 mi upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--1,226 mi^2.

PERIOD OF RECORD.--October 1976 to September 1987 (discontinued).

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

GAGE.--Water-stage recorder. Datum of gage is 782.02 ft above National Geodetic Vertical Datum of 1929 (North Carolina Department of Transportation bench mark). Prior to February 22, 1977, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some regulation by W. Kerr Scott Reservoir (station 02111391).

AVERAGE DISCHARGE.--11 years, 1,951 ft^3/s, 21.61 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,600 ft^3/s Sept. 22, 1979, gage height, 26.72 ft; minimum, 304 ft^3/s Aug. 31, Sept. 1, 1981, gage height, 2.66 ft; minimum daily, 315 ft^3/s Sept. 1, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 14 or 15, 1940 reached a stage of 816.7 ft above National Geodetic Vertical Datum of 1929, 34.7 ft above gage datum, from information by U. S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35,200 ft^3/s Mar. 1, gage height, 24.10 ft, from floodmarks; minimum, 538 ft^3/s Oct. 7, 8, 9, gage height, 3.05 ft; minimum daily, 538 ft^3/s Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	744	752	1250	1490	1920	e28000	4920	3550	e1800	e1900	e1200	873
2	706	1160	1160	1500	2100	e9200	3680	3250	e1900	e4200	e1280	860
3	619	1170	2320	1570	2580	e9700	3120	3050	e2000	e3000	e1300	791
4	576	948	2710	1500	2690	e10000	2940	3020	e1920	e3700	e1420	755
5	563	900	2210	1390	2400	e11300	2810	3040	e1980	e4200	e1200	794
6	563	894	1880	1310	2040	e7600	2590	2760	e1820	e3550	e1220	1460
7	542	899	1560	1300	1880	e5000	2360	2740	e1630	e2950	e1220	2970
8	538	1570	1440	1300	1820	e3600	2340	2560	e1550	e2400	e1200	5110
9	540	1320	1330	1300	1670	e3250	2270	2470	e1520	e2000	e1180	1520
10	575	1090	1330	1300	1550	e3000	2200	2380	e1480	e2100	e1150	2330
11	592	981	1460	1300	1490	2800	2040	e2300	e1450	e2300	e1100	2860
12	592	976	2490	1280	1440	2520	2010	e2200	e1450	e2000	e1100	1780
13	635	976	2330	1230	1430	2370	2080	e3000	e1480	e1900	e1080	2120
14	982	976	1990	1200	1410	2200	1960	e2450	e1550	e1780	e1050	1920
15	968	976	1700	1200	1400	2120	3740	e2200	e1500	e1680	e1050	1490
16	769	976	1550	1200	1400	2070	7190	e2150	e1400	e1600	e1080	1390
17	721	976	1410	1200	1500	2030	6490	e2200	e1900	e1550	e1070	1390
18	695	968	1270	1400	1550	1920	6370	e2100	e2000	e1500	e1050	1390
19	685	962	1250	2600	1410	2370	5650	e2080	e2100	e1480	e1030	1290
20	677	947	1200	2810	1510	2550	3980	e2050	e2300	e1400	1020	1360
21	669	968	1130	2450	1770	2130	3460	e2020	e1850	e1320	975	1300
22	666	1050	1090	2300	2000	1940	2930	e1950	e1700	e1300	973	1200
23	664	1010	1080	2160	4150	1890	2880	e2200	e2100	e1250	960	1190
24	649	990	1150	1680	3330	1770	21300	e2400	e2020	e1220	924	1160
25	626	983	6450	1560	2600	1820	9050	e2930	e3600	e1220	917	1150
26	1100	976	4940	1660	2110	2070	6420	e2600	e4000	e1200	934	1150
27	1200	2090	4860	1630	e4000	1950	8130	e2350	e3650	e1200	936	1110
28	853	2190	3660	1520	e12000	1860	6890	e2400	e2850	e1250	909	1090
29	778	1850	2850	1460	---	1870	4950	e2200	e2000	e1200	860	1060
30	757	1550	1890	1440	---	3590	3780	e2000	e1800	e1250	853	1060
31	753	---	1600	1800	---	5820	---	e1980	---	e1220	847	---
TOTAL	21997	34074	64540	49040	67150	140310	140530	76580	60300	60820	33088	45923
MEAN	710	1136	2082	1582	2398	4526	4684	2470	2010	1962	1067	1531
MAX	1200	2190	6450	2810	12000	28000	21300	3550	4000	4200	1420	5110
MIN	538	752	1080	1200	1400	1770	1960	1950	1400	1200	847	755
(†)	-13	+107	0	+6	+140	+81	-50	-3	0	-13	-67	+132

CAL YR 1986 TOTAL 397753 MEAN 1090 MAX 6450 MIN 428 MEAN‡ 1091 CFSM‡ 0.89 IN‡ 12.08
WTR YR 1987 TOTAL 794352 MEAN 2176 MAX 28000 MIN 538 MEAN‡ 2180 CFSM‡ 1.78 IN‡ 24.15

e Estimated
† 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.

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.

WATER-DISCHARGE RECORDS

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 fair.

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

AVERAGE DISCHARGE.--23 years, 310 ft^3/s, 18.22 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,000 ft^3/s Sept. 22, 1979, gage height, 24.46 ft; minimum, 19 ft^3/s Aug. 29, 30, 1981; minimum daily, 21 ft^3/s Aug. 29, 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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	1900	4,090	7.15	Apr. 24	1800	5,910	9.60
Mar. 1	1100	*12,800	*15.85	Apr. 25	0700	4,470	7.68
Mar. 30	1500	3,530	6.34	Sept. 7	2300	4,460	7.67
Apr. 24	0600	6,530	10.34	Sept. 10	2300	3,310	6.01

Minimum discharge, 67 ft^3/s Oct. 7, 8, gage height, 0.81 ft; minimum daily, 69 ft^3/s Oct. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	109	176	227	269	8500	744	580	330	272	194	124
2	88	183	211	255	276	2030	580	549	348	784	192	116
3	85	142	274	224	296	1100	536	544	330	741	196	118
4	80	127	217	213	327	767	544	543	377	667	260	110
5	78	128	196	209	302	636	503	526	357	516	182	156
6	72	213	180	205	275	561	475	500	297	610	163	338
7	69	207	173	203	266	526	450	477	279	351	176	1640
8	69	328	176	206	256	504	429	451	270	309	184	1300
9	74	214	194	200	227	506	411	426	261	270	178	348
10	85	180	252	201	220	492	391	415	251	475	155	649
11	82	169	451	196	222	443	387	405	247	484	149	889
12	79	179	452	192	220	429	387	395	256	307	149	402
13	111	156	295	186	213	410	387	405	256	411	142	424
14	219	143	242	183	212	391	365	397	282	398	140	309
15	140	159	226	187	210	383	991	395	252	281	139	261
16	104	161	207	185	e230	389	1650	378	368	262	154	238
17	98	149	200	184	e260	377	1220	362	374	250	149	258
18	94	142	198	287	e240	364	797	356	276	241	138	230
19	90	141	189	451	e230	505	630	344	279	229	147	231
20	91	160	179	373	277	424	551	390	266	220	134	302
21	91	190	171	271	350	384	509	360	260	212	126	222
22	91	158	167	283	457	363	465	347	245	207	124	207
23	90	145	164	265	943	349	471	347	236	210	119	197
24	91	151	1750	232	556	344	4910	464	222	221	113	191
25	101	150	961	239	421	393	3360	443	251	194	115	187
26	240	328	405	251	378	404	1600	641	307	188	126	182
27	160	373	308	220	407	367	999	405	325	186	125	180
28	122	235	267	226	1940	379	800	599	231	191	117	180
29	110	203	245	214	---	347	696	401	217	180	115	182
30	109	186	231	225	---	1520	640	363	210	179	109	201
31	105	---	219	300	---	1490	---	342	---	208	113	---
TOTAL	3210	5509	9576	7293	10480	26077	26878	13550	8460	10254	4623	10372
MEAN	104	184	309	235	374	841	896	437	282	331	149	346
MAX	240	373	1750	451	1940	8500	4910	641	377	784	260	1640
MIN	69	109	164	183	210	344	365	342	210	179	109	110
CFSM	.45	.79	1.34	1.02	1.62	3.64	3.88	1.89	1.22	1.43	.65	1.50
IN.	.52	.89	1.54	1.17	1.69	4.20	4.33	2.18	1.36	1.65	.74	1.67

CAL YR 1986 TOTAL 67403 MEAN 185 MAX 1750 MIN 49 CFSM .80 IN. 10.9
WTR YR 1987 TOTAL 136282 MEAN 373 MAX 8500 MIN 69 CFSM 1.62 IN. 21.9

e Estimated

PEE DEE RIVER BASIN

02113850 ARARAT RIVER AT ARARAT, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/09	1200	WATER	0.1	.83	72	230	7.20	18.0	4.8	8.7	230
87/02/03	1025	WATER	0.1	1.34	286	98	6.60	5.0	34.0	12.9	
87/04/09	1215	WATER	0.1	1.55	407	77	7.10	13.0	5.7	12.2	
87/07/09	1030	WATER	0.1	1.31	270	115	6.70	25.0	22.0	7.6	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/09	1200	WATER	0.1	33	1	150	.47	.050	.400	.580	.450
87/02/03	1025	WATER	0.1	19	9	95	.78	.100	.200	.170	.100
87/04/09	1215	WATER	0.1	16	9	70	.57	.040	.200	.140	
87/07/09	1030	WATER	0.1	20	63	140	.01	.010	.200	.230	.090

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/09	1200	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/03	1025	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/04/09	1215	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/09	1030	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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.

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

AVERAGE DISCHARGE.--27 years, 46.1 ft^3/s, 14.63 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,400 ft^3/s Sept. 22, 1979, gage height 20.29 ft, from rating curve extended above 2,700 ft^3/s on basis of slope-area measurement at gage height 17.86 ft; minimum, 1.3 ft^3/s Aug. 2, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 1	0400	*4,650	*12.29	Apr. 24	1630	3,370	9.49
Apr. 15	1330	2,370	7.05	Apr. 25	0630	4,620	12.22
Apr. 15	2200	2,490	7.35	July 2	0500	4,010	10.92
Apr. 24	0530	2,800	8.11	Sept. 7	2030	3,880	10.63

Minimum discharge, 2.6 ft^3/s Oct. 7; minimum daily, 2.9 ft^3/s Oct. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	9.8	16	26	60	2610	100	47	21	65	16	9.1
2	4.2	14	23	36	105	385	63	43	19	1110	15	8.0
3	4.1	14	30	30	140	158	62	41	18	292	15	7.7
4	3.8	13	22	27	111	82	62	40	29	119	13	7.0
5	3.5	13	19	24	70	66	53	37	27	65	13	11
6	3.3	14	17	22	52	55	46	34	20	62	14	25
7	2.9	16	16	22	45	50	41	33	18	42	27	962
8	3.0	26	17	21	41	45	37	30	17	36	17	364
9	3.7	16	27	20	34	44	35	28	17	27	15	72
10	5.0	18	61	21	31	42	32	28	e23	24	15	128
11	4.9	18	140	20	29	37	31	27	e20	49	12	104
12	4.6	28	92	18	28	36	30	32	18	73	11	76
13	8.6	17	46	18	26	35	30	100	21	31	11	64
14	14	17	33	18	26	32	27	34	21	26	10	81
15	8.7	17	27	18	25	31	866	31	18	22	11	31
16	6.4	18	24	18	31	31	666	27	17	21	13	25
17	6.1	16	22	18	46	30	185	25	18	20	12	23
18	6.1	15	22	64	27	30	122	24	18	20	11	22
19	6.3	14	20	176	32	51	82	23	19	19	15	20
20	6.6	23	19	87	40	41	62	24	18	17	11	25
21	7.4	27	18	48	48	35	52	23	17	17	9.9	19
22	8.0	19	17	50	69	32	46	22	16	16	9.5	18
23	8.4	17	17	39	191	30	41	21	15	15	8.7	17
24	8.6	16	189	40	83	29	1460	23	14	15	7.4	16
25	11	15	105	31	53	32	1540	24	17	14	7.6	16
26	27	26	48	40	41	33	374	138	33	14	8.8	15
27	13	33	35	38	47	30	146	39	31	13	10	15
28	10	22	27	28	530	31	87	31	18	13	8.8	15
29	9.2	19	24	31	---	28	65	25	16	12	8.7	15
30	9.3	17	22	35	---	262	54	23	14	12	7.7	25
31	9.1	---	20	73	---	290	---	21	---	13	7.8	---
TOTAL	231.5	547.8	1215	1157	2061	4723	6497	1098	588	2294	371.9	2235.8
MEAN	7.47	18.3	39.2	37.3	73.6	152	217	35.4	19.6	74.0	12.0	74.5
MAX	27	33	189	176	530	2610	1540	138	33	1110	27	962
MIN	2.9	9.8	16	18	25	28	27	21	14	12	7.4	7.0
CFSM	.17	.43	.92	.87	1.72	3.56	5.06	.83	.46	1.73	.28	1.74
IN.	.20	.48	1.06	1.01	1.79	4.11	5.65	.95	.51	1.99	.32	1.94

CAL YR 1986 TOTAL 6836.5 MEAN 18.7 MAX 282 MIN 1.6 CFSM .44 IN. 5.94
WTR YR 1987 TOTAL 23020.0 MEAN 63.1 MAX 2610 MIN 2.9 CFSM 1.47 IN. 20.0

e Estimated

PEE DEE RIVER BASIN

02114450 LITTLE YADKIN RIVER AT DALTON, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/02	1505	WATER	0.1		22						
86/10/09	0915	WATER	0.1	.47	3	71	7.10	17.0	8.2	7.4	100
86/11/13	0900	WATER	0.1	.73	18						
86/12/18	1540	WATER	0.1	.74	22	63	7.40	11.0		11.8	
87/02/03	0920	WATER	0.1	1.31	112	53	5.50	4.0	12.0	12.2	
87/02/23	0900	WATER	0.1			49	7.40	5.0		12.1	
87/03/17	0910	WATER	0.1	.85	31	55	7.10	4.0		12.6	
87/04/09	1040	WATER	0.1	.92	36	51	6.70	11.0	20.0	11.8	
87/05/19	0900	WATER	0.1	.84	23	54	6.50	21.0		8.3	
87/06/01	1010	WATER	0.1	.83	22	61	6.70	22.0		8.1	
87/07/09	0915	WATER	0.1	.79	27	60	6.80	24.0	18.0	7.6	
87/08/06	0915	WATER	0.1	.64	14	70	7.04	25.0		6.2	
87/09/02	0930	WATER	0.1	.55	8	65	6.70	20.0		7.2	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/09	0915	WATER	0.1	29	10	84	.11	.030	.400	.060	.020
86/12/18	1540	WATER	0.1	20							
87/02/03	0920	WATER	0.1	8	22	110	.43	.030	.200	.070	.010
87/02/23	0900	WATER	0.1	5							
87/03/17	0910	WATER	0.1	8							
87/04/09	1040	WATER	0.1	16	6	70	.39	.010	.200	.020	
87/05/19	0900	WATER	0.1	17							
87/06/01	1010	WATER	0.1	20							
87/07/09	0915	WATER	0.1	17	22	94	.37	.040	.100	.080	.010
87/08/06	0915	WATER	0.1	23							
87/09/02	0930	WATER	0.1	24							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/09	0915	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/03	0920	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	11
87/04/09	1040	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/09	0915	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some regulation by W. Kerr Scott Reservoir (station 02111391). U. S. Army Corps of Engineers gage height radio telemeter and satellite telemeter at station.

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

AVERAGE DISCHARGE.--23 years, 2,534 ft^3/s, 20.31 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 73,300 ft^3/s June 21, 1972; maximum gage height, 29.52 ft Sept. 22, 1979; minimum, 363 ft^3/s Aug. 31, Sept. 1, 1981, gage height, 2.05 ft.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 50,100 ft^3/s Mar. 1, gage height, 26.45 ft; minimum, 606 ft^3/s Oct. 7, gage height, 2.33 ft; minimum daily 613 ft^3/s Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	826	866	1550	2060	2760	38000	e7200	3980	2320	2130	1660	e940
2	856	1240	1680	2310	2940	24000	e5400	3730	2380	13000	1490	e930
3	776	1620	3340	2230	3630	10400	e4700	3530	2420	4710	1560	e910
4	694	1210	2930	2050	3730	10200	e4300	3460	e2400	5520	1670	e880
5	665	1100	2490	1920	3280	9340	e4050	3480	2650	4370	1540	e950
6	653	1140	2160	1820	2860	7860	e3700	3230	2240	4320	1410	1780
7	625	1250	1880	1770	2590	5660	e3400	3130	2060	3490	1520	5620
8	613	1950	1770	1760	2530	e4800	3030	3020	1960	2820	1530	10500
9	635	1910	1740	1750	2330	e4400	2940	2900	1940	2340	1480	2600
10	674	1490	2030	1730	2120	e4000	2850	2810	1890	2300	1400	1590
11	713	1320	2600	1750	2050	e3800	2700	2740	1810	4370	1320	e3900
12	705	1400	3850	1650	1980	e3500	2630	2670	1820	2720	1280	e2600
13	773	1330	2910	1610	1940	e3200	2710	3440	1860	2370	1260	e2800
14	1190	1250	2440	1560	1900	e3100	2570	3010	1940	2820	1190	e2500
15	1370	1230	2140	1550	1900	e2900	6130	2790	1900	2210	1200	e2000
16	960	1290	1970	1570	1910	e2800	13100	2780	1870	2050	1280	e1900
17	825	1260	1810	1580	2080	e2700	11400	2660	2190	1910	e1300	e1850
18	790	1210	1690	1830	2170	e2700	8760	2620	2280	1830	e1270	e1800
19	771	1190	1660	3710	2060	e3000	7010	2530	2550	1790	e1230	e1750
20	762	1230	1580	3900	2180	e3600	5030	2650	2600	1730	1180	e1780
21	756	1460	1490	3140	2490	e3100	4230	2570	2340	1650	1110	e1700
22	756	1360	1440	2970	2820	e2700	3690	2500	1990	1590	1050	e1550
23	751	1260	1420	2900	5730	e2500	3310	2400	2090	1560	1030	1370
24	738	1230	4630	2300	4520	e2400	27600	2850	2130	1570	e1020	1340
25	737	1230	13000	2130	3500	e2300	31900	3120	3510	1520	e980	1320
26	1210	1440	5990	2230	2890	e2700	14500	3660	3870	1470	993	1310
27	1770	3210	5160	2220	2730	e2600	10500	2750	4760	1450	1040	1290
28	1140	2500	4030	2050	6090	e2500	8520	3010	3160	1470	980	1270
29	951	2170	3140	1950	---	e2850	6050	2730	2330	1430	941	1310
30	895	1860	2380	2000	---	e5000	4470	2540	1940	1420	923	1420
31	873	---	2120	2530	---	e8500	---	2450	---	1530	898	---
TOTAL	26453	44206	89020	66530	79710	187110	218380	91740	71200	85460	38735	63460
MEAN	853	1474	2872	2146	2847	6036	7279	2959	2373	2757	1250	2115
MAX	1770	3210	13000	3900	6090	38000	31900	3980	4760	13000	1670	10500
MIN	613	866	1420	1550	1900	2300	2570	2400	1810	1420	898	880
(†)	-13	+107	0	+6	+140	-81	-50	-3	0	-13	-67	+32

CAL YR 1986	TOTAL	527646	MEAN	1446	MAX	13000	MIN	445	MEAN‡	1447	CFSM‡	0.85	IN‡	11.60
WTR YR 1987	TOTAL	1062000	MEAN	2910	MAX	38000	MIN	613	MEAN‡	2914	CFSM‡	1.72	IN‡	23.36

e Estimated
† 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.

PEE DEE RIVER BASIN

02115360 YADKIN RIVER AT ENON, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/16	0845	WATER	0.1	2.85	979	62	7.00	13.0	11.0	8.8	130
86/11/17	1510	WATER	0.1	3.21	1245	64	7.30	11.0		11.0	30
86/12/29	0900	WATER	0.1	5.99	3362	41	7.30	7.0		11.6	380
87/02/05	0855	WATER	0.1	5.97	3345	57	6.10	5.0	21.0	9.4	50
87/02/26	0850	WATER	0.1			56	7.30	5.0		11.7	50
87/03/19	0850	WATER	0.1	5.13	2671	54	7.30	7.0		11.4	110
87/04/09	0935	WATER	0.1	5.49	2952	48	6.80	12.0	7.1	11.3	20
87/05/19	1620	WATER	0.1	4.91	2501	50	6.40	24.0		8.4	180
87/06/01	1320	WATER	0.1	4.66	2311	50	6.50	25.0		8.1	210
87/07/13	0925	WATER	0.1	4.75	2379	52	6.70	24.0	80.0	7.4	550
87/08/06	1430	WATER	0.1	3.42	1393	62	7.16	27.0		7.0	10K
87/09/02	1450	WATER	0.1	2.42	930	70	7.03	25.0		8.1	20

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/16	0845	WATER	0.1	15	24	70	.46	.040	.200	.150	.070
86/11/17	1510	WATER	0.1	23	9	72					
86/12/29	0900	WATER	0.1	7	48	110					
87/02/05	0855	WATER	0.1	13	20	70					
87/02/26	0850	WATER	0.1	18	18	75					
87/03/19	0850	WATER	0.1	15	66	110					
87/04/09	0935	WATER	0.1	13	24	58					
87/05/19	1620	WATER	0.1	16	35	70					
87/06/01	1320	WATER	0.1	12	49	120					
87/07/13	0925	WATER	0.1	15	6	160					
87/08/06	1430	WATER	0.1	15	27	96					
87/09/02	1450	WATER	0.1	17	21	73					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/16	0845	WATER	0.1	10K	10K	25K	13	50K	.2K	50K	10K
87/02/05	0855	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/04/09	0935	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/13	0925	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

PEE DEE RIVER BASIN

02116500 YADKIN RIVER AT YADKIN COLLEGE, NC
(National stream-quality accounting network station)

LOCATION (REVISED).--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.

REMARKS.--Records good except those for March 4 to September 30, which are fair. 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). U. S. Army Corps of Engineers satellite telemeter, and Yadkin, Inc. gage-height telephone telemeter, at station.

AVERAGE DISCHARGE.--59 years, 2,974 ft^3/s, 17.71 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 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 daily, 330 ft^3/s Oct. 9, 1954, Sept. 23, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916, reached a stage of 36.3 ft, from floodmarks, discharge, 94,300 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 59,700 ft^3/s Mar. 2, gage height, 29.55 ft; minimum, 305 ft^3/s Oct. 9, gage height, -0.22 ft; minimum daily, 616 ft^3/s Oct. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	828	981	1820	2230	3670	27700	9150	5330	2640	e2200	1750	959
2	929	1060	1810	2690	3860	54900	6720	4880	2730	e10700	1710	986
3	897	1690	2940	2650	5500	34100	5250	4610	2730	10400	1720	984
4	847	1450	3490	2370	5250	13100	4840	4430	2710	e7400	e1700	919
5	786	1280	2800	2120	4450	10600	4620	4370	2990	e5600	e1700	947
6	757	1160	2410	2070	3700	9280	4250	4290	2790	e5200	e1700	1510
7	725	1360	2130	2010	3150	7360	3940	4060	2430	e4400	e1690	4490
8	698	2070	1970	1940	2990	5780	3760	4010	2190	e3500	e1900	15500
9	616	2380	1940	1920	2760	5080	3580	3840	2090	e2880	1730	5630
10	685	1760	2430	1890	e2550	4900	3440	3680	2100	e2600	1590	2830
11	790	1570	3110	1890	e2400	4520	3310	3630	2020	e4300	1500	7430
12	795	2060	5050	1860	e2300	4120	3150	3460	1960	e3700	1390	4360
13	937	1670	3840	1780	2160	3830	3220	3790	1980	e2900	1380	3990
14	1800	1470	2970	1740	2090	3600	3150	4290	2130	e3000	1280	3460
15	1650	1430	2510	1720	2090	3400	5800	3680	2120	2810	1310	2700
16	1300	1520	2250	1710	2080	3310	22000	3530	e2000	2340	1440	2190
17	991	1470	2100	1750	2170	3250	19100	3320	e2000	2190	1460	2090
18	920	1400	1920	2020	2370	3160	11100	3180	2850	2040	1380	2090
19	874	1360	1890	4620	2390	3840	8980	3050	2900	1960	1330	2000
20	863	1460	1820	5640	2550	4450	6870	3170	2880	1890	1330	1980
21	866	1900	1740	4020	2670	3930	5440	3230	e2800	1800	1250	2060
22	851	1750	1640	3520	3050	3510	4770	3100	e2500	1710	1130	1890
23	850	1520	1620	3510	6870	3270	4190	3040	e2600	1640	1090	1770
24	833	1430	2410	3000	6470	3140	14300	2970	e2800	1570	e1100	1700
25	840	1400	15600	2560	4550	3040	36400	3560	e3400	1530	e1100	1680
26	1520	1540	7730	2530	3550	3450	38600	3940	e5000	1530	e1100	1670
27	1870	2870	6300	2600	3140	3450	18200	4050	e5500	1530	e1100	1650
28	1510	3140	4700	2410	6230	3380	10700	3290	e4200	1540	1060	1600
29	1140	2470	3880	2310	---	3260	7610	3500	e3200	1640	1020	1600
30	991	2110	2790	2320	---	3760	6120	3180	e2200	1840	982	1850
31	974	---	2340	3120	---	10300	---	2750	---	1700	963	---
TOTAL	30933	50731	101950	78520	97010	254770	282560	115210	82440	100040	42885	84515
MEAN	998	1691	3289	2533	3465	8218	9419	3716	2748	3227	1383	2817
MAX	1870	3140	15600	5640	6870	54900	38600	5330	5500	10700	1900	15500
MIN	616	981	1620	1710	2080	3040	3150	2750	1960	1530	963	919
(†)	-13	+107	0	+6	+140	-81	-50	-3	0	-13	-67	+32

CAL YR 1986 TOTAL 614087 MEAN 1687 MAX 15600 MIN 475 MEAN‡ 1688 CFSM‡ 0.74 IN‡ 10.05
WTR YR 1987 TOTAL 1321560 MEAN 3621 MAX 54900 MIN 616 MEAN‡ 3625 CFSM‡ 1.59 IN‡ 21.59

e Estimated
† Change in contents, equivalent in cubic feet per second, in W. Kerr Scott Reservoir: provided by the U. S. Army Corps of Engineers.
‡ Adjusted for change in W. Kerr Scott Reservoir.

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.

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 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.--
SPECIFIC CONDUCTANCE: Maximum daily, 222 microsiemens Aug. 6; minimum daily, 38 microsiemens Mar. 2.
WATER TEMPERATURE: Maximum daily, 32.0°C July 23, 28, Aug. 2, 3, 4; minimum daily, 2.0°C Jan. 27.
SEDIMENT CONCENTRATION: Maximum daily mean, 2,090 mg/L Dec. 25; minimum daily mean, 10 mg/L Nov. 15.
SEDIMENT LOAD: Maximum daily, 117,000 tons Mar. 2; minimum daily, 27 tons Oct. 9.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV											
25...	1100	1410	108	6.50	10.5	10	748	11.0	100	--	--
FEB											
03...	1100	5680	90	6.90	5.0	78	740	12.7	102	--	--
MAR											
02...	1200	59200	47	--	6.0	310	--	--	--	--	--
JUN											
01...	1030	2680	103	6.70	23.0	79	670	7.6	101	K13000	86000
JUL											
07...	1000	2240	51	6.40	25.0	180	744	8.6	107	--	--
SEP											
02...	1130	966	140	6.90	24.5	5.1	742	7.9	97	--	--

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WHOLE IT-FLD (MG/L)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
NOV											
25...	20	0	5.1	1.7	11	50	1	3.2	24	20	9.6
FEB											
03...	21	11	5.1	1.9	6.0	36	0.6	2.4	15	12	--
MAR											
02...	9	4	2.0	0.95	1.6	22	0.2	2.6	--	--	11
JUN											
01...	18	0	4.5	1.6	10	51	1	2.6	27	22	13
JUL											
07...	13	4	3.2	1.2	4.1	37	0.5	2.0	15	12	8.7
SEP											
02...	20	0	5.2	1.8	17	60	2	3.4	37	30	16

PEE DEE RIVER BASIN

02116500 YADKIN RIVER AT YADKIN COLLEGE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRATE 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)
NOV											
25...	10	0.10	14	69	70	0.09	263	--	0.830	0.080	0.100
FEB											
03...	6.9	<0.10	11	58	56	--	--	0.820	0.840	0.190	0.170
MAR											
02...	2.4	<0.10	3.3	30	27	0.04	4800	--	0.580	0.350	0.230
JUN											
01...	12	0.20	13	71	71	0.10	514	0.980	1.00	0.050	0.050
JUL											
07...	3.8	<0.10	11	42	40	0.06	254	--	0.610	0.090	0.050
SEP											
02...	14	0.20	13	88	86	0.12	230	1.29	1.30	0.050	0.030

DATE	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)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)
NOV										
25...	0.13	0.32	0.40	0.270	0.210	0.220	0.67	40	<1	12
FEB										
03...	0.22	1.1	1.3	0.240	0.050	0.060	0.18	30	<1	24
MAR										
02...	0.30	0.95	1.3	0.180	0.010	<0.010	--	--	--	--
JUN										
01...	0.06	1.2	1.2	0.390	0.120	0.120	0.37	40	<1	20
JUL										
07...	0.06	1.4	1.5	0.360	0.060	0.040	0.12	--	--	--
SEP										
02...	0.04	0.25	0.30	0.370	0.380	0.350	1.1	20	<1	16

PEE DEE RIVER BASIN

02116500 YADKIN RIVER AT YADKIN COLLEGE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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 25...	<0.5	1	<1	<3	10	240	6	<4	17	<0.1
FEB 03...	2	<1	1	<3	5	41	<5	4	19	<0.1
MAR 02...	--	--	--	--	--	--	--	--	--	--
JUN 01...	<0.5	<1	<1	<3	3	66	<5	<4	6	<0.1
JUL 07...	--	--	--	--	--	--	--	--	--	--
SEP 02...	<0.5	<1	1	<3	2	100	<5	<4	19	<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. [2] FINER THAN .062 MM
NOV 25...	<10	2	<1	<1	40	<6	14	19	72	68
FEB 03...	<10	<1	<1	<1	42	<6	23	--	--	--
MAR 02...	--	--	--	--	--	--	--	764	122000	62
JUN 01...	<10	1	<1	<1	37	<6	16	162	1170	69
JUL 07...	--	--	--	--	--	--	--	252	1520	84
SEP 02...	<10	3	<1	<1	41	<6	6	24	63	77

PEE DEE RIVER BASIN

02116500 YADKIN RIVER AT YADKIN COLLEGE, NC--Continued

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	121	74	75	88	49	56	66	74	78	---	115
2	125	124	92	76	85	38	55	65	69	48	90	136
3	133	90	70	78	73	50	61	68	74	52	115	126
4	128	103	65	82	75	47	72	63	77	55	91	132
5	137	107	77	81	77	48	68	66	73	48	93	94
6	133	108	73	86	83	53	71	66	85	52	98	109
7	148	117	75	82	78	51	66	76	81	57	222	137
8	169	104	81	95	74	56	69	74	88	68	78	55
9	165	92	86	92	80	63	77	73	85	81	91	59
10	162	87	80	94	77	63	78	71	95	79	85	69
11	140	96	94	91	74	63	67	72	89	72	91	66
12	140	93	70	94	81	67	70	65	88	60	93	70
13	135	96	71	93	85	70	72	73	90	77	93	73
14	107	103	73	100	87	68	66	66	91	65	106	75
15	99	107	72	92	88	70	87	76	86	80	102	76
16	102	98	75	95	---	70	50	77	88	82	92	82
17	127	110	81	107	83	71	53	77	95	84	93	89
18	129	107	87	97	88	71	51	72	83	81	108	91
19	129	114	83	89	87	69	53	75	76	85	102	97
20	129	102	98	70	83	69	53	67	78	88	102	94
21	134	93	91	72	86	71	57	76	68	93	105	93
22	138	102	91	---	80	70	63	78	73	94	114	103
23	139	109	92	71	73	71	68	80	82	93	111	99
24	134	102	70	77	66	67	46	81	78	113	102	101
25	127	100	48	78	66	68	44	76	80	97	113	111
26	97	100	53	85	68	74	46	71	65	98	124	106
27	91	76	53	79	72	75	54	---	53	94	117	101
28	108	71	52	84	83	80	53	---	58	103	113	100
29	116	71	58	94	---	72	53	82	56	92	124	108
30	114	70	66	95	---	80	62	79	71	94	120	166
31	105	---	74	94	---	53	---	79	---	---	115	---
MEAN	129	99.1	75.0	---	---	64.1	61.4	---	78.3	---	---	97.8
MAX	169	124	98	---	---	80	87	---	95	---	---	166
MIN	91	70	48	---	---	38	44	---	53	---	---	55

TEMPERATURE, WATER, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.0	16.0	9.0	4.0	6.0	5.0	12.0	20.0	28.0	28.0	---	27.0
2	28.0	17.0	9.0	4.0	5.0	5.0	12.0	22.0	28.0	25.0	30.0	27.0
3	28.0	17.0	10.0	5.0	7.0	6.0	13.0	22.0	28.0	27.0	32.0	27.0
4	28.0	17.0	10.0	5.0	7.0	6.0	9.0	18.0	25.0	25.0	32.0	24.0
5	28.0	16.0	9.0	5.0	7.0	6.0	9.0	19.0	26.0	26.0	32.0	22.0
6	24.0	18.0	9.0	6.0	7.0	6.0	11.0	14.0	26.0	27.0	31.0	22.0
7	23.0	16.0	7.0	6.0	7.0	7.0	13.0	21.0	27.0	27.0	30.0	24.0
8	23.0	16.0	6.0	6.0	8.0	7.0	15.0	21.0	28.0	29.0	30.0	23.0
9	21.0	18.0	8.0	6.0	7.0	8.0	17.0	21.0	28.0	30.0	30.0	20.0
10	19.0	16.0	10.0	5.0	8.0	8.0	18.0	22.0	28.0	29.0	31.0	27.0
11	19.0	14.0	9.0	5.0	8.0	9.0	18.0	22.0	28.0	29.0	29.0	25.0
12	19.0	13.0	9.0	7.0	9.0	9.0	18.0	23.0	28.0	29.0	29.0	24.0
13	18.0	12.0	8.0	8.0	8.0	10.0	19.0	20.0	25.0	29.0	29.0	25.0
14	20.0	10.0	8.0	8.0	7.0	9.0	16.0	20.0	27.0	28.0	29.0	26.0
15	20.0	9.0	8.0	9.0	6.0	12.0	15.0	21.0	28.0	27.0	26.0	26.0
16	18.0	16.0	8.0	8.0	---	9.0	15.0	23.0	28.0	28.0	25.0	25.0
17	18.0	10.0	9.0	8.0	4.0	10.0	13.0	24.0	29.0	28.0	29.0	26.0
18	17.0	11.0	9.0	6.0	3.0	9.0	13.0	25.0	25.0	29.0	30.0	27.0
19	17.0	12.0	9.0	7.0	5.0	9.0	16.0	26.0	27.0	30.0	31.0	25.0
20	17.0	9.0	9.0	6.0	5.0	14.0	19.0	24.0	28.0	30.0	31.0	25.0
21	17.0	10.0	7.0	6.0	6.0	14.0	20.0	24.0	28.0	29.0	31.0	25.0
22	17.0	10.0	6.0	---	4.0	15.0	22.0	24.0	27.0	31.0	31.0	23.0
23	19.0	9.0	4.0	4.0	5.0	15.0	21.0	25.0	28.0	32.0	31.0	22.0
24	18.0	12.0	5.0	4.0	6.0	15.0	18.0	25.0	29.0	24.0	28.0	22.0
25	16.0	11.0	7.0	3.0	6.0	13.0	14.0	25.0	28.0	31.0	28.0	23.0
26	16.0	11.0	7.0	3.0	6.0	15.0	15.0	25.0	25.0	31.0	29.0	23.0
27	17.0	12.0	8.0	2.0	5.0	15.0	16.0	24.0	25.0	31.0	31.0	23.0
28	18.0	11.0	7.0	3.0	5.0	17.0	16.0	27.0	28.0	32.0	31.0	23.0
29	17.0	12.0	7.0	4.0	---	17.0	17.0	27.0	29.0	31.0	29.0	22.0
30	18.0	11.0	7.0	4.0	---	17.0	19.0	27.0	28.0	30.0	27.0	22.0
31	17.0	---	6.0	6.0	---	14.0	---	28.0	---	---	25.0	---
MEAN	20.1	13.1	7.87	---	---	10.7	15.6	22.9	27.3	---	---	24.2
MAX	28.0	18.0	10.0	---	---	17.0	22.0	28.0	29.0	---	---	27.0
MIN	16.0	9.0	4.0	---	---	5.0	9.0	14.0	25.0	---	---	20.0

PEE DEE RIVER BASIN

02116500 YADKIN RIVER AT YADKIN COLLEGE, NC--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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	19	42	15	40	32	157	57	343	80	793	955	70000
2	29	73	16	46	30	147	140	1020	100	1040	790	117000
3	24	58	37	169	201	1830	168	1200	270	4010	170	15700
4	20	46	30	117	170	1600	72	461	170	2410	165	5840
5	20	42	20	69	81	612	35	200	101	1210	158	4520
6	20	41	24	75	56	364	34	190	81	809	159	3980
7	19	37	47	173	37	213	61	331	88	748	132	2620
8	18	34	129	721	35	186	96	503	80	646	99	1540
9	16	27	132	848	29	152	81	420	52	388	80	1100
10	19	35	48	228	111	728	34	174	38	262	88	1160
11	19	41	38	161	139	1350	31	158	55	356	53	647
12	15	32	120	667	378	5150	30	151	39	242	32	356
13	21	53	46	207	222	2300	19	91	25	146	30	310
14	81	394	18	71	91	730	18	85	19	107	30	292
15	40	178	10	39	37	251	17	79	31	175	28	257
16	37	130	11	45	24	146	18	83	39	219	23	206
17	32	86	17	67	21	119	31	146	25	146	26	228
18	25	62	20	76	21	109	60	327	25	160	24	205
19	19	45	21	77	27	138	344	5070	39	252	154	1800
20	18	42	31	122	27	133	320	4870	40	275	100	1200
21	17	40	80	410	20	94	151	1640	40	288	58	615
22	17	39	70	331	17	75	112	1060	100	823	40	379
23	15	34	68	279	19	83	100	948	434	8440	38	336
24	17	38	30	116	153	1250	82	664	251	4380	40	339
25	16	36	19	72	2090	88200	70	484	160	1970	31	254
26	70	287	50	208	630	13100	60	410	102	978	40	373
27	72	364	148	1290	300	5100	47	330	65	551	25	233
28	32	130	170	1440	200	2540	28	182	358	8650	37	338
29	26	80	100	667	160	1680	21	131	---	---	35	308
30	20	54	53	302	123	927	30	188	---	---	57	684
31	16	42	---	---	60	379	80	674	---	---	480	13300
TOTAL	---	2642	---	9133	---	129843	---	22613	---	40474	---	246120

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	290	7160	112	1610	121	862	50	350	28	132	20	52
2	129	2340	97	1280	91	671	1550	64800	32	148	24	64
3	82	1160	78	971	68	501	795	23600	46	214	22	58
4	77	1010	69	825	65	476	660	12500	41	170	20	50
5	97	1210	79	932	74	597	520	7530	35	144	20	51
6	50	574	58	672	68	512	270	2810	25	103	42	171
7	30	319	50	548	60	394	250	2410	54	246	473	8240
8	36	365	66	715	56	331	180	2240	81	468	1320	53200
9	31	300	61	632	46	260	109	862	52	243	350	5320
10	40	372	48	477	49	278	88	646	42	180	190	1450
11	30	268	40	392	44	240	299	4210	43	174	601	12600
12	30	255	35	327	40	212	272	2890	42	158	377	4440
13	29	252	69	706	41	219	230	1920	41	153	241	2600
14	22	187	326	3780	43	247	230	2000	35	121	144	1350
15	154	4580	142	1410	39	223	190	1440	35	124	110	802
16	711	42000	68	648	32	168	136	859	40	156	90	532
17	739	38100	50	448	44	246	88	520	35	138	56	316
18	237	7100	48	412	63	485	58	319	30	112	70	395
19	200	4850	45	371	66	517	62	328	30	108	52	281
20	188	3490	48	411	70	544	52	265	25	90	44	235
21	110	1620	45	392	61	461	46	224	26	88	40	222
22	112	1440	39	326	60	405	42	194	25	76	33	168
23	114	1290	40	328	55	386	37	164	25	74	36	172
24	1200	67700	40	321	62	469	30	127	23	66	41	188
25	840	82600	60	577	69	633	28	116	22	59	31	141
26	250	26100	130	1380	679	9840	28	116	20	56	28	126
27	200	9830	141	1540	648	10000	27	112	24	68	27	120
28	310	8960	110	977	430	5330	27	112	20	57	25	108
29	205	4210	100	945	258	2480	26	115	15	41	20	86
30	124	2050	130	1120	55	395	30	149	21	56	39	195
31	---	---	105	780	---	---	30	138	22	57	---	---
TOTAL	---	321692	---	26253	---	38382	---	134066	---	4080	---	93733

TOTAL LOAD FOR YEAR: 1069031 TONS.

PEE DEE RIVER BASIN

02116500 YADKIN RIVER AT YADKIN COLLEGE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/23	1510	WATER	0.1	.61	820	137	7.70	18.0	6.6	11.1	280
86/11/20	1345	WATER	0.1	1.35	1448	106	7.00	8.0		10.4	
86/12/29	1500	WATER	0.1	3.76	3930	52	7.30	10.0		11.7	
87/01/06	1235	WATER	0.1	2.06	2095	82	7.30	8.0	15.0	12.6	
87/02/11	1120	WATER	0.1	2.24	2400	88	7.30	6.0		12.6	
87/03/05	1500	WATER	0.1	9.60	10350	46	7.60	9.0		12.1	
87/04/21	1135	WATER	0.1	5.60	5468	52	7.20	18.0	27.0	9.6	
87/05/21	1210	WATER	0.1	5.41	3207	72	7.20	21.0		8.2	
87/06/22	1230	WATER	0.1	3.00	2500	73	6.80	28.0		7.5	
87/07/13	1305	WATER	0.1	3.01	3101	96	6.90	27.0	170.0	7.2	
87/08/04	1215	WATER	0.1	1.50	1700	97	7.24	31.0		7.1	
87/09/01	1130	WATER	0.1	.88	966	132	7.06	25.0		7.1	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/23	1510	WATER	0.1	28	17	120	.95	.030	.200	.430	.350
86/11/20	1345	WATER	0.1	46	12	100	.69	.040	.200	.310	.240
86/12/29	1500	WATER	0.1	17	64	130	.71	.050	.400	.180	
87/01/06	1235	WATER	0.1	23	14	100	1.20	.170	.400	.260	.180
87/02/11	1120	WATER	0.1	34	12	110	.71	.230	.300	.180	.120
87/03/05	1500	WATER	0.1	11	110	130	.64	.090	.300	.180	.020
87/04/21	1135	WATER	0.1	14	68	120	.63	.070	.400	.160	.050
87/05/21	1210	WATER	0.1	16	39	94	.64	.020	.200	.180	.090
87/06/22	1230	WATER	0.1	18	44	99	.66	.030	.300	.200	.130
87/07/13	1305	WATER	0.1	20	56	220	1.20	.030	.400	.450	.210
87/08/04	1215	WATER	0.1	21	14	64	1.00	.050	.400	.240	.170
87/09/01	1130	WATER	0.1	25	21	120	1.20	.060	.300	.420	.360

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/23	1510	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/01/06	1235	WATER	0.1	10K	10K	25K	10K	50K		50K	10K
87/04/21	1135	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/13	1305	WATER	0.1	20K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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.

REMARKS.--Records good except those for estimated daily discharges, which are poor. The city of Statesville diverted an average of 7.9 ft^3/s for water supply and waste-treatment dilution. The Alexander Water Corporation withdrew an average of 1.7 ft^3/s for water supply. Yadkin, Inc. stage telephone telemeter at station.

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

AVERAGE DISCHARGE.--49 years, 340 ft^3/s, 15.09 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,800 ft^3/s Oct. 17, 1964, Mar. 2, 1987; maximum gage height, 18.88 ft Mar. 2, 1987; minimum, 21 ft^3/s July 22, 24, 1986.

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).

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 2,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 2	0430	*11,800	*18.88	Apr. 25	1630	4,660	12.57

Minimum discharge, 50 ft^3/s Oct. 7, gage height, 1.45 ft; minimum daily, 53 ft^3/s Oct. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	92	183	304	664	6820	884	508	207	222	145	85
2	63	153	240	446	713	9750	597	460	205	630	174	84
3	65	199	392	383	1130	3500	537	436	201	857	136	94
4	66	141	338	315	985	1030	545	408	211	430	182	114
5	59	128	256	301	737	752	510	401	240	442	160	111
6	56	121	217	271	572	645	447	387	222	357	136	180
7	53	184	207	266	484	592	418	360	189	276	225	341
8	58	252	186	250	433	543	388	344	181	456	217	1030
9	55	224	201	242	388	591	365	324	176	287	148	417
10	62	174	323	243	328	611	347	313	169	229	147	336
11	68	182	510	234	301	538	339	304	169	608	131	1210
12	72	247	752	233	297	496	327	302	162	291	117	603
13	80	192	497	214	273	459	326	334	174	233	123	421
14	154	165	339	209	255	438	312	328	195	223	112	316
15	143	156	287	209	259	420	1260	323	188	214	107	236
16	101	164	248	203	252	407	1460	379	172	208	127	199
17	86	166	230	210	271	398	1000	306	252	198	128	182
18	79	149	213	312	276	379	842	292	384	180	116	179
19	77	138	203	831	280	669	625	268	363	180	109	165
20	78	164	187	959	317	670	509	257	253	167	103	168
21	78	240	181	572	320	512	449	267	219	170	106	173
22	77	214	172	479	338	451	414	256	213	152	91	152
23	73	181	170	499	944	416	380	250	208	145	94	139
24	72	174	697	387	722	393	1430	247	234	142	87	143
25	76	158	2300	389	490	401	3800	253	492	140	80	138
26	187	168	1420	391	412	490	3610	246	1540	143	89	131
27	220	293	579	361	453	443	1870	238	819	128	90	138
28	138	297	430	340	1820	503	836	231	514	134	81	138
29	106	228	367	312	---	454	650	228	312	134	78	128
30	98	201	324	358	---	772	559	217	252	119	82	140
31	93	---	288	578	---	1420	---	225	---	128	83	---
TOTAL	2759	5545	12937	11301	14714	35963	26036	9692	9116	8223	3804	7891
MEAN	89.0	185	417	365	525	1160	868	313	304	265	123	263
MAX	220	297	2300	959	1820	9750	3800	508	1540	857	225	1210
MIN	53	92	170	203	252	379	312	217	162	119	78	84
CFSM	.29	.60	1.36	1.19	1.72	3.79	2.84	1.02	.99	.87	.40	.86
IN.	.34	.67	1.57	1.37	1.79	4.37	3.17	1.18	1.11	1.00	.46	.96

CAL YR 1986 TOTAL 61535 MEAN 169 MAX 2300 MIN 22 CFSM .55 IN. 7.48
WTR YR 1987 TOTAL 147981 MEAN 405 MAX 9750 MIN 53 CFSM 1.32 IN. 18.0

PEE DEE RIVER BASIN

02118000 SOUTH YADKIN RIVER NEAR MOCKSVILLE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/23	1130	WATER	0.1	1.62	73	60	7.10	14.0	10.0	11.3	580
86/11/20	1115	WATER	0.1	2.06	147	56	6.70	8.0		10.6	
86/12/29	1230	WATER	0.1	2.87	364	43	6.90	8.0		11.4	
87/01/06	1430	WATER	0.1	2.55	266	57	7.30	5.0	14.0	12.4	
87/02/26	1235	WATER	0.1	3.03	406	54	7.40	8.0		11.8	
87/03/19	1155	WATER	0.1	3.88	744	51	7.00	9.0		10.8	
87/04/21	1050	WATER	0.1	3.11	448	51	7.10	18.0	19.0	8.9	
87/05/21	1100	WATER	0.1	2.56	268	56	7.50	19.0		8.2	
87/06/22	1130	WATER	0.1	2.33	207	53	7.10	25.0		7.4	
87/07/13	1150	WATER	0.1	2.39	223	65	6.80	25.0	70.0	7.0	
87/08/04	1100	WATER	0.1	2.00	135	67	7.10	27.0		6.6	
87/09/01	1030	WATER	0.1	1.70	85	71	7.10	24.0		7.3	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/23	1130	WATER	0.1	22	22	80	.38	.010	.100	.040	.010K
86/11/20	1115	WATER	0.1	37	12	91					
86/12/29	1230	WATER	0.1	7	42	110					
87/01/06	1430	WATER	0.1	20	8	57	.70	.080	.200	.030	.010
87/02/26	1235	WATER	0.1	22	23	83					
87/03/19	1155	WATER	0.1	16	150	230					
87/04/21	1050	WATER	0.1	17	45	89	.49	.050	.200	.080	.010
87/05/21	1100	WATER	0.1	19	32	69					
87/06/22	1130	WATER	0.1	16	50	100					
87/07/13	1150	WATER	0.1	19	68	140	.48	.030	.200	.130	.010
87/08/04	1100	WATER	0.1	22	35	66					
87/09/01	1030	WATER	0.1	23	33	98					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC-- ZN,TOT UG/L
86/10/23	1130	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/01/06	1430	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/04/21	1050	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/13	1150	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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.

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

AVERAGE DISCHAGE.--37 years, 206 ft^3/s, 18.05 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,800 ft^3/s Sept. 22, 1979, gage height, 25.05 ft, from high-water mark in gage house; minimum, 18 ft^3/s Oct. 8, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	1900	3,810	11.29	June 25	1130	4,400	12.45
Mar. 1	1230	*10,200	*20.62	July 2	0300	3,240	10.09
Apr. 24	1400	8,440	18.45	July 4	0230	2,120	7.11
Apr. 25	1400	5,050	13.59				

Minimum discharge, 38 ft^3/s Oct. 6, 7, 8; minimum daily, 38 ft^3/s Oct. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	70	97	162	290	8770	e640	297	213	256	e180	96
2	51	193	163	199	382	2430	e330	282	197	1880	e215	94
3	47	109	262	180	547	e1200	e290	278	e200	445	e175	103
4	44	85	164	165	462	e600	e270	289	e240	1040	e220	92
5	42	79	125	156	325	e420	e260	264	289	631	e200	127
6	39	77	110	148	263	e350	e250	248	e220	319	e180	198
7	38	80	103	144	235	e320	e240	238	e210	e330	e280	445
8	39	135	99	143	217	e300	e235	225	e200	e500	e215	662
9	42	108	106	141	193	e320	e230	212	e200	e340	e150	199
10	49	91	156	139	173	e350	e230	206	e195	e275	e145	179
11	48	87	281	138	166	e290	224	200	e190	e700	e130	236
12	48	112	367	134	163	e270	221	194	e185	e370	e120	220
13	62	99	210	130	154	e250	218	461	e210	e310	e125	212
14	95	87	153	128	148	e240	212	243	e215	e280	e110	233
15	76	86	129	127	147	e230	742	301	e210	e270	e105	154
16	e60	90	117	126	146	e230	905	268	e210	e255	e125	139
17	e58	85	110	126	158	e220	1070	209	e230	e240	e120	141
18	e56	82	106	175	154	e200	597	193	262	e220	e115	130
19	e56	80	102	462	157	e350	423	180	e225	e215	e105	121
20	e55	97	98	372	190	e325	354	197	e220	e200	e95	128
21	e54	145	94	257	216	e280	316	185	e210	e215	101	117
22	e53	107	92	236	258	e245	292	202	e200	e190	100	108
23	e52	95	91	229	542	e230	277	215	e190	e185	97	103
24	e51	91	1520	201	282	e220	5900	211	e180	e180	94	101
25	e70	88	968	193	194	e220	3400	340	1920	e175	93	99
26	173	126	389	195	159	e260	1410	228	950	e170	96	97
27	105	213	271	192	166	e250	674	217	588	e160	101	96
28	73	140	214	190	1620	e280	470	214	270	e170	96	96
29	66	113	184	170	---	e250	370	206	209	e170	94	96
30	63	102	168	173	---	e420	327	253	185	e150	93	111
31	61	---	154	289	---	897	---	213	---	e165	91	---
TOTAL	1876	3152	7203	5820	8107	21217	21377	7469	9223	11006	4166	4933
MEAN	60.5	105	232	188	290	684	713	241	307	355	134	164
MAX	173	213	1520	462	1620	8770	5900	461	1920	1880	280	662
MIN	38	70	91	126	146	200	212	180	180	150	91	92
CFSM	.39	.68	1.50	1.21	1.87	4.42	4.60	1.55	1.98	2.29	.87	1.06
IN.	.45	.76	1.73	1.40	1.95	5.09	5.13	1.79	2.21	2.64	1.00	1.18

CAL YR 1986 TOTAL 40217 MEAN 110 MAX 1520 MIN 27 CFSM .71 IN. 9.65
WTR YR 1987 TOTAL 105549 MEAN 289 MAX 8770 MIN 38 CFSM 1.87 IN. 25.3

e Estimated

PEE DEE RIVER BASIN

02118500 HUNTING CREEK NEAR HARMONY, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/02	1300	WATER	0.1	.21	51	44	6.40	23.0		8.4	700
86/11/06	1500	WATER	0.1	.54	78	46	6.70	16.0	7.0	9.4	
87/02/23	1035	WATER	0.1	3.33	645	47	6.00	5.0	130.0	12.5	
87/05/20	1145	WATER	0.1	1.64	196	35	6.40	19.0	70.0	8.0	
87/08/19	1430	WATER	0.1	.00	105	40	6.50	24.0	11.0	8.4	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/02	1300	WATER	0.1	12	11	51					
86/11/06	1500	WATER	0.1	20	7	39					
87/02/23	1035	WATER	0.1	10	140	230					
87/05/20	1145	WATER	0.1	9	81	97					
87/08/19	1430	WATER	0.1	14	18	21					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/02/23	1035	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	22
87/08/19	1430	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	12

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.

WATER-DISCHARGE RECORDS

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 fair except those for estimated daily discharges, which are poor, Some diurnal fluctuation caused by industry 0.7 mi upstream.

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

AVERAGE DISCHARGE.--8 years, 99.0 ft^3/s, 11.39 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,820 ft^3/s Apr. 16, 1987, gage height, 16.92; minimum, 4.4 ft^3/s Oct. 1, 1987; minimum daily, 5.0 ft^3/s Oct. 6, 7, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 1	1400	5,330	16.65	June 26	0400	1,620	10.90
Apr. 16	0900	*5,820	*16.92	Sept. 8	0730	2,140	12.35
Apr. 24	0800	1,730	11.24				

Minimum discharge, 4.4 ft^3/s Oct. 1; minimum daily 5.0 ft^3/s Oct. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	20	44	52	245	4470	215	102	e50	35	26	14
2	6.4	28	71	214	211	1400	160	100	e48	45	14	11
3	6.4	20	87	126	221	304	136	97	e46	34	15	9.4
4	5.9	19	60	82	183	208	134	94	e100	32	12	9.8
5	5.3	18	51	71	141	158	112	96	e65	59	14	25
6	5.0	18	47	64	120	134	102	e92	e50	35	23	30
7	5.0	23	44	60	111	121	97	e90	e48	28	129	468
8	5.3	49	44	58	101	124	93	e85	e45	28	43	1500
9	6.2	27	49	54	91	189	89	e78	e44	25	28	148
10	8.3	24	50	53	87	164	85	e77	e45	24	26	87
11	7.9	37	87	54	86	126	83	e76	e42	32	24	234
12	8.1	84	188	50	85	115	82	e78	e40	26	24	88
13	12	42	83	49	79	106	80	e76	39	23	22	80
14	59	32	62	48	77	99	77	e80	43	26	20	61
15	18	45	55	48	72	95	1120	e82	39	22	23	51
16	13	47	50	46	76	92	4370	e80	37	21	28	46
17	14	37	47	48	87	88	804	e80	41	20	25	44
18	13	32	45	205	84	84	278	e76	40	20	21	42
19	13	29	43	602	92	315	225	e72	43	25	18	40
20	14	41	41	201	91	185	181	e63	43	21	14	43
21	14	53	40	118	83	136	152	e60	40	17	12	39
22	13	38	38	125	85	115	135	e56	37	16	11	36
23	13	34	38	128	159	103	115	e54	40	16	9.7	36
24	12	32	76	108	104	97	1360	e54	39	16	8.9	36
25	19	31	399	117	90	117	609	e53	194	15	9.9	35
26	75	49	130	125	81	128	274	e52	818	15	10	34
27	e25	108	84	102	359	114	173	e53	177	14	9.3	33
28	e21	56	70	93	1950	151	143	e52	60	15	8.5	33
29	e22	48	62	89	---	113	120	e50	43	13	9.9	33
30	e23	44	58	202	---	282	110	e48	38	12	8.6	85
31	e20	---	54	387	---	431	---	e47	---	12	10	---
TOTAL	489.0	1165	2297	3779	5251	10364	11714	2253	2434	742	656.8	3431.2
MEAN	15.8	38.8	74.1	122	188	334	390	72.7	81.1	23.9	21.2	114
MAX	75	108	399	602	1950	4470	4370	102	818	59	129	1500
MIN	5.0	18	38	46	72	84	77	47	37	12	8.5	9.4
CFSM	.13	.33	.63	1.03	1.59	2.83	3.31	.62	.69	.20	.18	.97
IN.	.15	.37	.72	1.19	1.66	3.27	3.69	.71	.77	.23	.21	1.08

CAL YR 1986 TOTAL 14227.2 MEAN 39.0 MAX 399 MIN 5.0 CFSM .33 IN. 4.49
WTR YR 1987 TOTAL 44576.0 MEAN 122 MAX 4470 MIN 5.0 CFSM 1.03 IN. 14.1

e Estimated

PEE DEE RIVER BASIN

02120780 SECOND CREEK NEAR BARBER, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/07	1355	WATER	0.1	1.12	5	163	6.80	19.0	16.0	7.7	150
86/11/06	1330	WATER	0.1	1.44	18	146	6.70	16.0		8.5	
86/12/16	1600	WATER	0.1	1.89	49	120	6.60	7.0		11.5	
87/01/27	1245	WATER	0.1	2.49	99						
87/01/27	1255	WATER	0.1			101	6.10	1.0		16.1	
87/02/25	1410	WATER	0.1	2.43	91	101	6.20	8.0		11.5	
87/03/17	1300	WATER	0.1	1.78	88	113	6.20	8.0		12.4	
87/04/16	1125	WATER	0.1	16.68	5372	40	6.20	12.0		8.3	
87/05/21	1340	WATER	0.1	2.21	60	108	7.00	18.0		8.0	
87/06/18	1030	WATER	0.1	1.58	37	120	7.10	23.0		7.7	
87/07/22	1410	WATER	0.1	1.42	17	125	6.80	24.0		7.6	
87/08/20	1450	WATER	0.1	1.34	14	147	7.00	25.0		7.2	
87/09/23	1100	WATER	0.1	1.69	36	114	6.80	16.0		9.1	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/07	1355	WATER	0.1	64	22	170	.37	.140	.400	.230	.150
86/11/06	1330	WATER	0.1	46	16	29					
86/12/16	1600	WATER	0.1	38							
87/01/27	1255	WATER	0.1	31							
87/02/25	1410	WATER	0.1	30	18	130					
87/03/17	1300	WATER	0.1	31							
87/04/16	1125	WATER	0.1	10							
87/05/21	1340	WATER	0.1	37	59	150					
87/06/18	1030	WATER	0.1	42							
87/07/22	1410	WATER	0.1	42							
87/08/20	1450	WATER	0.1	51	30	170					
87/09/23	1100	WATER	0.1	56							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/02/25	1410	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/20	1450	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--May 1979 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 630 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Slight diurnal fluctuation at low flows in growing season.

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

AVERAGE DISCHARGE.--8 years, 9.08 ft^3/s, 12.82 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,170 ft^3/s April 15, 1987, gage height, 8.51 ft; minimum, 0.47 ft^3/s July 29, 1986; minimum daily, 0.75 ft^3/s July 20, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 190 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 19	0930	197	3.74	Apr. 15	2300	*1,170	*8.51
Feb. 28	1700	643	6.55	Apr. 24	0530	275	4.42
Mar. 1	0430	855	7.45	Apr. 24	1630	298	4.61

Minimum discharge, 0.60 ft^3/s Aug. 28, 29; minimum daily, 0.84 ft^3/s Aug. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	2.2	3.5	27	18	381	17	8.7	3.8	2.9	3.8	1.8
2	1.3	2.8	8.0	16	18	35	14	7.8	3.6	3.0	2.5	1.5
3	1.1	2.6	6.0	9.1	17	19	12	7.4	3.4	2.7	2.6	1.4
4	1.1	2.5	4.8	7.4	13	14	13	7.2	9.1	3.7	1.8	1.4
5	.97	2.6	4.4	6.4	9.8	12	10	6.9	4.7	3.3	1.6	6.6
6	.91	2.6	4.2	5.7	8.4	10	8.9	6.7	3.7	2.6	1.7	12
7	.89	4.4	4.1	5.5	7.5	8.9	8.0	6.6	3.6	2.5	2.3	17
8	1.0	4.4	4.5	5.0	6.5	8.9	7.0	6.4	3.3	2.4	2.0	14
9	1.3	3.4	4.9	4.7	5.7	16	6.1	5.7	3.2	2.2	1.8	4.4
10	1.6	3.3	7.0	4.9	5.4	23	6.0	5.7	3.4	2.1	1.5	3.4
11	1.5	8.4	17	4.4	5.3	14	5.9	5.5	3.0	2.2	1.2	9.8
12	1.5	9.5	9.6	4.3	5.3	12	5.9	5.7	3.0	8.4	1.2	4.6
13	2.2	5.3	6.4	3.9	5.0	11	5.7	5.5	3.3	4.2	1.0	5.1
14	5.6	4.5	5.4	3.9	5.1	9.6	5.5	5.9	3.5	3.5	.95	3.9
15	2.5	8.7	5.6	4.1	5.0	9.2	198	6.0	3.1	2.5	3.4	3.2
16	2.0	5.2	5.0	3.9	4.7	8.8	269	5.8	3.0	2.4	2.3	3.2
17	2.0	3.9	4.7	4.9	5.8	8.5	36	5.8	2.9	2.3	1.7	3.1
18	2.1	3.3	4.7	23	6.6	8.2	22	5.5	11	2.2	1.5	3.0
19	2.1	3.2	4.5	64	10	30	18	5.1	4.6	2.1	2.5	3.0
20	2.1	7.4	4.3	18	9.3	16	16	4.5	4.2	2.0	1.6	3.2
21	2.1	4.9	4.2	10	8.0	12	13	4.3	4.1	1.8	1.4	3.0
22	2.1	3.8	4.1	9.8	10	11	9.5	4.1	7.0	1.8	1.3	2.9
23	2.1	3.6	4.3	9.1	18	10	8.8	4.0	4.2	1.8	1.2	2.9
24	2.1	3.5	17	8.3	9.1	10	124	4.0	3.2	1.7	.98	2.8
25	4.1	3.5	10	8.7	7.7	11	77	3.8	6.8	2.1	1.1	2.8
26	7.2	4.8	7.3	8.0	6.7	11	28	3.8	4.4	2.8	1.2	2.7
27	3.1	4.4	6.2	6.7	25	11	18	3.9	3.6	1.8	1.0	2.6
28	2.6	3.8	5.6	6.3	326	15	14	3.8	3.0	1.7	.91	2.6
29	2.6	3.7	5.3	6.5	---	11	11	3.7	2.8	1.6	.84	2.6
30	2.7	3.6	5.0	22	---	30	9.8	3.5	2.9	1.6	.93	9.3
31	2.3	---	4.8	26	---	26	---	3.4	---	1.6	2.8	---
TOTAL	68.67	129.8	192.4	347.5	581.9	813.1	997.1	166.7	125.4	79.5	52.61	139.8
MEAN	2.22	4.33	6.21	11.2	20.8	26.2	33.2	5.38	4.18	2.56	1.70	4.66
MAX	7.2	9.5	17	64	326	381	269	8.7	11	8.4	3.8	17
MIN	.89	2.2	3.5	3.9	4.7	8.2	5.5	3.4	2.8	1.6	.84	1.4
CFSM	.23	.45	.65	1.17	2.16	2.73	3.45	.56	.43	.27	.18	.48
IN.	.27	.50	.74	1.34	2.25	3.14	3.86	.64	.48	.31	.20	.54

CAL YR 1986 TOTAL 1410.62 MEAN 3.86 MAX 22 MIN .75 CFSM .40 IN. 5.45
WTR YR 1987 TOTAL 3694.45 MEAN 10.1 MAX 381 MIN .84 CFSM 1.05 IN. 14.3

PEE DEE RIVER BASIN

02121180 NORTH POTTS CREEK AT LINWOOD, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/23	1600	WATER	0.1	1.08	2	93	7.30	17.0	8.1	9.8	3200
86/11/06	1445	WATER	0.1	1.13	3	104	6.90	19.0		8.1	
86/12/02	1430	WATER	0.1	1.47	9	125	6.70	11.0		9.8	
87/01/06	1155	WATER	0.1	1.37	6	92	7.30	7.0	12.0	12.4	
87/02/11	1500	WATER	0.1	1.31	5	83	7.20	8.0		11.3	
87/03/05	1440	WATER	0.1	1.58	11	78	7.50	10.0		11.2	
87/04/21	1220	WATER	0.1			73	7.00	17.0	23.0	9.4	
87/05/26	1145	WATER	0.1			88	7.40	21.0		7.8	
87/06/22	1345	WATER	0.1			108	6.90	26.0		7.6	
87/07/20	1345	WATER	0.1			94	7.30	27.0	7.1	7.3	
87/08/05	1015	WATER	0.1			96	7.43	26.0		6.8	
87/09/01	1310	WATER	0.1			94	7.27	23.0		7.8	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/23	1600	WATER	0.1	34	20	100	.55	.030	.500	.150	.070
86/11/06	1445	WATER	0.1	37	5	92					
86/12/02	1430	WATER	0.1	34	53	130					
87/01/06	1155	WATER	0.1	31	3	96	.75	.080	.300	.210	.120
87/02/11	1500	WATER	0.1	35	12	110					
87/03/05	1440	WATER	0.1	19	23	89					
87/04/21	1220	WATER	0.1	20	24	110	.53	.030	.400	.100	.020
87/05/26	1145	WATER	0.1	40	13	130					
87/06/22	1345	WATER	0.1	37	12	110					
87/07/20	1345	WATER	0.1	36	19	380	.49	.050	1.000	.110	.110
87/08/05	1015	WATER	0.1	35	14	120					
87/09/01	1310	WATER	0.1	33	13	110					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/23	1600	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/01/06	1155	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/04/21	1220	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/20	1345	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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 fair except those for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 405 ft^3/s Apr. 15, 1987, gage height, 7.12 ft, from rating curve extended above 85 ft^3/s on basis of computation of peak flow through culvert; minimum, 0.01 ft^3/s July 16, 17, 21, Oct. 6-9, 1986; minimum daily, 0.01 ft^3/s July 15, 16, Oct. 7, 8, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 120 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 28	Unknown	Unknown	Unknown	Apr. 15	2100	*405	*7.12

Minimum discharge, 0.01 ft^3/s Oct. 6-9; minimum daily discharge 0.01 ft^3/s Oct. 7,8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.31	.94	21	1.7	e60	6.1	2.5	2.1	3.3	.35	.95
2	.07	.49	3.9	8.9	1.9	e15	4.7	2.3	1.6	5.2	.36	.33
3	.06	.48	3.3	2.8	1.9	e6.0	4.3	2.2	1.0	2.9	.31	.24
4	.05	.40	1.3	1.8	1.5	e4.5	4.7	2.2	1.1	1.3	.26	.22
5	.04	.38	.94	1.5	1.3	e3.5	3.7	2.2	1.5	1.5	.25	.62
6	.02	.40	.78	1.3	1.3	e3.0	3.3	2.0	.97	.87	.26	1.5
7	.01	.61	.70	1.2	1.5	e2.8	3.0	2.0	.83	.76	4.0	3.7
8	.01	.95	.70	1.2	1.4	e2.8	2.8	1.9	.78	.69	.70	1.4
9	.03	.67	.82	1.1	1.2	e2.7	2.6	1.8	.76	.59	.44	.63
10	.08	.54	1.3	1.2	1.2	e2.6	2.4	1.7	.82	.53	.38	.56
11	.10	.47	2.9	1.2	1.2	e2.5	2.3	1.6	.72	.62	.38	.78
12	.10	1.3	2.3	1.1	1.3	e2.4	2.2	1.7	.90	3.0	.39	2.6
13	.13	1.2	1.6	1.1	1.2	e2.3	2.2	23	.86	3.3	.27	3.1
14	.88	.78	1.1	1.0	1.2	e2.2	2.1	6.3	1.1	1.0	.28	.81
15	.45	1.5	.98	1.1	1.2	e2.0	127	3.4	1.0	.85	.96	.55
16	.24	1.4	.89	1.1	1.5	e1.8	41	2.4	1.0	.71	.56	.45
17	.18	.88	.82	1.2	1.5	e1.7	11	1.9	.86	.58	.38	.43
18	.15	.77	.80	4.8	1.9	e9.0	7.8	1.5	3.5	.59	.31	.40
19	.15	.69	.75	43	3.8	e5.0	6.2	1.9	2.1	.56	.27	.40
20	.15	1.8	.70	8.5	4.0	e3.0	5.1	3.2	1.1	.51	.26	.39
21	.15	1.4	.65	3.9	3.5	e2.5	4.7	1.7	.94	.46	.23	.38
22	.15	.69	.64	39	4.0	e2.3	4.3	1.4	.89	.44	.22	.34
23	.13	.49	.65	13	8.1	e2.0	3.9	1.3	1.0	.39	.23	.31
24	.13	.49	7.6	5.5	3.9	e2.5	4.1	1.1	3.0	.35	.22	.31
25	.16	.83	3.6	7.8	2.8	2.6	4.1	1.0	2.0	.34	.14	.31
26	.70	1.5	2.0	9.8	2.2	2.5	3.5	1.1	1.4	.37	.16	.31
27	.54	1.2	1.5	4.6	e48	2.8	3.2	1.1	1.8	.36	.17	.27
28	.35	.76	1.2	3.3	e80	4.8	3.0	1.1	.90	.31	.15	.26
29	.25	.62	1.1	2.5	---	3.1	2.8	1.0	.73	.28	.21	.26
30	.24	.59	1.1	2.4	---	16	2.7	.92	.63	.28	.52	1.2
31	.24	---	.98	2.0	---	13	---	.87	---	.29	.63	---
TOTAL	5.97	24.59	48.54	199.9	186.2	188.9	280.8	80.29	37.89	33.23	14.25	24.01
MEAN	.19	.82	1.57	6.45	6.65	6.09	9.36	2.59	1.26	1.07	.46	.80
MAX	.88	1.8	7.6	43	80	60	127	23	3.5	5.2	4.0	3.7
MIN	.01	.31	.64	1.0	1.2	1.7	2.1	.87	.63	.28	.14	.22
CFSM	.06	.24	.46	1.87	1.93	1.77	2.72	.75	.37	.31	.13	.23
IN.	.06	.27	.52	2.16	2.01	2.04	3.04	.87	.41	.36	.15	.26

CAL YR 1986 TOTAL 427.12 MEAN 1.39 MAX 13 MIN .01 CFSM .40 IN. 4.62
WTR YR 1987 TOTAL 1124.55 MEAN 3.08 MAX 127 MIN .01 CFSM .90 IN. 12.2

e Estimated

PEE DEE RIVER BASIN

02123567 DUTCHMAN'S CREEK NEAR UWHARRIE, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1982-83, October 1986 to September 1987.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1981 to September 1983.
WATER TEMPERATURE: November 1981 to September 1983.

INSTRUMENTATION.--Water-quality monitor from November 1981 to September 1983.

REMARKS.--Basin above station is 100 percent forested. Station is part of district's Natural Quality Network for determining the quality of streams relatively unaffected by man.

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, 66 microsiemens July 22, Aug. 4, 5, 6, 23; minimum, 22 microsiemens Mar. 6.
WATER TEMPERATURE: Maximum, 28.0°C July 21, 22, Aug. 21; minimum, 0.5°C Jan. 19, 20, 21.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)
FEB											
27...	1245	26	40	6.60	6.0	--	--	760	13.4	108	--
27...	1635	83	35	6.40	5.0	--	--	760	13.4	105	--
28...	1045	127	30	5.70	7.0	55	17	755	11.9	99	7
28...	1330	178	27	5.85	7.0	60	44	755	12.0	100	7
MAR											
01...	0833	94	33	5.75	7.5	49	9.0	--	--	--	--
JUL											
28...	1245	0.32	78	7.50	23.5	--	--	750	7.6	--	--
AUG											
07...	1235	6.3	54	7.11	23.5	69	38	752	8.0	96	11

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	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)
FEB											
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
28...	3	1.5	0.77	2.1	36	0.4	1.0	12	1.8	<0.10	8.2
28...	3	1.5	0.74	1.6	29	0.3	1.2	13	1.3	<0.10	6.1
MAR											
01...	--	--	--	--	--	--	--	13	1.6	<0.10	--
JUL											
28...	--	--	--	--	--	--	--	--	--	--	--
AUG											
07...	0	2.7	1.1	3.6	37	0.5	1.7	11	2.2	0.10	17

PEE DEE RIVER BASIN

02123567 DUTCHMAN'S CREEK NEAR UWHARRIE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	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)
FEB											
27...	--	--	--	--	<0.090	<0.010	<0.100	0.050	0.55	0.60	<0.70
27...	--	--	--	--	<0.090	<0.010	<0.100	0.070	1.1	1.2	<1.3
28...	32	30	0.04	11	<0.090	<0.010	<0.100	0.080	0.82	0.90	<1.0
28...	41	28	0.06	20	<0.090	0.010	<0.100	0.100	0.90	1.0	<1.1
MAR											
01...	54	--	--	--	<0.090	<0.010	<0.100	0.030	0.27	0.30	<0.40
JUL											
28...	--	--	--	--	--	--	--	--	--	--	--
AUG											
07...	57	48	0.08	0.97	0.080	0.020	0.100	0.020	1.2	1.2	1.3

DATE	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	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)
FEB											
27...	<3.1	0.010	<0.010	660	<1	<1	<1	2	2	670	<5
27...	<5.8	0.010	0.010	830	<1	<1	<1	2	2	1200	<5
28...	<4.4	0.010	<0.010	910	<1	<1	<1	1	2	1400	<5
28...	<4.9	0.020	0.020	1800	<1	<1	<1	<1	3	2300	<5
MAR											
01...	<1.8	0.020	0.020	70	<1	--	--	--	--	--	--
JUL											
28...	--	--	--	--	--	--	--	--	--	--	--
AUG											
07...	5.8	0.050	0.010	360	<1	<1	<1	1	1	670	<5

PEE DEE RIVER BASIN

02123567 DUTCHMAN'S CREEK NEAR UWHARRIE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
FEB											
27...	40	<0.10	2	<1	<10	--	--	--	--	--	--
27...	110	<0.10	3	<1	<10	--	--	--	--	--	--
28...	100	<0.10	3	<1	<10	--	--	--	--	--	--
28...	240	<0.10	3	<1	<10	--	--	--	--	--	--
MAR											
01...	--	<0.10	--	<1	--	--	--	--	--	--	--
JUL											
28...	--	--	--	--	--	<0.1	<1	<0.10	<1.0	<0.010	<0.1
AUG											
07...	20	<0.10	1	<1	<10	<0.1	--	<0.10	--	<0.010	--

DATE	CHLORDANE, TOTAL (UG/L)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL (UG/L)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN TOTAL (UG/L)
FEB											
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
MAR											
01...	--	--	--	--	--	--	--	--	--	--	--
JUL											
28...	<0.1	<1.0	<0.010	<0.1	<0.010	<0.1	<0.010	<0.1	<0.01	<0.1	<0.010
AUG											
07...	<0.1	--	<0.010	--	<0.010	--	<0.010	--	<0.01	--	<0.010

PEE DEE RIVER BASIN

02123567 DUTCHMAN'S CREEK NEAR UWHARRIE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDO-SULFAN, TOTAL (UG/L)	ENDO-SULFAN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
FEB											
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
MAR											
01...	--	--	--	--	--	--	--	--	--	--	--
JUL											
28...	<0.1	<0.010	<0.1	<0.010	<0.1	<0.01	<0.1	<0.010	<0.1	<0.010	<0.1
AUG											
07...	--	<0.010	--	<0.010	--	<0.01	--	<0.010	--	<0.010	--

DATE	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	MALA-THION, TOTAL (UG/L)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	METH-OXY-CHLOR, TOTAL (UG/L)	METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA-THION, TOTAL (UG/L)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI-THION, TOTAL (UG/L)	METHYL TRI-THION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)
FEB											
27...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
MAR											
01...	--	--	--	--	--	--	--	--	--	--	--
JUL											
28...	<0.010	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01
AUG											
07...	<0.010	--	<0.01	--	<0.01	--	<0.01	--	<0.01	--	<0.01

PEE DEE RIVER BASIN

02123567 DUTCHMAN'S CREEK NEAR UWHARRIE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE TOTAL (UG/L)	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)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
FEB											
27...	--	--	--	--	--	--	--	--	--	31	2.2
27...	--	--	--	--	--	--	--	--	--	79	18
28...	--	--	--	--	--	--	--	--	--	88	30
28...	--	--	--	--	--	--	--	--	--	163	78
MAR											
01...	--	--	--	--	--	--	--	--	--	41	10
JUL											
28...	<0.1	<0.01	<0.1	<0.1	<1.00	<1	<10	<0.01	<0.1	40	0.03
AUG											
07...	--	<0.01	--	<0.1	--	<1	--	<0.01	--	--	--

PEE DEE RIVER BASIN

0212429930 WIBERLY BRANCH BELOW SMITH LAKE NEAR WILGROVE, NC

LOCATION.--(Revised) Lat 35°13'37", long 80°41'31", Mecklenburg County, Hydrologic Unit 03050103, on left bank 200 ft downstream from outlet to Smith Lake in Harrisburg landfill; 2.0 mi northwest of Wilgrove, and 4.1 mi northwest of Mint Hill.

DRAINAGE AREA.--0.35 mi^2 (Revised).

PERIOD OF RECORD.--December 1984 to current year. Published as "near Mint Hill" prior to September 1986.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1984 to current year.
WATER TEMPERATURE: December 1984 to current year.

INSTRUMENTATION.--Water-quality monitor since December 1984.

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.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 333 microsiemens Mar. 29 1985; minimum recorded, 33 microsiemens, July 5, 1987.
WATER TEMPERATURE: Maximum recorded, 36.9°C July 5, 1987; minimum 1.5°C Jan. 23, 24, 1985.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 323 microsiemens Nov. 6; minimum recorded, 33 microsiemens, July 5.
WATER TEMPERATURE: Maximum recorded, 36.9°C July 5; minimum, 2.0°C Feb. 9.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
FEB 04...	1045	122	6.50	14.0	11.0	2.8	39	7	9.5	3.8	6.1
JUL 15...	1115	175	6.58	25.5	1.1	0.7	52	0	12	5.3	6.6

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	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, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)
FEB 04...	23	0.4	3.1	8.6	9.4	<0.20	2.8	65	0.09	0.0	0.300
JUL 15...	--	0.4	<1.0	1.2	3.2	<0.20	6.7	--	--	--	<0.500

DATE	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)
FEB 04...	0.080	<0.050	--	0.100	<0.010	0	<0	4	2	100	<100
JUL 15...	0.320	0.320	0.41	0.140	0.080	<0	<0	<1	<1	<100	<100

DATE	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)
FEB 04...	2	<1	5	3	<50	<50	6100	450	3	2
JUL 15...	3	<1	<1	<1	<50	<50	3800	140	6	<1

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)
FEB 04...	430	380	0.20	<0.2	<1	<1	1	<1	100	<50
JUL 15...	2100	2400	<0.20	<0.2	<2	<2	<1	<1	70	<50

PEE DEE RIVER BASIN

0212429930 WIBERLY BRANCH BELOW SMITH LAKE NEAR WILGROVE, NC--Continued

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	132	127	130	234	184	209	151	140	145	---	---	---
2	131	127	129	249	208	224	151	132	143	---	---	---
3	134	126	130	281	250	263	162	151	155	---	---	---
4	134	125	129	294	271	283	173	162	166	---	---	---
5	132	127	129	320	293	304	175	171	173	---	---	---
6	140	129	133	323	264	303	173	160	165	---	---	---
7	155	142	148	301	282	294	161	157	159	---	---	---
8	165	145	158	302	273	287	159	148	155	---	---	---
9	171	161	166	293	284	287	148	131	143	---	---	---
10	178	167	171	307	293	301	147	133	141	---	---	---
11	192	179	188	313	236	293	151	144	146	---	---	---
12	193	183	189	236	163	190	161	151	154	---	---	---
13	188	162	185	250	181	190	164	160	162	---	---	---
14	141	65	81	304	132	211	169	165	166	---	---	---
15	103	77	90	147	127	140	170	165	168	---	---	---
16	113	96	105	148	145	147	171	168	170	---	---	---
17	122	112	115	175	146	159	171	169	171	---	---	---
18	130	119	125	162	157	159	172	169	171	---	---	---
19	152	131	137	163	157	160	172	158	168	---	---	---
20	160	133	142	160	111	135	167	163	166	---	---	---
21	151	139	143	146	123	135	168	160	165	---	---	---
22	153	143	146	151	145	147	164	158	162	---	---	---
23	155	147	150	146	141	143	163	153	160	---	---	---
24	163	151	156	141	139	141	153	98	132	---	---	---
25	172	118	160	139	126	135	140	124	135	---	---	---
26	132	116	122	146	138	142	150	138	144	---	---	---
27	167	128	139	152	143	149	153	150	151	---	---	---
28	227	169	199	153	152	153	156	151	154	---	---	---
29	246	228	239	158	152	155	---	---	---	138	113	133
30	258	228	244	158	153	156	---	---	---	131	114	122
31	237	221	227	---	---	---	---	---	---	139	123	132
MONTH	258	65	152	323	111	200	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	133	122	130	96	59	84	143	94	132	243	208	226
2	137	128	134	109	96	102	150	140	144	223	180	205
3	153	134	142	113	106	110	152	146	148	202	165	188
4	132	122	125	117	111	114	152	145	148	168	126	155
5	126	121	124	119	112	117	163	150	157	138	113	130
6	128	121	125	122	118	120	176	157	165	119	100	112
7	131	119	127	124	119	121	183	171	178	115	105	109
8	134	126	132	124	84	108	183	167	174	139	117	128
9	135	132	133	110	84	97	167	152	160	160	136	148
10	136	124	133	114	105	111	159	136	153	182	157	164
11	135	131	133	122	110	115	147	137	142	189	171	181
12	141	125	134	125	112	120	142	128	136	192	168	184
13	137	129	133	132	123	127	132	126	130	190	151	177
14	132	127	131	137	128	133	128	117	123	173	160	167
15	133	129	131	140	133	137	119	62	92	176	62	149
16	160	126	136	142	136	140	98	66	85	143	89	115
17	191	158	166	144	138	141	98	76	88	157	131	146
18	230	193	216	144	142	143	109	86	99	166	154	160
19	190	175	181	142	79	106	127	101	110	177	147	161
20	182	170	177	128	108	119	120	94	108	168	153	161
21	172	159	169	136	126	131	114	98	105	177	153	164
22	163	143	152	142	132	137	123	101	108	173	155	163
23	152	146	148	147	139	142	107	93	101	181	154	166
24	151	138	144	147	141	145	112	85	95	187	156	171
25	140	138	139	153	135	140	106	89	98	186	170	177
26	140	136	138	152	142	148	130	105	116	181	167	174
27	136	92	108	150	122	144	147	122	134	184	170	178
28	92	59	76	129	121	125	174	140	154	192	180	185
29	---	---	---	134	127	131	205	167	185	210	187	196
30	---	---	---	133	124	128	225	203	213	207	190	197
31	---	---	---	132	118	124	---	---	---	207	191	203
MONTH	230	59	140	153	59	125	225	62	133	243	62	166

PEE DEE RIVER BASIN

0212429930 WIBERLY BRANCH BELOW SMITH LAKE NEAR WILGROVE, NC--Continued

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	201	154	183	180	45	143	211	203	207	141	130	135
2	184	175	181	117	86	107	210	195	200	147	138	143
3	186	165	176	155	119	137	204	191	198	144	139	140
4	182	167	175	185	152	168	205	195	201	142	139	141
5	189	170	176	217	33	169	204	193	198	140	94	112
6	192	158	176	130	72	105	196	168	178	104	65	98
7	189	166	180	143	132	138	168	42	105	84	34	50
8	195	165	180	150	142	145	171	138	159	84	40	62
9	195	166	181	155	148	152	172	163	166	98	43	81
10	195	176	185	161	132	153	178	169	172	95	80	91
11	197	168	185	166	136	150	180	175	177	91	50	80
12	196	178	185	178	166	171	180	173	176	100	73	90
13	197	180	188	182	173	176	181	169	173	103	90	96
14	192	166	183	185	177	180	178	171	174	111	100	105
15	190	173	183	186	172	179	183	176	180	115	108	111
16	190	171	184	183	169	176	182	168	174	125	114	118
17	187	166	180	193	178	183	180	173	177	122	114	116
18	186	165	178	190	175	182	180	173	177	122	111	116
19	192	158	179	195	177	186	187	179	181	121	115	118
20	175	82	155	196	178	187	188	181	185	127	119	122
21	166	134	153	195	180	186	184	171	175	122	114	118
22	167	151	159	196	177	185	188	178	183	123	104	116
23	199	164	181	197	185	190	190	179	186	122	115	118
24	189	174	184	202	186	193	187	165	173	123	117	120
25	175	51	104	203	196	200	171	160	163	125	117	120
26	115	73	99	203	195	200	177	171	173	138	119	128
27	116	91	102	205	183	198	181	174	177	149	134	141
28	151	118	137	201	179	186	186	175	180	172	148	158
29	157	134	145	204	190	196	185	68	161	164	153	159
30	181	142	166	211	192	198	110	72	91	164	159	160
31	---	---	---	212	203	207	130	110	121	---	---	---
MONTH	201	51	167	217	33	172	211	42	172	172	34	115

TEMPERATURE, WATER, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	24.8	22.9	23.9	15.6	13.7	14.4	8.5	6.1	7.1	---	---	---
2	24.9	23.2	24.1	19.5	14.3	16.2	8.9	6.1	8.2	---	---	---
3	25.8	23.0	24.6	15.9	12.7	14.4	12.4	8.3	9.9	---	---	---
4	26.0	23.8	25.0	17.4	12.1	14.4	11.3	6.2	8.3	---	---	---
5	25.7	24.1	25.1	16.1	14.8	15.4	10.0	5.9	7.5	---	---	---
6	24.6	21.2	22.4	19.7	15.6	16.7	8.9	3.9	6.3	---	---	---
7	21.1	19.1	19.9	16.0	14.5	15.1	8.1	3.6	5.7	---	---	---
8	21.8	18.5	20.2	18.6	14.1	15.8	8.1	6.0	6.9	---	---	---
9	20.7	18.8	19.7	20.7	16.1	17.9	13.5	8.2	10.8	---	---	---
10	19.4	16.7	18.4	17.4	13.0	14.8	17.2	13.3	14.9	---	---	---
11	17.8	15.5	16.7	13.0	11.8	12.4	14.5	9.2	11.3	---	---	---
12	19.8	16.4	17.8	12.0	10.7	11.3	9.6	8.3	9.0	---	---	---
13	20.9	18.5	19.5	10.8	6.3	9.5	8.7	5.4	7.1	---	---	---
14	23.9	19.6	21.2	8.7	4.9	6.4	7.1	3.2	5.3	---	---	---
15	22.9	17.0	19.4	7.2	4.9	5.9	10.2	4.5	6.9	---	---	---
16	19.8	14.1	16.4	9.1	7.1	8.2	10.4	5.5	7.8	---	---	---
17	20.8	13.1	16.3	11.2	8.9	10.0	10.3	7.4	8.9	---	---	---
18	19.4	13.5	16.3	12.4	10.8	11.5	10.4	8.1	9.5	---	---	---
19	19.4	11.4	14.9	14.0	9.0	11.3	11.0	5.6	7.9	---	---	---
20	20.2	11.6	15.2	10.2	7.2	8.2	10.3	5.5	7.8	---	---	---
21	20.2	12.3	15.6	12.3	5.9	8.4	8.3	5.2	6.6	---	---	---
22	20.5	12.0	15.7	10.4	5.3	7.5	6.7	3.4	5.1	---	---	---
23	20.1	13.4	16.5	9.1	6.1	7.6	6.7	3.8	5.2	---	---	---
24	20.5	14.8	17.1	13.3	8.6	10.9	9.2	6.4	7.8	---	---	---
25	17.0	15.5	16.1	13.0	11.6	12.5	10.4	8.7	9.4	---	---	---
26	21.5	15.5	17.2	14.8	10.7	12.4	12.8	7.6	9.8	---	---	---
27	21.1	15.5	17.8	15.6	12.1	13.6	9.8	7.1	8.4	---	---	---
28	20.6	14.2	16.9	12.2	10.9	11.4	9.8	6.6	7.7	---	---	---
29	15.8	13.5	14.8	16.0	9.3	12.2	---	---	---	7.3	3.0	5.3
30	20.3	12.4	15.8	11.5	8.6	10	---	---	---	9.1	6.6	7.6
31	18.2	12.7	15.4	---	---	---	---	---	---	7.3	5.1	6.1
MONTH	26.0	11.4	18.6	20.7	4.9	11.9	---	---	---	---	---	---

PEE DEE RIVER BASIN

0212429930 WIBERLY BRANCH BELOW SMITH LAKE NEAR WILGROVE, NC--Continued

TEMPERATURE, WATER, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	6.6	5.0	5.9	11.5	3.9	7.5	19.3	7.9	12.7	28.8	17.6	22.2
2	6.8	4.3	5.9	14.3	5.1	9.3	18.9	8.2	13.5	29.2	17.8	22.5
3	8.9	4.8	6.8	16.4	5.9	10.3	15.2	10.9	13.2	25.7	19.0	22.3
4	11.1	6.2	8.2	14.0	6.4	10	16.4	7.6	11.1	24.8	16.9	21.0
5	8.4	6.4	7.3	13.2	5.6	9.0	17.8	7.4	11.0	25.3	13.5	18.6
6	9.0	5.4	7.4	14.6	5.8	9.8	20.4	7.5	13.3	27.1	14.5	20.5
7	12.7	7.4	9.4	16.5	6.0	10.9	20.2	10.3	14.7	26.4	17.4	21.7
8	12.6	6.4	8.7	12.0	10.0	11.1	23.8	12.0	16.6	26.4	17.7	22.0
9	7.5	2.0	5.0	14.8	11.2	12.5	24.1	11.5	17.5	26.6	13.8	19.8
10	9.1	2.5	5.6	12.1	7.0	9.9	24.6	11.7	18.1	28.2	15.6	21.0
11	9.9	4.2	6.8	10.9	3.2	6.7	22.6	14.1	17.6	25.9	16.8	21.5
12	13.4	6.8	9.5	11.4	5.6	8.3	23.3	15.1	18.4	24.7	19.0	21.6
13	13.4	7.1	10	16.0	7.5	11.0	25.7	16.0	20.1	23.3	18.7	20.9
14	10.2	7.5	9.1	17.3	7.0	11.4	20.8	16.6	18.3	20.3	16.8	18.5
15	9.7	7.9	8.9	18.7	8.1	13.1	20.8	16.8	18.2	27.2	16.2	19.7
16	8.6	2.3	5.3	13.7	10.4	12.4	23.1	13.7	17.1	27.5	17.2	21.1
17	4.1	2.4	3.3	18.3	8.3	12.3	21.1	12.8	15.8	29.2	17.1	21.6
18	6.0	3.4	4.4	11.3	8.8	10.1	22.2	13.5	16.8	29.7	16.8	22.3
19	7.8	4.2	5.8	15.3	7.9	10	26.0	13.5	19.1	29.9	17.1	22.4
20	9.7	4.2	7.1	20.1	8.2	12.7	27.6	14.9	21.0	23.6	18.2	20.3
21	10.3	7.3	8.5	21.0	9.2	14.4	27.7	16.5	22.0	26.1	16.9	20.5
22	8.1	6.1	7.1	20.4	8.5	14.4	30.2	16.2	23.0	27.3	16.7	21.3
23	11.8	4.3	7.3	21.1	10.3	15.1	25.0	19.0	21.9	29.9	16.5	22.4
24	9.2	5.7	7.4	17.9	10.9	14.4	21.7	16.1	19.1	30.1	18.6	23.5
25	10.4	7.1	8.4	14.5	12.8	13.7	15.6	11.5	14.2	29.2	18.6	23.6
26	8.4	6.9	7.5	22.4	13.5	17.1	23.6	9.9	15.8	28.4	19.7	23.6
27	7.0	4.0	5.0	19.8	13.1	16.3	24.2	11.3	17.2	29.7	20.3	24.0
28	4.4	3.7	4.1	25.6	14.7	19.1	24.9	14.1	18.7	29.2	18.9	23.1
29	---	---	---	19.6	14.6	16.9	24.9	12.3	17.7	30.0	18.4	23.4
30	---	---	---	21.4	15.8	17.9	27.7	13.7	19.8	29.5	18.7	23.5
31	---	---	---	17.7	9.0	14.9	---	---	---	29.8	18.7	23.3
MONTH	13.4	2.0	6.99	25.6	3.2	12.3	30.2	7.4	17.1	30.1	13.5	21.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	28.5	19.5	22.6	33.5	23.2	26.6	24.3	22.8	23.6	22.8	21.9	22.3
2	29.9	18.6	23.6	33.3	25.2	28.3	24.3	22.9	23.7	26.1	20.0	23.2
3	29.8	19.0	24.0	35.0	24.3	28.1	25.1	23.2	24.1	26.5	23.0	24.3
4	29.6	20.4	23.3	33.2	24.1	27.3	25.3	23.8	24.6	25.0	23.3	23.9
5	29.3	18.8	23.2	36.9	23.7	28.9	25.2	23.9	24.6	23.1	19.6	22.1
6	28.6	16.5	22.0	26.4	24.0	25.0	24.8	23.6	24.4	25.8	22.5	24.0
7	28.2	17.2	22.2	24.1	23.1	23.6	26.1	23.5	24.9	26.2	23.5	24.5
8	28.5	18.0	22.7	23.6	22.3	23.1	24.2	23.0	23.7	30.5	24.1	26.3
9	28.5	19.0	23.3	23.8	22.4	23.1	24.2	23.2	23.7	26.8	24.3	25.7
10	28.6	19.8	23.4	24.3	22.5	23.3	24.6	23.4	24.0	30.7	24.6	27.1
11	26.1	19.8	22.6	23.9	22.7	23.4	24.1	23.0	23.4	30.1	23.6	26.1
12	28.5	20.4	23.7	24.0	22.8	23.4	23.8	22.6	23.1	28.9	23.8	25.5
13	25.3	21.8	23.5	23.8	22.4	23.2	23.3	21.6	22.5	29.9	24.7	26.3
14	28.6	21.1	24.0	24.0	22.5	23.3	22.1	20.2	21.3	31.6	22.8	25.8
15	28.4	21.7	23.9	23.3	22.2	22.8	22.3	21.8	22.0	30.4	21.2	24.6
16	28.3	22.3	24.7	23.1	21.1	22.2	23.1	21.8	22.3	28.7	20.9	24.1
17	28.7	22.3	24.8	22.5	20.6	21.7	24.1	22.2	23.0	28.3	21.7	24.0
18	29.7	22.0	24.9	23.0	20.9	22.0	24.1	22.6	23.3	27.4	21.1	23.7
19	29.0	22.7	24.9	23.1	21.2	22.3	23.8	22.5	23.3	24.9	20.5	22.5
20	30.5	22.1	25.1	23.6	21.6	22.7	24.0	22.4	23.3	25.7	20.6	22.6
21	33.2	22.7	27.2	23.7	22.1	23.0	23.6	22.0	23.0	23.8	17.5	20.2
22	31.4	22.7	26.1	24.1	22.3	23.2	24.2	22.7	23.5	22.8	17.5	19.4
23	31.0	22.4	26.0	24.4	22.7	23.5	24.5	23.3	23.9	20.8	16.1	18.4
24	31.5	22.6	26.7	24.0	22.1	23.2	24.1	22.2	23.2	20.0	16.1	18.2
25	26.8	22.3	25.0	24.4	22.6	23.5	22.5	20.7	21.5	21.0	16.0	18.1
26	30.1	23.5	25.6	24.5	22.8	23.8	23.8	22.0	22.8	20.6	16.9	18.4
27	35.5	22.6	27.7	24.6	22.9	23.8	24.6	23.5	24.0	19.8	15.2	17.5
28	33.5	18.1	25.3	23.8	22.6	23.3	24.8	23.8	24.3	21.1	14.6	17.3
29	33.0	18.3	25.1	24.0	22.5	23.3	25.7	23.2	24.5	20.7	15.0	18.1
30	33.2	21.1	26.5	23.5	22.2	22.9	25.7	22.3	24.1	21.7	18.7	20.0
31	---	---	---	24.0	22.5	23.2	22.4	21.5	22.1	---	---	---
MONTH	35.5	16.5	24.5	36.9	20.6	23.9	26.1	20.2	23.4	31.6	14.6	22.5

PEE DEE RIVER BASIN

02124471 DUTCH BUFFALO CREEK AT NC 49 NEAR MOUNT PLEASANT, N.C.

LOCATION.--Lat 35° 25'37", long 80° 24'40", Cabbarrus County, Hydrologic unit 03040105, on left bank at downstream side of bridge on State Highway 49, 0.6 mi. upstream from Little Buffalo Creek, and 2.4 mi. northeast of Mount Pleasant.

DRAINAGE AREA.--45.1 mi^2

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1985 to February 1987 (discontinued).

GAGE.--Water--stage recorder. Elevation of gage is 520 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair above 3 ft^3/s and poor below.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,080 ft^3/s Nov. 21, 1985, gage height, 7.97 ft; minimum, no flow Oct. 4-8, 15-22, 1986.

EXTREMES FOR CURRENT PERIOD.--October 1986 to February 1987-maximum discharge during period, 2,440 ft^3/s Feb. 28, gage height, 6.84 ft; minimum, no flow Oct. 4-8, 15-22.

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER 1986 TO FEBRUARY 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.17	.87	4.3	244	71	---	---	---	---	---	---	---
2	.05	1.4	27	140	63	---	---	---	---	---	---	---
3	.02	1.4	28	38	66	---	---	---	---	---	---	---
4	.00	2.1	11	23	38	---	---	---	---	---	---	---
5	.00	2.0	6.7	18	27	---	---	---	---	---	---	---
6	.00	1.7	5.3	14	24	---	---	---	---	---	---	---
7	.00	1.9	4.7	12	23	---	---	---	---	---	---	---
8	.00	2.2	4.6	11	21	---	---	---	---	---	---	---
9	.01	2.0	5.6	10	18	---	---	---	---	---	---	---
10	.03	2.1	16	9.9	16	---	---	---	---	---	---	---
11	.02	2.1	93	9.6	16	---	---	---	---	---	---	---
12	.01	11	61	8.4	16	---	---	---	---	---	---	---
13	.02	6.8	21	8.3	15	---	---	---	---	---	---	---
14	.57	3.2	12	7.9	14	---	---	---	---	---	---	---
15	.00	2.9	9.1	8.1	14	---	---	---	---	---	---	---
16	.00	4.4	7.5	8.0	15	---	---	---	---	---	---	---
17	.00	2.9	7.0	8.4	17	---	---	---	---	---	---	---
18	.00	2.2	6.4	87	18	---	---	---	---	---	---	---
19	.00	2.2	6.5	512	31	---	---	---	---	---	---	---
20	.00	34	6.1	119	38	---	---	---	---	---	---	---
21	.00	21	5.5	48	29	---	---	---	---	---	---	---
22	.00	6.6	5.2	65	27	---	---	---	---	---	---	---
23	.01	4.8	5.0	100	99	---	---	---	---	---	---	---
24	.01	3.7	70	54	39	---	---	---	---	---	---	---
25	.37	3.6	57	101	26	---	---	---	---	---	---	---
26	2.8	4.6	20	143	22	---	---	---	---	---	---	---
27	4.4	6.5	13	56	471	---	---	---	---	---	---	---
28	2.1	4.5	9.9	40	1600	---	---	---	---	---	---	---
29	1.2	4.0	8.5	42	---	---	---	---	---	---	---	---
30	.35	3.8	8.0	172	---	---	---	---	---	---	---	---
31	.02	---	7.2	166	---	---	---	---	---	---	---	---
TOTAL	12.09	152.47	552.1	2283.6	2874	---	---	---	---	---	---	---
MEAN	.39	5.08	17.8	73.7	103	---	---	---	---	---	---	---
MAX	4.4	34	93	512	1600	---	---	---	---	---	---	---
MIN	.00	.87	4.3	7.9	14	---	---	---	---	---	---	---
CFSM	.01	.11	.39	1.63	2.28	---	---	---	---	---	---	---
IN.	.01	.13	.46	1.88	2.37	---	---	---	---	---	---	---

PEE DEE RIVER BASIN

02124471 DUTCH BUFFALO CREEK AT NC 49 NEAR MOUNT PLEASANT, NC-Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1985 to January 1987 (discontinued).

REMARKS.--Station operated to define baseline water quality information for pre-impoundment.

WATER QUALITY DATA, OCTOBER 1986 TO JANUARY 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
JAN											
19...	0200	200	95	6.50	5.0	750	12.4	99	0.400	0.170	1.3
19...	0730	450	88	6.40	5.0	750	13.0	103	0.400	0.160	1.3
19...	1005	1000	83	6.40	5.5	750	12.8	103	0.400	0.200	0.90
19...	1330	700	75	5.80	5.0	748	12.5	100	0.400	0.210	1.5
20...	1040	115	92	6.40	5.5	--	--	--	0.500	0.100	0.60

DATE	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-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
JAN											
19...	1.5	1.9	8.4	0.210	0.050	0.070	0.030	0.09	<0.10	111	60
19...	1.5	1.9	8.4	0.270	0.040	0.080	0.030	0.09	<0.10	204	248
19...	1.1	1.5	6.6	0.490	0.070	0.100	0.060	0.18	<0.10	745	2010
19...	1.7	2.1	9.3	0.340	0.040	0.070	0.020	0.06	0.20	576	1090
20...	0.70	1.2	5.3	0.100	0.040	0.040	0.020	0.06	<0.10	--	--

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.

WATER-DISCHARGE RECORDS

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.

AVERAGE DISCHARGE.--33 years, 57.5 ft^3/s, 14.04 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,100 ft^3/s Aug. 22, 1967, gage height, 15.95 ft; no flow for periods in 1954, 1961-64, 1966-69, 1972, 1976-77, 1980, 1983, 1986 and 1987.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1921 reached a stage of about 19 ft, from information by North Carolina State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 28	1400	*3,990	*10.06	Sept. 7	2330	2,560	8.07
Aug. 7	0800	3,380	9.26				

No flow many days in October, November.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	7.3	302	78	1660	73	11	96	7.8	.42	1.3
2	.00	.12	91	184	71	320	52	10	43	9.8	.38	.67
3	.00	.09	100	94	69	147	40	11	11	7.9	.32	.43
4	.00	.00	35	53	50	95	40	9.1	17	6.9	.24	.28
5	.00	.00	19	38	40	70	32	7.9	18	6.4	.79	7.3
6	.00	.06	12	28	35	51	26	7.3	8.3	23	60	18
7	.00	.11	9.3	24	35	48	23	6.9	6.2	28	731	253
8	.00	.31	8.3	21	32	43	21	6.6	4.9	30	46	334
9	.00	.25	9.1	18	24	49	18	5.9	4.0	9.6	22	46
10	.00	.29	52	18	21	47	16	5.2	3.5	6.8	16	29
11	.00	.25	172	17	18	34	15	4.5	3.1	5.4	14	359
12	.00	.62	143	14	18	31	14	4.1	2.9	4.8	12	406
13	.00	.71	62	13	17	29	13	95	2.8	6.3	8.9	127
14	.00	.50	35	12	16	24	12	88	3.0	11	5.0	65
15	.00	.68	25	12	16	24	81	28	2.7	5.4	5.6	35
16	.00	.82	20	12	17	21	268	23	2.4	3.9	12	23
17	.00	.67	16	12	18	19	123	14	2.2	3.0	7.9	17
18	.00	.59	13	63	26	18	67	10	17	2.4	5.2	12
19	.00	.57	12	947	68	112	47	8.4	7.7	2.0	2.9	9.8
20	.00	1.0	10	258	90	80	37	8.4	4.4	1.5	1.9	9.1
21	.00	2.1	8.8	110	65	50	30	8.0	3.3	1.2	1.4	7.8
22	.00	1.6	7.8	344	57	36	24	6.8	2.8	1.1	.98	6.6
23	.00	.90	7.3	301	159	28	20	5.8	8.4	.89	.74	5.6
24	.00	.66	94	160	82	24	36	5.0	14	.76	.59	5.1
25	.00	.58	112	336	70	24	60	4.2	266	.72	.50	4.7
26	.28	28	51	399	43	26	37	7.2	44	.62	.45	4.2
27	.08	57	32	156	787	24	25	5.5	58	.53	.38	3.8
28	.00	17	23	110	2420	71	20	4.3	16	.50	.29	3.6
29	.00	9.4	18	102	---	45	15	3.7	9.4	.54	.83	3.2
30	.00	6.7	16	152	---	90	13	3.3	7.4	.55	16	6.3
31	.00	---	13	140	---	129	---	2.9	---	.45	4.1	---
TOTAL	.36	131.63	1233.9	4450	4442	3469	1298	421.0	689.4	189.76	978.81	1803.78
MEAN	.01	4.39	39.8	144	159	112	43.3	13.6	23.0	6.12	31.6	60.1
MAX	.28	57	172	947	2420	1660	268	95	266	30	731	406
MIN	.00	.00	7.3	12	16	18	12	2.9	2.2	.45	.24	.28
CFSM	.00	.08	.72	2.58	2.85	2.01	.78	.24	.41	.11	.57	1.08
IN.	.00	.09	.83	2.98	2.97	2.32	.87	.28	.46	.13	.65	1.21

CAL YR 1986 TOTAL 4280.09 MEAN 11.7 MAX 353 MIN .00 CFSM .21 IN. 2.86
WTR YR 1987 TOTAL 19107.51 MEAN 52.3 MAX 2420 MIN .00 CFSM .94 IN. 12.8

PEE DEE RIVER BASIN

02125000 BIG BEAR CREEK NEAR RICHFIELD, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1985 to January 1987 (discontinued).

REMARKS.--Station operated to define baseline water quality information for pre-impoundment.

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

WATER QUALITY DATA, OCTOBER 1986 TO JANUARY 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
JAN											
19...	0045	269	140	6.10	6.0	746	9.6	79	--	--	--
19...	0315	412	138	6.50	5.0	750	13.4	107	2.60	0.310	1.2
19...	0830	985	120	6.15	6.5	--	12.4	--	2.30	0.250	0.75
19...	1215	2010	97	6.40	5.5	750	12.6	102	2.00	0.230	2.6
19...	1330	1650	--	--	--	--	--	--	--	--	--
19...	1645	1040	--	--	--	--	--	--	--	--	--
19...	1705	1000	100	6.20	8.0	--	--	--	2.40	0.180	1.0
20...	1335	212	110	6.50	5.5	--	--	--	3.40	0.100	0.60

DATE	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-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
JAN											
19...	--	--	--	--	--	--	--	--	<0.10	--	--
19...	1.5	4.1	18	0.160	0.080	0.070	0.060	0.18	<0.10	322	358
19...	1.0	3.3	15	0.250	0.160	0.090	0.130	0.40	--	--	--
19...	2.8	4.8	21	0.380	0.090	0.100	0.070	0.21	<0.10	513	2780
19...	--	--	--	--	--	--	--	--	--	493	2200
19...	--	--	--	--	--	--	--	--	--	191	536
19...	1.2	3.6	16	0.160	0.070	0.060	0.050	0.15	<0.10	133	359
20...	0.70	4.1	18	0.070	0.040	0.030	0.030	0.09	<0.10	--	--

PEE DEE RIVER BASIN

02125000 BIG BEAR CREEK NEAR RICHFIELD, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/15	1335	WATER	0.1	1.24	0						
86/11/17	1405	WATER	0.1	.80	1	101	6.40	11.0	1.1	8.8	
86/12/02	1030	WATER	0.1	2.09	99	174	6.10	9.0		9.8	
87/01/14	1445	WATER	0.1	1.21	12	117	6.20	6.0		11.4	
87/02/10	1445	WATER	0.1	1.36	19	95	6.30	6.0	2.8	13.8	
87/03/04	1200	WATER	0.1	2.06	95	86	6.20	9.0		12.3	
87/04/07	1135	WATER	0.1	1.41	23	79	6.70	11.0		13.1	
87/05/05	1420	WATER	0.1	1.16	8	89	6.90	17.0	2.9	10.3	
87/06/09	1045	WATER	0.1	1.01	4	104	6.90	21.0		8.5	
87/07/08	1200	WATER	0.1	1.41	23	98	6.70	24.0		8.0	
87/08/10	1540	WATER	0.1	1.31	15	113	6.30	27.0	11.0	7.7	
87/09/09	1510	WATER	0.1	1.66	45	108	6.40	23.0		8.3	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/11/17	1405	WATER	0.1	37	1	90	.03	.030	.200	.030	.010K
86/12/02	1030	WATER	0.1	28							
87/01/14	1445	WATER	0.1	15							
87/02/10	1445	WATER	0.1	12	1K	74	2.60	.010	.100	.020	.010K
87/03/04	1200	WATER	0.1	11							
87/04/07	1135	WATER	0.1	18							
87/05/05	1420	WATER	0.1	24	2	79	1.20	.070	.300	.080	.040
87/06/09	1045	WATER	0.1	21							
87/07/08	1200	WATER	0.1	17							
87/08/10	1540	WATER	0.1	19	6	92	1.80	.010	.300	.070	.040
87/09/09	1510	WATER	0.1	20							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/17	1405	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	17
87/02/10	1445	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/05	1420	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/10	1540	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

PEE DEE RIVER BASIN

0212501005 BIG BEAR CREEK AT SR 1214 NEAR BLOOMINGTON, NC

LOCATION.--Lat 35°18'24", long 80°19'08", Stanly County, Hydrologic Unit 03040105, at bridge on SR 1214 and 1.9 mi south of Bloomington.

DRAINAGE AREA.--61.9 mi^2.

PERIOD OF RECORD.--March 1985 to January 1987 (discontinued).

REMARKS.--Station operated to define baseline water quality information for pre-impoundment.

WATER QUALITY DATA, OCTOBER 1986 TO JANUARY 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
JAN											
19...	0035	260	--	--	--	--	--	--	--	--	--
19...	0100	278	--	--	--	--	--	--	--	--	--
19...	0145	318	--	--	--	--	--	--	--	--	--
19...	0200	334	140	6.20	6.5	--	11.7	--	2.70	0.220	0.98
19...	0415	412	135	6.40	5.0	745	13.3	107	2.60	0.230	1.1
19...	0830	985	--	--	--	--	--	--	--	--	--
19...	0900	1250	120	6.10	7.0	--	12.6	--	2.30	0.260	1.2
19...	0915	1400	--	--	--	--	--	--	--	--	--
19...	1330	1660	90	5.50	8.0	--	--	--	2.00	0.200	1.7
19...	1645	1040	100	6.20	8.0	--	--	--	2.20	0.150	1.1
20...	1355	212	115	6.50	5.5	--	--	--	3.20	0.100	0.50

DATE	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-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
JAN											
19...	--	--	--	--	--	--	--	--	--	45	32
19...	--	--	--	--	--	--	--	--	--	54	41
19...	--	--	--	--	--	--	--	--	--	55	47
19...	1.2	3.9	17	0.130	--	0.040	--	--	--	52	47
19...	1.3	3.9	17	0.140	0.070	0.060	0.050	0.15	<0.10	65	72
19...	--	--	--	--	--	--	--	--	--	539	1430
19...	1.5	3.8	17	0.270	0.090	0.090	0.080	0.25	0.20	459	1550
19...	--	--	--	--	--	--	--	--	--	579	2190
19...	1.9	3.9	17	0.310	0.140	0.090	0.110	0.34	0.10	--	--
19...	1.3	3.5	15	0.220	0.120	0.060	0.100	0.31	--	--	--
20...	0.60	3.8	17	0.070	0.040	0.030	0.030	0.09	<0.10	--	--

SANTEE RIVER BASIN

02125816 LANES CREEK NEAR MARSHVILLE, NC

LOCATION.--Lat 34°58'31", long 80°18'14", Union County, Hydrologic Unit 03040105, on left bank at downstream side of bridge on Secondary Road 1901, 0.5 mi downstream from Beaver Dam Creek and 3.5 mi southeast of Marshville.

DRAINAGE AREA.--87.8 mi^2.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--March 1985 to February 1987 (discontinued).

GAGE.--Water--stops recorder. Elevation of gage is 3900 ft above National Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except those below 1 ft^3/s and those for estimated daily discharge, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,900 ft^3/s Feb. 28, 1987, gage height, 16.3 ft from flood marks, and rating curve extended above 2,500 ft^3/s; no flow at times in 1985, 1986, and 1987.

EXTREMES FOR CURRENT PERIOD.--October 1986 to February 1987; Maximum discharge, 4,900 ft^3/s Feb. 28, gage height, 16.3 ft, from flood marks and rating curve extended above 2,500 ft^3/s; no flow all or parts of Oct. 6-9, and 21-25.

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER 1986 TO FEBRUARY 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.09	57	1250	50	---	---	---	---	---	---	---
2	.02	1.1	511	e1780	41	---	---	---	---	---	---	---
3	.02	2.9	413	e427	41	---	---	---	---	---	---	---
4	.01	3.4	114	e207	36	---	---	---	---	---	---	---
5	.01	3.9	50	e127	30	---	---	---	---	---	---	---
6	.01	3.9	31	e72	25	---	---	---	---	---	---	---
7	.01	3.8	22	e46	34	---	---	---	---	---	---	---
8	.00	5.2	18	e38	61	---	---	---	---	---	---	---
9	.70	6.0	16	e28	38	---	---	---	---	---	---	---
10	1.5	4.7	41	e24	26	---	---	---	---	---	---	---
11	1.3	3.9	95	e34	21	---	---	---	---	---	---	---
12	.21	8.8	318	e36	19	---	---	---	---	---	---	---
13	.08	10	322	24	18	---	---	---	---	---	---	---
14	.07	6.5	89	22	18	---	---	---	---	---	---	---
15	.07	18	49	18	18	---	---	---	---	---	---	---
16	.04	14	36	17	24	---	---	---	---	---	---	---
17	.03	9.5	28	19	47	---	---	---	---	---	---	---
18	.02	12	24	306	165	---	---	---	---	---	---	---
19	.01	9.9	20	1770	262	---	---	---	---	---	---	---
20	.01	25	17	793	136	---	---	---	---	---	---	---
21	.01	46	15	174	74	---	---	---	---	---	---	---
22	.00	35	11	1960	57	---	---	---	---	---	---	---
23	.00	25	9.0	1380	177	---	---	---	---	---	---	---
24	.00	21	414	194	100	---	---	---	---	---	---	---
25	.00	326	387	208	56	---	---	---	---	---	---	---
26	.01	463	114	786	42	---	---	---	---	---	---	---
27	.01	121	59	211	1080	---	---	---	---	---	---	---
28	.16	50	39	115	3700	---	---	---	---	---	---	---
29	.12	29	29	78	---	---	---	---	---	---	---	---
30	.09	20	24	67	---	---	---	---	---	---	---	---
31	.07	---	20	75	---	---	---	---	---	---	---	---
TOTAL	4.60	1288.59	3392.0	12286	6396	---	---	---	---	---	---	---
MEAN	.15	43.0	109	396	228	---	---	---	---	---	---	---
MAX	1.5	463	511	1960	3700	---	---	---	---	---	---	---
MIN	.00	.09	9.0	17	18	---	---	---	---	---	---	---
CFSM	.00	.49	1.25	4.51	2.60	---	---	---	---	---	---	---
IN.	.00	.55	1.44	5.21	2.71	---	---	---	---	---	---	---

e Estimated

PEE DEE RIVER BASIN

02125816 LANES CREEK NEAR MARSHVILLE, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1985 to January 1987 (discontinued).

REMARKS.--Station operated to define baseline water quality information for pre-impoundment.

WATER QUALITY DATA, OCTOBER 1986 TO JANUARY 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
JAN											
19...	0330	1000	125	6.30	6.5	--	10.1	--	1.40	0.180	1.6
19...	0345	1010	--	--	--	--	--	--	--	--	--
19...	1045	1990	118	6.10	7.5	--	12.2	--	1.50	0.210	1.2
19...	1055	2040	--	--	--	--	--	--	--	--	--
19...	1535	2460	100	6.20	7.5	--	--	--	1.30	0.190	1.8
20...	0120	1750	81	6.60	6.0	--	--	--	1.20	0.210	1.8
20...	0150	1730	--	--	--	--	--	--	--	--	--
20...	1125	484	105	5.45	6.5	740	11.0	92	1.70	0.130	1.4

DATE	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-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
JAN											
19...	1.8	3.2	14	0.440	0.270	0.210	0.240	0.74	<0.10	138	373
19...	--	--	--	--	--	--	--	--	--	124	338
19...	1.4	2.9	13	1.00	0.340	0.280	0.310	0.95	<0.10	207	1110
19...	--	--	--	--	--	--	--	--	--	215	1180
19...	2.0	3.3	15	0.440	0.320	0.260	0.290	0.89	<0.10	193	1280
20...	2.0	3.2	14	0.470	0.290	0.220	0.250	0.77	0.10	158	747
20...	--	--	--	--	--	--	--	--	--	149	696
20...	1.5	3.2	14	0.320	0.240	0.170	0.210	0.64	--	51	67

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

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

AVERAGE DISCHARGE.--58 years, 1,340 ft^3/s, 13.26 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 105,000 ft^3/s Sept. 18, 1945, gage height, 46.37 ft, from floodmark; minimum, 17 ft^3/s Oct. 8, 1954, gage height, 0.00 ft.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 16,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 1	2400	22,400	16.71	Apr. 16	0400	18,600	14.75
Jan. 19	1800	23,900	17.46	Sept. 7	1500	18,800	14.81
Jan. 22	2100	19,000	14.97	Sept. 8	0600	22,300	16.68
Mar. 1	0900	*50,900	29.11				

Minimum daily discharge, 63 ft^3/s Oct. 5, 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e67	127	686	7510	2370	47300	3320	487	214	186	110	1090
2	e65	109	3360	15500	1570	24600	1830	495	557	928	119	281
3	e64	118	4870	3870	1630	7160	1250	478	313	599	98	147
4	e64	151	1990	1910	1430	2880	1040	439	224	411	89	117
5	e63	135	965	1250	1070	1950	908	399	356	303	90	130
6	e63	115	650	934	879	1440	774	371	312	803	211	272
7	e63	111	507	763	862	1190	697	348	230	721	3120	12000
8	e64	133	433	674	956	1080	641	333	171	427	1980	17700
9	e68	137	417	597	806	2030	593	312	148	347	525	6640
10	e90	121	527	553	647	2390	548	286	135	231	299	7300
11	121	112	1480	553	578	1520	508	261	133	182	238	6210
12	99	145	3670	506	554	1060	473	259	130	200	233	7890
13	93	511	3150	459	537	922	445	297	123	214	161	8390
14	99.5	430	1370	421	502	826	424	1890	119	192	134	3420
15	163	309	851	402	487	742	5710	748	122	328	128	1290
16	279	504	681	390	501	680	14900	719	127	241	136	750
17	203	397	573	388	580	636	10800	572	126	171	129	556
18	131	306	507	1330	872	601	5910	373	202	144	125	449
19	93	259	456	16000	2230	2290	2470	311	863	130	119	370
20	79	263	408	11600	1930	3450	1460	285	356	110	108	321
21	75	1680	362	3750	1330	1650	1060	269	215	107	100	286
22	73	976	323	11300	1060	1100	866	257	169	104	92	259
23	74	520	294	12000	2550	857	744	235	146	100	84	234
24	75	358	1360	4060	2290	736	693	216	251	96	83	215
25	81	591	4610	3530	1320	681	2200	199	1270	94	93	201
26	94	2410	2200	8710	987	753	1580	192	2250	88	87	193
27	237	3620	1080	4070	7420	883	918	237	1850	83	86	179
28	294	1410	755	2520	35900	5560	719	189	748	80	85	164
29	174	689	588	1900	---	2710	613	180	344	111	86	158
30	124	491	526	1800	---	2390	533	176	229	163	141	219
31	122	---	467	2870	---	5060	---	164	---	143	224	---
TOTAL	3454.5	17238	40116	122120	73848	127127	64627	11977	12433	8037	9313	77431
MEAN	111	575	1294	3939	2637	4101	2154	386	414	259	300	2581
MAX	294	3620	4870	16000	35900	47300	14900	1890	2250	928	3120	17700
MIN	63	109	294	388	487	601	424	164	119	80	83	117
CFSM	.08	.42	.94	2.87	1.92	2.99	1.57	.28	.30	.19	.22	1.88
IN.	.09	.47	1.09	3.31	2.00	3.45	1.75	.32	.34	.22	.25	2.10

CAL YR 1986 TOTAL 178797.5 MEAN 490 MAX 8120 MIN 55 CFSM .36 IN. 4.85
WTR YR 1987 TOTAL 567721.5 MEAN 1555 MAX 47300 MIN 63 CFSM 1.13 IN. 15.4

e Estimated

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 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV											
25...	1445	630	221	6.70	13.5	52	759	9.9	95	1300	--
FEB											
02...	1400	1520	140	6.80	--	38	--	13.8	--	560	1300
MAR											
02...	1110	24800	68	6.50	11.0	110	754	11.2	103	2200	5300
APR											
20...	1430	1350	110	7.25	17.0	25	754	7.7	81	--	--
JUN											
11...	1415	138	405	7.68	26.0	19	760	7.3	90	440	430
AUG											
04...	1115	0.83	590	7.95	29.0	2.7	750	7.8	103	64	580

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WHOLE IT-FLD (MG/L)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
NOV											
25...	49	24	11	5.2	19	42	1	6.5	31	25	30
FEB											
02...	34	22	7.7	3.5	10	37	0.8	2.5	15	12	21
MAR											
02...	19	0	4.2	2.0	3.7	28	0.4	1.8	44	36	11
APR											
20...	32	19	7.0	3.4	8.2	34	0.7	2.2	17	14	16
JUN											
11...	44	0	10	4.7	51	68	3	6.2	73	60	46
AUG											
04...	45	0	9.6	5.1	85	76	6	9.9	93	76	78

PEE DEE RIVER BASIN

02126000 ROCKY RIVER NEAR NORWOOD, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRATE 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)
NOV 25...	18	0.20	11	130	120	0.18	221	3.37	3.40	0.340	0.370
FEB 02...	10	0.10	14	89	77	0.12	365	1.48	1.50	0.140	0.140
MAR 02...	3.9	<0.10	8.1	54	58	0.07	3620	--	--	--	--
APR 20...	6.9	0.10	13	78	66	0.11	284	0.930	0.950	0.080	0.070
JUN 11...	37	0.40	13	219	210	0.30	82	1.49	1.50	0.060	0.040
AUG 04...	47	0.60	5.0	309	290	0.42	0.69	0.890	0.900	0.030	0.030

DATE	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)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)
NOV 25...	0.48	1.1	1.4	0.390	0.240	0.190	0.58	180	1	28
FEB 02...	0.18	1.2	1.3	0.150	0.060	0.080	0.25	210	1	24
MAR 02...	--	--	--	--	--	--	--	620	<1	23
APR 20...	0.09	0.92	1.0	0.170	0.120	0.100	0.31	270	<1	25
JUN 11...	0.05	1.4	1.5	0.650	0.600	0.570	1.7	150	5	35
AUG 04...	0.04	--	<0.20	7.60	1.00	0.910	2.8	110	10	31

PEE DEE RIVER BASIN

02126000 ROCKY RIVER NEAR NORWOOD, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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 25...	<0.5	<1	<1	<3	13	180	<5	6	14	<0.1
FEB 02...	<0.5	<1	<1	<3	5	470	<5	<1	12	<0.1
MAR 02...	<0.5	2	<1	<3	4	450	6	<4	67	<0.1
APR 20...	<0.5	<1	<1	<3	<1	430	<5	<4	12	<0.1
JUN 11...	<0.5	4	<1	--	12	160	<5	4	28	<0.1
AUG 04...	<0.5	<1	<1	--	16	140	7	8	27	<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. 2 FINER THAN .062 MM
NOV 25...	<10	4	<1	<1	81	<6	17	52	88	96
FEB 02...	<10	<1	<1	<1	67	<6	13	38	156	94
MAR 02...	<10	4	<1	<1	38	<6	49	153	10200	82
APR 20...	<10	4	<1	<1	64	<6	10	27	98	93
JUN 11...	10	<1	<1	<1	110	<6	19	22	8.2	99
AUG 04...	<10	3	1	<1	110	8	66	5	0.01	100

PEE DEE RIVER BASIN

02126000 ROCKY RIVER NEAR NORWOOD, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/28	1140	WATER	0.1	1.18	299	497	7.60	18.0		8.6	60
86/11/17	1110	WATER	0.1	1.40	396	289	6.90	10.0	9.4	11.8	
86/12/02	1245	WATER	0.1	4.78	3838	169	6.50	10.0		10.4	
87/01/14	1130	WATER	0.1	1.45	420	194	6.60	6.0	8.2	13.0	
87/02/11	1300	WATER	0.1	1.74	572	156	6.30	6.0	11.0	12.8	
87/03/05	1315	WATER	0.1	3.19	1895	100	6.30	8.0	30.0	12.3	
87/04/08	1300	WATER	0.1	1.85	635	156	6.80	13.0	5.8	11.2	
87/05/07	1325	WATER	0.1	1.29	345	206	7.20	20.0	3.9	9.5	
87/06/10	1250	WATER	0.1	.69	138	264	7.40	27.0	19.0	7.8	
87/07/09	1340	WATER	0.1	1.26	332	153	6.90	29.0	160.0	7.6	
87/08/06	1400	WATER	0.1	1.24	324	540	7.50	31.0	5.2	9.0	
87/09/09	1300	WATER	0.1	6.32	5668	71	6.60	23.0	23.0	7.9	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/28	1140	WATER	0.1	112	6	420	2.30	.170	.900	1.200	1.200
86/11/17	1110	WATER	0.1	49	7	210	3.00	1.100	1.400	.570	.480
86/12/02	1245	WATER	0.1	22			4.00	.260	.800	.180	.380
87/01/14	1130	WATER	0.1	33			2.30	.330	.500	.220	.160
87/02/11	1300	WATER	0.1	31	10	160	1.60	.080	.300	.190	.130
87/03/05	1315	WATER	0.1	20			1.40	.160	.300	.150	.070
87/04/08	1300	WATER	0.1	35			.86	.020	.300	.210	.170
87/05/07	1325	WATER	0.1	46	8	160	1.30	.020	.300	.360	.310
87/06/10	1250	WATER	0.1	55			1.60	.040	.500	.550	.470
87/07/09	1340	WATER	0.1	28			2.00	.040	.500	.590	.400
87/08/06	1400	WATER	0.1	83	6	370	.53	.040	.800	.990	.930
87/09/09	1300	WATER	0.1	20			.77	.090	.800	.460	.100

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/17	1110	WATER	0.1	10K	10K	25K	10	50K	.2K	50K	44
87/02/11	1300	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	12
87/05/07	1325	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10
87/08/06	1400	WATER	0.1	11	10K	25K	19	50K	.2K	50K	23

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.

WATER-DISCHARGE RECORDS

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.--Records good except those below 30 ft^3/s which are fair, and those for estimated daily discharges, which are poor.

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

AVERAGE DISCHARGE.--33 years, 110 ft^3/s, 14.09 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,400 ft^3/s Oct. 15, 1954, gage height, 16.46 ft; minimum, 0.24 ft^3/s Oct. 4, 5, 1968, gage height, 0.68 ft, may be affected by upstream storage releases for water supply.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1945 reached a stage of about 20 ft, from information by by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 1	0600	4,730	10.66	Aug. 7	1630	2,930	8.32
Apr. 16	1230	*4,920	*10.89				

Minimum discharge, 0.90 ft^3/s Oct. 6, 7, 8, gage height, 1.03 ft; minimum daily, 1.0 ft^3/s Oct. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	6.61	16	65	97	3270	252	58	29	31	18	51
2	1.6	5.73	27	664	74	448	140	55	30	34	15	28
3	1.5	5.3	176	134	78	e200	119	51	30	43	12	17
4	1.4	5.9	73	70	74	e150	380	49	32	35	11	14
5	1.2	6.2	35	50	58	e120	185	49	64	34	8.9	20
6	1.1	7.0	24	40	52	e105	124	47	45	26	10	28
7	1.0	8.9	19	35	52	e90	102	47	31	22	803	400
8	1.0	10	17	33	50	e80	90	45	26	20	162	426
9	1.3	7.6	16	30	44	e85	81	43	23	18	48	137
10	1.8	10	21	30	40	e80	75	42	22	16	28	151
11	1.8	10	116	31	40	e78	70	39	20	18	34	102
12	1.7	10	231	30	40	e74	68	38	20	19	55	74
13	1.7	23	82	28	39	e70	65	192	20	53	24	95
14	6.0	26	46	26	38	e65	61	86	52	62	17	74
15	8.0	17	33	26	38	e59	427	55	31	37	71	49
16	5.8	18	27	26	42	e56	2980	48	26	25	76	31
17	7.4	25	23	26	48	e54	411	42	33	19	37	25
18	5.0	19	21	58	48	e50	209	39	46	17	25	22
19	4.1	13	20	1050	60	e280	170	39	47	16	19	20
20	3.3	13	19	496	130	e150	124	261	38	14	16	19
21	3.0	39	18	150	113	e90	103	72	29	13	14	19
22	2.9	43	16	717	101	e77	90	50	24	12	13	18
23	2.8	22	16	505	282	e70	80	43	22	11	12	17
24	2.5	15	121	194	156	e60	78	39	100	10	11	16
25	2.4	19	301	157	90	59	130	36	105	9.8	10	16
26	4.7	14	85	381	70	62	135	34	135	9.2	10	15
27	11	101	49	170	331	66	87	34	55	8.7	10	15
28	16	56	37	108	2840	230	72	33	35	8.5	9.9	14
29	8.7	28	30	87	---	128	64	35	27	9.0	9.5	13
30	6.3	19	27	86	---	288	60	34	23	8.3	13	30
31	5.8	---	25	153	---	581	---	31	---	8.0	14	---
TOTAL	125.0	603.24	1767	5656	5125	7275	7032	1766	1220	666.5	1616.3	1956
MEAN	4.03	20.1	57.0	182	183	235	234	57.0	40.7	21.5	52.1	65.2
MAX	16	101	301	1050	2840	3270	2980	261	135	62	803	426
MIN	1.0	5.3	16	26	38	50	60	31	20	8.0	8.9	13
CFSM	.04	.19	.54	1.72	1.73	2.21	2.21	.54	.38	.20	.49	.62
IN.	.04	.21	.62	1.98	1.80	2.55	2.47	.62	.43	.23	.57	.69

CAL YR 1986 TOTAL 13184.15 MEAN 36.1 MAX 425 MIN 1.0 CFSM .34 IN. 4.63
WTR YR 1987 TOTAL 34808.02 MEAN 95.4 MAX 3270 MIN 1.0 CFSM .90 IN. 12.2

e Estimated

PEE DEE RIVER BASIN

02128000 LITTLE RIVER NEAR STAR, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/22	1200	WATER	0.1	1.17	3						
86/10/22	1310	WATER	0.1			60	6.90	11.0		10.0	200
86/11/17	1300	WATER	0.1	1.56	28						
86/12/30	1235	WATER	0.1	1.55	27	57	7.10	4.0	15.0	11.6	
87/01/14	1300	WATER	0.1	1.54	26	55	7.20	4.0		11.8	
87/02/11	1220	WATER	0.1	1.65	40	64	7.80	4.0		12.0	
87/03/12	1240	WATER	0.1	.00	74	41	7.00	7.0	9.4	11.8	
87/04/09	1250	WATER	0.1	1.88	81	50	7.60	13.0		11.0	
87/05/21	1310	WATER	0.1	1.81	67	46	7.10	18.0		8.0	
87/06/23	1240	WATER	0.1	1.50	21	59	7.20	24.0	20.0	7.6	
87/07/14	1300	WATER	0.1	1.72	49	50	7.00	25.0		7.0	
87/08/17	1300	WATER	0.1	1.61	34	40	6.10	24.0		6.0	
87/09/15	1240	WATER	0.1	1.70	47						
87/09/15	1240	WATER	0.15			50	7.00	21.0	32.0	8.2	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/22	1310	WATER	0.1	25	1	66					
86/12/30	1235	WATER	0.1	15	5	73	.23	.040	.300	.020	.060
87/01/14	1300	WATER	0.1	20							
87/02/11	1220	WATER	0.1	18							
87/03/12	1240	WATER	0.1	17	3	91	.10	.010K	.200	.040	.010K
87/04/09	1250	WATER	0.1	17							
87/06/23	1240	WATER	0.1	30	12	95	.44	.040	.200	.120	.040
87/07/14	1300	WATER	0.1	20							
87/09/15	1240	WATER	0.15	18	15	120	.33	.020	.400	.120	.050

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/12/30	1235	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/03/12	1240	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/06/23	1240	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/09/15	1240	WATER	0.15	10K	10K	25K	10K	50K	2.7	50K	10K

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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1906 to January 1912, October 1927 to current year. Published as Yadkin River near Pee Dee, N.C., August 1906 to January 1912.

REVISED RECORDS.--WSP 1203: 1928-37. WSP 1303: 1928-42 (monthly and yearly runoff), 1943-46 (adjusted monthly runoff). WSP 1503: 1906-12, 1928-32(m). WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 120.68 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers). August 1906 to January 1912 nonrecording gage at site 3.3 mi upstream at different datum. September 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. 414).

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

AVERAGE DISCHARGE.--65 years (1906-11, 1927-87), 8,008 ft^3/s, 15.85 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 276,000 ft^3/s Aug. 27, 1908, gage height, 31.28 ft, present site and datum, from records of State Highway Commission; minimum, 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 124,000 ft^3/s Mar. 2, gage height, 17.69 ft; minimum, 130 ft^3/s Sept. 21, gage height, 0.48 ft; minimum daily, 214 ft^3/s Oct. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3000	438	6400	9620	9720	92900	18200	13900	3930	9160	552	1700
2	1660	1060	7570	31200	9940	122000	15200	10500	6330	8260	377	3560
3	2900	1410	8280	21200	10000	118000	13600	11700	5770	9700	3610	2960
4	2340	1300	9190	13600	10100	84500	13100	9510	6180	9690	3250	3040
5	654	3010	9260	8400	9650	34000	11600	8860	2190	9800	4250	887
6	241	3270	6080	8830	9770	20900	11500	8010	5300	9700	2530	4490
7	214	3290	1020	9020	9640	17200	10800	8740	1440	9710	3190	5340
8	218	281	5300	7420	9540	16500	11200	9670	3710	8030	7950	17600
9	2660	1080	7850	9220	9160	11700	10200	9670	4680	9670	1480	20600
10	263	1250	6860	6480	8570	12700	10000	4590	4690	9670	3260	17300
11	223	2900	4860	8990	4250	13200	9670	6150	5910	8100	670	13800
12	1640	3290	8500	6760	6200	11800	8890	8000	3720	2670	3630	18000
13	3040	3670	9570	6410	9630	11600	3950	7990	2050	3590	2790	20900
14	2180	3400	8890	4490	9040	11200	3570	9590	1130	3930	4110	18000
15	779	3690	5160	5190	8280	11300	8320	7560	4380	1960	1690	11500
16	774	3140	4980	8770	9160	10700	43000	3490	4330	7350	4310	9390
17	3630	2610	5460	2300	9060	11000	69200	1920	4440	4090	3280	9550
18	280	4870	6100	3130	5790	10000	57800	3840	1300	3390	3510	9000
19	245	3530	7220	15900	8360	9200	28200	4950	4470	980	3250	7390
20	2420	6640	4690	37700	9410	10100	16800	7510	3430	3720	1110	362
21	1040	5940	3770	19500	4170	12700	12300	7700	616	4850	3100	715
22	388	5230	6680	23500	3540	10300	12400	7260	2690	3120	554	3690
23	810	5130	8110	35300	8590	9950	11200	4710	2090	2890	1340	2480
24	863	5120	7660	20700	9050	10000	13400	4650	4990	3280	1360	6080
25	1150	6180	9420	14900	9750	9290	24300	459	4540	2200	4330	3390
26	467	7400	9550	17300	9740	9240	49700	2600	9960	1100	1310	1770
27	2420	7730	9420	18100	11300	10100	56800	7220	10400	2140	2240	2960
28	1210	6890	7450	14900	54100	12100	35700	3030	9960	2140	3550	2650
29	1740	6800	5380	10700	---	13200	17600	7530	8380	4550	438	2770
30	1900	3060	5650	9840	---	11400	14300	5740	6090	5980	328	1800
31	1800	---	8350	9440	---	15000	---	648	---	2370	4190	---
TOTAL	43149	113609	214680	418810	285510	763780	622500	207697	139096	167790	81539	223674
MEAN	1392	3787	6925	13510	10200	24640	20750	6700	4637	5413	2630	7456
MAX	3630	7730	9570	37700	54100	122000	69200	13900	10400	9800	7950	20900
MIN	214	281	1020	2300	3540	9200	3570	459	616	980	328	362
(†)	-82	-69	+822	-348	+1341	-199	+648	-584	+62	-470	-337	+135

CAL YR 1986	TOTAL	1208350	MEAN	3310	MAX	12900	MIN	147	MEAN‡	3310	CFSM‡	.48	IN‡	6.55
WTR YR 1987	TOTAL	3281830	MEAN	8991	MAX	122000	MIN	214	MEAN‡	8991	CFSM‡	1.31	IN‡	17.79

† 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.

PEE DEE RIVER BASIN

02129000 PEE DEE RIVER NEAR ROCKINGHAM, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/21	1215	WATER	0.1	2.47	2435	136	7.40	16.0		7.4	10K
86/11/19	1330	WATER	0.1	3.21	5027	144	6.80	13.0		8.5	
86/12/04	1425	WATER	0.1	4.07	8760	124	6.80	12.0	15.0	9.0	
87/01/20	1045	WATER	0.1	9.16	43406	88	6.30	7.0		12.5	
87/02/19	1150	WATER	0.1			84	7.00	5.0		11.8	
87/02/19	1300	WATER	0.1	3.82	7567						
87/03/10	1130	WATER	0.1	4.95	13193	68	7.20	7.0	99.0	10.8	
87/04/23	1330	WATER	0.1	4.61	11442	68	7.00	18.0		9.6	
87/05/07	1330	WATER	0.1	4.12	9011	67	6.80	19.0		8.0	
87/06/03	1100	WATER	0.1	3.62	6680	69	6.80	23.0	70.0	5.0	
87/07/30	1400	WATER	0.1	3.90	7938	95	6.90	28.0		5.1	
87/08/27	1300	WATER	0.1	1.17	384	100	6.00	26.0		5.0	
87/09/22	1200	WATER	0.1	2.45	2380	90	6.90	23.0	10.0	6.0	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/21	1215	WATER	0.1	31	11	100					
86/11/19	1330	WATER	0.1	30							
86/12/04	1425	WATER	0.1	23	14	95					
87/01/20	1045	WATER	0.1	15							
87/02/19	1150	WATER	0.1	19							
87/03/10	1130	WATER	0.1	13	76	160					
87/04/23	1330	WATER	0.1	17							
87/06/03	1100	WATER	0.1	18	14	72					
87/07/30	1400	WATER	0.1	25							
87/09/22	1200	WATER	0.1	34	6	75					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/12/04	1425	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/03/10	1130	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/06/03	1100	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/09/22	1200	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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 except those for estimated daily discharges, which are poor. Diurnal fluctuation at low flows in the growing season.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, not determined, occurred July 17, 1984, gage height, 2.70 ft. Maximum discharge, since weir installed Nov. 8, 1984, 7.9 ft^3/s July 31 1987; minimum 0.10 ft^3/s part of each day July 12-15, 28-30, Aug. 10-11, Oct. 1, 3-6, 1986; minimum daily 0.11 ft^3/s Nov. 24, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1.3 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 1	0530	1.6	1.53	Aug. 15	0800	6.8	1.98
July 31	1830	*7.9	*2.03	Aug. 21	1715	1.5	1.50

Minimum discharge, 0.10 ft^3/s part of each day Oct. 1, 3-6; minimum daily, 0.11 ft^3/s Nov. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.14	.18	.20	.21	.71	.32	.30	.24	.40	.47	.28
2	.12	.15	.18	.18	.22	.35	.32	.30	.25	.29	.29	.24
3	.12	.14	.18	.16	.21	.33	.33	.28	.23	.30	.25	.23
4	.12	.13	.15	.15	.21	.29	.32	.29	.25	.26	.23	.24
5	.12	.14	.14	.15	.21	.29	.32	.28	.26	.23	.18	.33
6	.12	.15	.13	.15	.21	.29	.31	.28	.22	.22	.19	.36
7	.13	.15	.13	.15	.26	.29	.30	.28	.22	.22	.32	.37
8	.13	.15	.13	.15	.22	.32	.30	.28	.21	.22	.21	.37
9	.28	.16	.13	.15	.22	.32	.29	.27	.20	.20	.19	.26
10	.23	.16	.13	.22	.21	.31	.29	.27	.21	.20	.33	.25
11	.19	.16	.18	.18	.21	.29	.29	.26	.21	.20	.28	.24
12	.16	.20	.22	.16	.21	.29	.29	.27	.21	.21	.20	.34
13	.14	.18	.17	.15	.21	.29	.29	.30	.25	.21	.18	.38
14	.24	.18	.14	.15	.21	.29	.29	.32	e.28	.21	.19	.26
15	.16	.30	.13	.15	.21	.29	.62	.29	e.27	.23	1.3	.26
16	.15	.17	.13	.15	.23	.29	.44	.28	e.26	.20	.38	.25
17	.15	.15	.13	.16	.25	.29	.36	.27	e.23	.19	.30	.25
18	.16	.15	.13	.20	.27	.29	.36	.26	.25	.19	.27	.25
19	.16	.13	.13	.62	.28	.48	.35	.26	.27	.18	.27	.25
20	.16	.17	.13	.23	.27	.32	.33	.28	.31	.18	.27	.26
21	.16	.15	.13	.19	.28	.31	.32	.28	.31	.17	.54	.25
22	.16	.12	.13	.58	.30	.29	.31	.27	.23	.17	.35	.23
23	.15	.12	.13	.25	.28	.29	.31	.26	.22	.17	.27	.22
24	.16	.11	.30	.23	.24	.29	.34	.25	.23	.17	.26	.22
25	.20	.41	.19	.25	.23	.31	.34	.25	.58	.17	.26	.22
26	.24	.20	.16	.24	.23	.31	.31	.26	.37	.16	.25	.21
27	.15	.15	.15	.23	.45	.38	.31	.25	.30	.16	.24	.21
28	.14	.15	.15	.23	.59	.48	.30	.26	.23	.17	.24	.21
29	.13	.14	.15	.22	---	.33	.30	.24	.22	.17	.24	.21
30	.14	.15	.15	.23	---	.39	.30	.23	.22	.17	.26	.24
31	.13	---	.15	.22	---	.36	---	.23	---	1.0	.30	---
TOTAL	4.92	4.96	4.76	6.68	7.13	10.36	9.86	8.40	7.74	7.22	9.51	7.89
MEAN	.16	.17	.15	.22	.25	.33	.33	.27	.26	.23	.31	.26
MAX	.28	.41	.30	.62	.59	.71	.62	.32	.58	1.0	1.3	.38
MIN	.12	.11	.13	.15	.21	.29	.29	.23	.20	.16	.18	.21
CFSM	.44	.46	.43	.60	.71	.93	.91	.75	.72	.65	.85	.73
IN.	.51	.51	.49	.69	.74	1.07	1.02	.87	.80	.75	.98	.82

CAL YR 1986 TOTAL 77.80 MEAN .21 MAX .63 MIN .11 CFSM .59 IN. 8.04
WTR YR 1987 TOTAL 89.43 MEAN .25 MAX 1.3 MIN .11 CFSM .68 IN. 9.24

e Estimated

PEE DEE RIVER BASIN

0213228795 JORDAN CREEK NEAR SILVER HILL, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1983 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 October 1983, automatic water sampler since May 1987.

REMARKS.--Station operated as the 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, 55 microsiemens, Dec. 6, 1983; minimum, 7 microsiemens, Nov. 5-15, 1986.
pH: Maximum, 5.51 units Sept. 29, 1987; minimum, 3.6 units Nov. 16, 17, 18, 20, 1983.
WATER TEMPERATURE: Maximum, 22.0°C, July 22, 25, Aug. 17, 18, 1985; minimum, 9.0°C, Jan. 21, 22, 23, 1985.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 51 microsiemens, Aug. 1; minimum, 7 microsiemens, Nov. 5-15.
pH: Maximum, 5.51 units Sept. 29; minimum, 4.10 units Apr. 15.
WATER TEMPERATURE: Maximum, 21.8°C, Aug. 21; minimum, 10.6°C, Feb. 28.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)
NOV											
18...	1200	0.12	10	4.50	16.0	1	0.09	0.20	0.90	0.10	0.9
18...	1210	0.12	10	4.50	16.0	1	0.09	0.20	0.90	0.09	0.8
JAN											
14...	1045	0.12	13	4.40	12.5	1	0.11	0.16	0.96	0.13	0.9
14...	1100	0.12	13	4.40	12.5	1	0.10	0.16	0.89	0.12	0.9
MAR											
18...	1145	--	16	4.43	12.0	1	0.12	0.18	0.88	0.19	1.2
18...	1215	--	15	4.43	12.0	1	0.07	0.16	0.79	0.15	1.2
APR											
15...	1250	0.45	33	4.17	17.0	1	0.14	0.21	0.78	0.30	1.9
15...	1350	1.2	26	4.20	15.5	2	0.18	0.29	0.80	0.37	2.0
15...	1700	1.0	28	4.20	15.0	2	0.18	0.28	0.78	0.33	2.1
JUN											
17...	1410	0.21	12	4.62	18.0	1	0.10	0.14	0.86	0.09	--
SEP											
22...	1300	0.23	15	--	19.0	1	0.08	0.13	0.81	0.08	0.5

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)
NOV										
18...	1.5	0.01	4.6	<0.010	0.030	0.002	40	28	4	2.9
18...	1.4	<0.01	4.6	<0.010	0.018	0.001	40	26	4	2.7
JAN										
14...	1.4	0.01	4.4	0.010	0.013	0.001	50	45	1	--
14...	1.5	0.01	4.4	0.050	0.091	<0.001	30	19	1	--
MAR										
18...	1.4	0.01	4.0	<0.010	0.034	<0.001	70	21	3	2.5
18...	1.3	0.01	3.7	<0.010	0.028	<0.001	70	14	<1	2.5
APR										
15...	1.3	0.03	4.1	<0.010	0.047	0.004	180	120	<1	9.1
15...	1.2	0.03	4.1	0.010	0.071	0.004	260	82	6	14
15...	1.2	0.02	4.4	<0.010	0.064	0.004	290	86	8	16
JUN										
17...	--	--	4.0	--	0.004	<0.001	40	23	2	4.8
SEP										
22...	1.5	0.05	4.5	0.020	0.034	0.003	50	53	3	--

PEE DEE RIVER BASIN

0213228795 JORDAN CREEK NEAR SILVER HILL, NC--Continued

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	10	10	10	8	8	8	14	13	14	14	12	13
2	10	10	10	8	8	8	14	13	13	14	13	13
3	10	10	10	8	8	8	16	13	15	13	13	13
4	10	10	10	8	8	8	15	13	14	13	12	13
5	10	10	10	8	7	8	14	13	14	13	12	12
6	10	10	10	7	7	7	14	13	13	13	12	12
7	10	10	10	7	7	7	13	12	13	13	12	12
8	10	9	9	7	7	7	13	12	12	12	12	12
9	20	9	13	7	7	7	12	11	11	12	12	12
10	17	15	16	7	7	7	12	12	12	17	12	14
11	15	13	14	7	7	7	13	11	12	17	14	15
12	13	12	13	8	7	7	17	12	14	15	14	14
13	12	11	12	7	7	7	17	15	16	14	13	13
14	12	11	12	7	7	7	15	14	15	14	12	13
15	11	10	11	19	7	13	14	13	14	12	11	12
16	10	10	10	15	12	14	14	13	13	12	11	11
17	10	10	10	12	11	11	14	12	13	12	11	11
18	10	9	10	11	10	10	13	12	12	13	11	12
19	10	9	9	11	11	11	13	11	13	32	14	21
20	10	9	9	12	10	11	13	11	12	20	19	19
21	10	9	9	12	11	12	13	12	13	19	16	17
22	9	8	9	11	11	11	13	12	13	19	16	17
23	8	8	8	11	10	10	13	12	13	18	16	17
24	8	8	8	10	10	10	25	12	18	16	15	15
25	8	8	8	17	10	13	23	18	20	15	13	14
26	11	8	10	22	18	21	18	14	16	15	12	13
27	11	9	10	21	17	19	15	14	14	13	12	13
28	9	8	9	17	14	15	15	14	14	13	12	12
29	9	8	8	14	13	14	14	13	14	12	11	12
30	8	8	8	13	12	13	13	13	13	12	11	11
31	8	8	8	---	---	---	13	13	13	12	11	11
MONTH	20	8	10.1	22	7	10.4	25	11	13.7	32	11	13.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	12	11	12	20	10	14	20	19	19	19	18	18
2	12	11	12	16	15	15	19	19	19	19	17	18
3	12	11	11	16	15	15	19	19	19	18	17	18
4	12	11	11	16	15	16	20	19	20	18	16	17
5	12	11	12	15	15	15	20	19	19	18	16	17
6	12	11	11	15	14	15	20	20	20	18	17	18
7	12	11	12	15	15	15	21	20	20	18	16	17
8	12	11	11	16	15	15	20	20	20	17	16	17
9	12	11	11	16	15	15	20	19	19	17	16	17
10	12	11	11	16	15	15	21	19	20	17	16	17
11	12	11	12	16	15	15	20	19	20	17	15	16
12	12	11	12	16	15	15	21	19	20	16	15	16
13	12	11	11	15	15	15	21	20	21	17	15	16
14	12	11	11	15	15	15	21	21	21	17	17	17
15	12	11	12	15	15	15	30	21	24	17	16	17
16	12	11	12	15	15	15	27	26	26	17	16	16
17	12	11	12	16	15	15	26	25	26	17	17	17
18	12	11	12	17	15	16	25	24	25	17	16	17
19	14	12	13	20	16	18	25	22	23	16	16	16
20	14	13	14	19	18	19	23	22	23	16	15	16
21	14	13	14	19	18	18	22	22	22	15	15	15
22	15	13	14	18	17	17	22	21	22	15	15	15
23	16	14	15	19	17	18	29	21	22	15	14	15
24	15	14	14	19	18	19	21	20	21	15	15	15
25	14	13	13	19	18	18	21	19	20	15	15	15
26	14	13	14	20	19	19	20	17	19	15	14	15
27	22	13	15	19	14	19	19	17	18	15	14	15
28	21	19	20	19	15	17	19	17	18	15	13	14
29	---	---	---	19	18	18	19	17	18	14	13	13
30	---	---	---	20	18	19	18	17	18	18	14	14
31	---	---	---	21	19	20	---	---	---	14	13	14
MONTH	22	11	12.6	21	10	16.5	30	17	20.7	19	13	16.1

PEE DEE RIVER BASIN

0213228795 JORDAN CREEK NEAR SILVER HILL, NC--Continued

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	14	14	14	33	15	21	51	25	34	19	17	18
2	14	13	13	24	19	21	26	20	23	18	16	17
3	18	12	13	21	18	20	21	18	20	17	15	16
4	13	12	13	---	---	18	19	17	18	17	16	17
5	14	12	13	---	---	---	18	16	17	20	16	19
6	14	13	13	---	---	---	17	16	17	22	17	20
7	13	12	13	---	---	---	25	16	22	28	16	21
8	13	12	12	---	---	---	21	17	19	30	19	24
9	14	12	13	---	---	---	18	16	17	21	16	19
10	14	12	13	---	---	---	37	15	21	20	17	19
11	14	14	14	---	---	---	30	20	24	18	15	17
12	13	11	12	---	---	---	20	17	19	33	16	19
13	13	12	13	---	---	---	18	15	17	33	21	25
14	13	12	13	---	---	---	17	16	17	22	16	19
15	13	12	13	---	---	---	46	16	34	19	16	18
16	13	12	13	---	---	---	31	21	25	18	16	17
17	20	11	13	---	---	---	23	19	21	18	15	17
18	14	11	13	---	---	---	21	18	20	17	14	16
19	17	13	15	---	---	---	19	17	18	18	16	17
20	32	14	17	---	---	---	20	17	19	18	16	17
21	27	18	22	---	---	13	50	18	27	18	16	17
22	19	16	17	16	13	14	34	21	26	17	15	16
23	17	15	16	16	13	15	22	19	21	17	14	16
24	17	16	16	15	14	15	20	18	20	17	14	16
25	47	15	29	15	14	15	19	18	19	16	14	16
26	37	23	28	15	14	15	18	16	17	17	14	16
27	25	20	23	15	14	15	17	16	17	16	14	15
28	21	18	19	15	14	15	17	16	17	16	14	15
29	19	16	18	15	14	15	17	16	17	15	15	15
30	17	15	16	15	14	15	17	16	17	16	14	15
31	---	---	---	62	14	26	19	16	17	---	---	---
MONTH	47	11	15.7	---	---	---	51	15	20.5	33	14	17.6

PH (STANDARD UNITS), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	4.97	4.92	4.94	5.04	4.94	5.01	5.05	5.01	5.02	4.39	4.38	4.39
2	4.98	4.93	4.96	5.03	5.00	5.02	5.02	4.89	4.99	4.49	4.38	4.43
3	4.98	4.93	4.95	5.01	4.99	5.00	5.03	4.90	5.00	4.49	4.38	4.42
4	4.97	4.92	4.95	4.99	4.97	4.98	4.96	4.79	4.87	4.49	4.38	4.43
5	4.96	4.91	4.94	4.98	4.96	4.97	4.81	4.69	4.74	4.45	4.38	4.41
6	4.98	4.93	4.95	4.98	4.91	4.97	4.74	4.60	4.69	4.45	4.38	4.43
7	4.96	4.89	4.92	4.99	4.89	4.93	4.66	4.59	4.64	4.49	4.38	4.44
8	5.00	4.89	4.93	4.95	4.86	4.92	4.66	4.63	4.65	4.50	4.38	4.42
9	5.15	5.00	5.07	4.93	4.84	4.89	4.70	4.59	4.65	4.51	4.38	4.44
10	5.16	5.13	5.14	4.90	4.85	4.87	4.76	4.69	4.73	4.51	4.48	4.50
11	5.18	5.15	5.16	4.85	4.81	4.83	4.79	4.69	4.74	4.50	4.39	4.49
12	5.17	5.14	5.16	4.81	4.69	4.79	4.79	4.69	4.73	4.50	4.38	4.42
13	5.15	5.10	5.12	4.73	4.66	4.69	4.74	4.59	4.67	4.50	4.38	4.44
14	5.18	5.12	5.15	4.68	4.64	4.66	4.63	4.49	4.57	4.80	4.40	4.59
15	5.15	5.01	5.05	4.68	4.63	4.65	4.56	4.49	4.55	4.81	4.69	4.74
16	5.15	5.01	5.10	4.65	4.58	4.62	4.59	4.49	4.53	4.75	4.68	4.73
17	5.17	5.07	5.13	4.58	4.45	4.50	4.54	4.51	4.53	4.72	4.69	4.71
18	5.19	5.16	5.18	4.92	4.45	4.62	4.53	4.50	4.51	4.70	4.58	4.64
19	5.20	5.17	5.18	4.95	4.80	4.91	4.50	4.39	4.45	4.75	4.48	4.54
20	5.20	5.10	5.16	4.86	4.79	4.83	4.49	4.38	4.43	4.64	4.59	4.61
21	5.23	5.09	5.17	4.86	4.79	4.82	4.45	4.41	4.44	4.64	4.57	4.63
22	5.23	5.18	5.21	4.84	4.70	4.79	4.42	4.39	4.40	4.62	4.47	4.52
23	5.20	5.03	5.12	4.86	4.79	4.82	4.39	4.28	4.35	4.59	4.48	4.58
24	5.14	5.01	5.06	4.94	4.79	4.87	4.44	4.28	4.38	4.60	4.47	4.57
25	5.15	5.13	5.14	4.96	4.79	4.92	4.41	4.38	4.39	4.61	4.56	4.59
26	5.17	5.07	5.12	4.99	4.89	4.93	4.41	4.38	4.40	4.59	4.56	4.58
27	5.16	5.05	5.08	5.06	4.99	5.02	4.39	4.29	4.36	4.60	4.56	4.58
28	5.15	5.05	5.13	5.11	4.90	5.04	4.38	4.28	4.32	4.60	4.58	4.59
29	5.13	5.10	5.12	5.09	4.99	5.03	4.44	4.34	4.38	4.61	4.58	4.59
30	5.11	5.08	5.09	5.05	5.01	5.03	4.45	4.38	4.41	4.62	4.58	4.60
31	5.09	5.04	5.06	---	---	---	4.45	4.38	4.41	4.61	4.58	4.60
MONTH	5.23	4.89	5.08	5.11	4.45	4.86	5.05	4.28	4.58	4.81	4.38	4.54

PEE DEE RIVER BASIN

0213228795 JORDAN CREEK NEAR SILVER HILL, NC--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4.61	4.56	4.59	4.53	4.37	4.46	4.38	4.31	4.35	4.37	4.24	4.32
2	4.59	4.58	4.59	4.53	4.50	4.52	4.44	4.32	4.42	4.37	4.22	4.32
3	4.61	4.58	4.59	4.53	4.49	4.51	4.52	4.40	4.46	4.32	4.20	4.30
4	4.61	4.54	4.60	4.56	4.46	4.51	4.55	4.50	4.53	4.31	4.28	4.29
5	4.60	4.53	4.58	4.56	4.46	4.51	4.56	4.49	4.54	4.33	4.24	4.29
6	4.60	4.57	4.59	4.56	4.46	4.51	4.59	4.49	4.51	4.35	4.32	4.34
7	4.60	4.55	4.57	4.53	4.46	4.51	4.58	4.48	4.51	4.35	4.33	4.34
8	4.60	4.56	4.58	4.53	4.45	4.49	4.60	4.47	4.55	4.39	4.26	4.31
9	4.59	4.55	4.57	4.52	4.45	4.46	4.64	4.57	4.59	4.40	4.32	4.38
10	4.59	4.54	4.57	4.55	4.45	4.46	4.64	4.56	4.59	4.44	4.32	4.39
11	4.59	4.52	4.57	4.52	4.45	4.49	4.69	4.57	4.65	4.45	4.38	4.44
12	4.59	4.52	4.56	4.52	4.44	4.49	4.71	4.55	4.66	4.51	4.38	4.48
13	4.58	4.51	4.55	4.51	4.44	4.47	4.75	4.55	4.65	4.75	4.44	4.58
14	4.58	4.51	4.55	4.51	4.44	4.47	4.72	4.54	4.66	4.86	4.71	4.79
15	4.58	4.51	4.52	4.54	4.44	4.48	4.76	4.10	4.58	4.92	4.78	4.87
16	4.58	4.42	4.54	4.51	4.43	4.46	4.65	4.54	4.60	4.97	4.86	4.93
17	4.57	4.54	4.55	4.50	4.43	4.45	4.65	4.61	4.63	5.02	4.92	4.98
18	4.57	4.50	4.55	4.89	4.38	4.49	4.62	4.50	4.59	5.06	5.01	5.03
19	4.57	4.54	4.56	4.45	4.29	4.35	4.59	4.57	4.58	5.08	4.98	5.01
20	4.55	4.52	4.54	4.37	4.27	4.32	4.60	4.57	4.58	5.11	5.08	5.10
21	4.54	4.52	4.53	4.37	4.26	4.30	4.59	4.54	4.56	5.11	5.01	5.04
22	4.54	4.51	4.52	4.29	4.16	4.24	4.55	4.50	4.53	5.11	5.02	5.09
23	4.55	4.51	4.53	4.31	4.26	4.28	4.53	4.50	4.51	5.10	5.06	5.08
24	4.55	4.51	4.53	4.33	4.25	4.29	4.51	4.42	4.48	5.09	5.04	5.07
25	4.55	4.52	4.54	4.48	4.35	4.41	4.50	4.39	4.43	5.08	5.04	5.06
26	4.55	4.53	4.54	4.41	4.24	4.35	4.46	4.37	4.40	5.06	5.03	5.05
27	4.55	4.38	4.49	4.41	4.14	4.29	4.43	4.34	4.41	5.04	4.95	5.00
28	4.51	4.38	4.44	4.34	4.23	4.28	4.41	4.31	4.37	5.03	4.93	4.95
29	---	---	---	4.29	4.22	4.26	4.39	4.29	4.35	5.02	4.91	4.96
30	---	---	---	4.32	4.22	4.27	4.38	4.26	4.30	5.01	4.88	4.97
31	---	---	---	4.34	4.22	4.31	---	---	---	4.99	4.86	4.96
MONTH	4.61	4.38	4.55	4.89	4.14	4.41	4.76	4.10	4.52	5.11	4.20	4.73
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	4.97	4.93	4.96	4.22	3.97	4.14	4.80	4.69	4.73	4.81	4.68	4.75
2	4.97	4.92	4.94	4.25	4.09	4.18	4.82	4.67	4.76	4.83	4.70	4.76
3	4.95	4.89	4.92	4.28	4.12	4.22	4.88	4.78	4.82	4.91	4.76	4.82
4	4.92	4.90	4.91	---	---	4.13	4.90	4.76	4.82	4.79	4.65	4.76
5	4.91	4.81	4.88	---	---	---	4.92	4.76	4.86	4.71	4.66	4.69
6	4.88	4.79	4.84	---	---	---	4.90	4.85	4.88	4.81	4.64	4.70
7	4.85	4.78	4.81	---	---	---	4.89	4.76	4.81	4.88	4.64	4.73
8	4.82	4.73	4.79	---	---	---	4.89	4.74	4.81	4.78	4.63	4.69
9	4.79	4.71	4.74	---	---	---	4.90	4.83	4.86	4.84	4.62	4.72
10	4.77	4.69	4.72	---	---	---	4.97	4.73	4.84	4.78	4.61	4.69
11	4.74	4.66	4.68	---	---	---	4.81	4.71	4.76	4.82	4.61	4.73
12	4.71	4.63	4.67	---	---	---	4.86	4.71	4.78	4.83	4.60	4.72
13	4.70	4.61	4.62	---	---	---	4.94	4.80	4.85	4.69	4.59	4.63
14	4.70	4.58	4.64	---	---	---	4.89	4.79	4.82	4.75	4.59	4.67
15	4.68	4.56	4.66	---	---	---	4.91	4.58	4.70	4.75	4.58	4.66
16	4.66	4.54	4.63	---	---	---	4.75	4.68	4.71	4.78	4.57	4.67
17	4.74	4.62	4.66	---	---	---	4.80	4.67	4.74	4.83	4.66	4.76
18	4.78	4.74	4.76	---	---	---	4.82	4.67	4.75	4.91	4.66	4.80
19	4.80	3.64	4.25	---	---	---	4.83	4.67	4.77	4.90	4.75	4.85
20	4.05	3.73	3.84	---	---	---	4.81	4.65	4.73	4.89	4.74	4.84
21	3.88	3.74	3.81	---	---	4.84	4.78	4.54	4.68	4.87	4.63	4.79
22	3.93	3.86	3.89	5.02	4.55	4.90	4.74	4.65	4.68	4.74	4.25	4.64
23	3.96	3.89	3.93	5.01	4.84	4.93	4.80	4.63	4.72	4.77	4.53	4.63
24	4.00	3.84	3.95	5.01	4.85	4.95	4.77	4.64	4.73	4.77	4.53	4.63
25	3.97	3.74	3.86	5.03	4.84	4.94	4.77	4.62	4.70	4.87	4.53	4.68
26	3.96	3.79	3.89	5.03	4.83	4.94	4.93	4.71	4.79	4.99	4.63	4.77
27	4.01	3.92	3.97	4.98	4.91	4.94	5.04	4.71	4.85	5.18	4.73	4.88
28	4.07	3.97	4.00	5.01	4.91	4.94	5.03	4.80	4.90	5.38	4.85	5.04
29	4.15	4.00	4.08	5.00	4.90	4.93	4.99	4.89	4.93	5.51	5.15	5.38
30	4.21	4.12	4.16	4.96	4.89	4.92	4.86	4.80	4.82	5.46	4.74	5.06
31	---	---	---	5.01	4.70	4.87	4.82	4.68	4.74	---	---	---
MONTH	4.97	3.64	4.45	---	---	---	5.04	4.54	4.79	5.51	4.25	4.77

PEE DEE RIVER BASIN

0213228795 JORDAN CREEK NEAR SILVER HILL, NC--Continued

TEMPERATURE, WATER, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.8	19.1	19.4	17.7	17.0	17.4	15.7	15.0	15.2	13.2	12.5	13.0
2	19.8	19.3	19.5	18.0	17.5	17.7	16.1	15.0	15.6	13.2	12.5	12.9
3	19.8	19.2	19.5	17.8	17.0	17.6	15.9	15.0	15.7	12.9	12.0	12.4
4	19.9	19.2	19.6	17.6	16.0	16.9	15.3	14.5	14.7	12.7	11.8	12.3
5	20.0	19.5	19.7	17.6	17.0	17.3	14.7	14.0	14.3	12.8	12.0	12.5
6	19.5	18.7	19.1	18.0	17.5	17.7	14.2	13.0	13.7	12.7	11.5	12.1
7	18.8	18.3	18.6	17.8	17.5	17.7	14.1	13.0	13.5	13.2	12.0	12.4
8	18.9	18.2	18.6	18.3	17.5	18.0	14.6	13.5	14.0	13.1	12.5	12.8
9	19.4	18.7	19.0	18.5	18.0	18.2	15.6	14.6	15.0	12.8	12.0	12.4
10	19.2	18.6	19.0	18.2	17.0	17.6	16.1	15.5	15.8	13.3	12.6	13.0
11	18.6	18.2	18.4	17.6	17.0	17.3	16.0	15.0	15.6	13.3	12.5	12.9
12	18.7	18.2	18.4	17.3	16.5	17.0	15.2	14.5	14.9	13.1	12.0	12.5
13	19.0	18.6	18.8	16.7	15.1	16.4	14.8	13.5	14.1	13.2	12.0	12.5
14	19.3	18.5	19.1	15.3	14.5	14.9	13.6	12.5	13.2	13.3	12.4	12.8
15	18.7	17.3	18.1	15.5	15.0	15.3	14.1	13.0	13.4	13.9	13.1	13.5
16	17.7	16.5	17.2	15.8	15.5	15.7	14.3	13.0	13.8	14.1	13.5	13.8
17	17.6	16.0	16.9	16.3	15.5	15.9	14.4	13.5	13.9	13.9	13.0	13.3
18	17.3	16.0	16.8	16.6	16.0	16.4	14.8	14.0	14.4	13.2	13.0	13.1
19	17.1	15.5	16.4	16.7	15.5	16.3	14.6	13.5	13.9	13.1	11.5	12.4
20	17.0	15.5	16.1	15.8	15.5	15.7	14.4	13.0	13.7	12.9	12.0	12.5
21	17.0	15.5	16.2	15.6	15.0	15.4	14.1	13.0	13.6	13.0	12.5	12.7
22	17.3	15.5	16.4	15.2	14.0	14.7	13.3	12.5	13.0	12.8	11.1	11.9
23	17.5	16.0	16.8	15.6	14.5	14.9	13.3	12.5	12.9	12.1	11.5	11.9
24	17.6	16.5	17.0	16.4	15.1	15.8	14.3	13.0	13.8	12.2	11.0	11.7
25	17.6	17.0	17.4	16.5	15.5	16.1	14.5	14.0	14.2	12.4	11.6	12.1
26	17.8	17.5	17.6	16.6	15.5	15.9	14.5	14.0	14.2	12.0	11.5	11.8
27	18.0	17.0	17.6	16.7	16.0	16.4	14.2	13.5	13.9	11.8	11.0	11.4
28	17.6	16.5	17.1	16.5	16.0	16.2	13.8	13.0	13.4	11.9	11.0	11.4
29	17.3	16.5	16.9	16.4	15.6	16.0	13.3	12.5	12.9	11.9	11.1	11.5
30	17.7	17.0	17.3	16.1	15.5	15.7	13.2	12.0	12.7	12.9	12.0	12.4
31	17.5	16.5	17.0	---	---	---	13.0	12.0	12.6	12.7	12.0	12.4
MONTH	20.0	15.5	17.9	18.5	14.0	16.5	16.1	12.0	14.1	14.1	11.0	12.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.5	11.5	12.0	12.7	11.5	12.2	13.8	13.0	13.4	16.1	15.0	15.5
2	12.9	12.0	12.5	12.8	12.0	12.4	14.1	12.5	13.4	16.3	15.1	15.8
3	13.2	12.5	12.9	12.8	11.5	12.3	14.1	13.0	13.6	16.4	15.5	16.0
4	13.1	12.1	12.7	12.6	11.6	12.2	13.7	12.9	13.3	16.3	15.5	15.9
5	12.8	12.1	12.6	12.3	11.5	11.9	13.6	12.5	13.0	15.9	15.0	15.5
6	12.9	12.1	12.4	12.4	11.1	11.9	13.9	12.5	13.2	15.7	14.5	15.2
7	13.2	12.5	12.8	12.8	11.5	12.2	14.1	12.6	13.4	15.9	14.6	15.4
8	13.1	12.0	12.6	13.2	12.6	12.9	14.3	13.0	13.6	16.1	15.5	15.7
9	12.6	11.5	12.2	13.4	13.0	13.2	14.5	13.0	13.8	15.9	14.6	15.4
10	12.4	11.1	11.9	13.4	12.1	12.9	14.6	13.1	13.9	15.9	15.0	15.4
11	12.4	11.0	11.8	12.6	11.5	12.1	14.7	13.6	14.0	15.9	15.0	15.5
12	13.1	12.0	12.6	12.4	12.0	12.2	15.0	13.5	14.3	16.2	15.5	15.9
13	13.0	12.0	12.6	12.6	11.5	12.1	15.4	14.0	14.7	16.2	15.5	15.9
14	12.9	12.0	12.4	12.5	11.5	12.0	15.2	14.6	14.9	16.2	16.0	16.1
15	12.9	12.5	12.7	12.9	11.5	12.3	15.4	14.6	15.0	16.3	15.5	16.0
16	12.7	10.7	11.6	12.7	12.5	12.6	15.4	14.6	15.2	16.4	16.0	16.2
17	11.7	11.0	11.5	12.8	12.0	12.4	15.2	14.5	14.8	16.6	16.0	16.2
18	11.7	11.0	11.5	12.7	12.0	12.3	15.3	14.5	15.0	16.8	16.0	16.5
19	11.9	11.0	11.4	12.6	12.0	12.3	15.5	15.0	15.2	16.9	16.0	16.6
20	11.9	11.2	11.5	12.9	12.0	12.5	15.8	14.5	15.2	16.9	16.7	16.7
21	12.0	11.5	11.7	13.1	12.1	12.6	15.9	15.0	15.4	16.8	16.5	16.6
22	11.7	11.5	11.6	13.2	12.0	12.6	16.1	15.0	15.5	16.8	16.5	16.6
23	12.1	11.0	11.5	13.2	12.0	12.7	16.1	15.1	15.7	17.0	16.5	16.7
24	12.0	11.0	11.5	13.3	12.5	12.9	16.2	15.2	15.8	17.2	16.6	16.9
25	12.1	11.5	11.9	13.4	13.0	13.1	15.4	14.6	15.1	17.2	16.5	16.9
26	11.9	11.5	11.6	14.1	13.5	13.8	15.5	14.5	14.9	17.1	16.5	16.8
27	11.8	11.0	11.4	16.2	13.6	14.2	15.4	14.0	14.8	17.3	16.6	17.0
28	11.7	10.6	11.1	15.1	14.0	14.5	15.4	14.5	14.9	17.2	16.5	16.9
29	---	---	---	14.9	14.0	14.5	15.4	14.0	14.7	17.3	16.5	16.9
30	---	---	---	15.0	14.5	14.7	15.9	14.5	15.2	17.4	16.6	17.1
31	---	---	---	14.9	13.6	14.3	---	---	---	17.5	17.0	17.2
MONTH	13.2	10.6	12.0	16.2	11.1	12.8	16.2	12.5	14.5	17.5	14.5	16.2

PEE DEE RIVER BASIN

0213228795 JORDAN CREEK NEAR SILVER HILL, NC--Continued

TEMPERATURE, WATER, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	17.5	17.0	17.2	20.0	18.5	19.0	21.4	20.1	20.6	20.4	19.6	20.2
2	17.6	17.0	17.3	19.4	19.0	19.2	20.4	19.6	20.2	20.1	19.5	19.8
3	17.7	17.0	17.4	19.4	19.1	19.2	20.4	19.6	20.0	20.2	19.5	19.9
4	17.6	17.0	17.5	---	---	---	20.6	19.6	20.1	19.9	19.5	19.8
5	17.7	17.0	17.6	---	---	---	20.6	20.1	20.2	20.0	19.5	19.7
6	17.5	17.0	17.3	---	---	---	20.4	19.6	20.1	20.3	19.5	20.0
7	17.5	17.0	17.2	---	---	---	20.9	19.6	20.5	20.7	20.0	20.3
8	17.6	17.0	17.3	---	---	---	20.4	20.1	20.2	20.8	20.0	20.5
9	17.7	17.0	17.4	---	---	---	20.4	19.6	20.0	20.5	20.0	20.3
10	17.7	17.0	17.3	---	---	---	21.8	20.1	20.6	20.4	20.0	20.2
11	17.6	17.0	17.3	---	---	---	21.3	20.1	20.7	20.4	20.1	20.2
12	17.8	17.0	17.5	---	---	---	20.4	19.6	20.2	21.1	20.0	20.3
13	17.7	17.5	17.6	---	---	---	20.3	19.6	19.9	21.1	20.1	20.7
14	17.8	17.5	17.7	---	---	---	19.8	19.1	19.6	20.6	20.0	20.3
15	17.8	17.5	17.7	---	---	---	21.6	19.7	20.7	20.4	20.0	20.1
16	18.1	17.5	17.9	---	---	---	20.7	20.1	20.4	20.4	19.5	20.0
17	18.6	17.5	18.0	---	---	---	20.7	20.0	20.4	20.4	20.0	20.1
18	18.1	17.5	17.8	---	---	---	20.7	20.0	20.4	20.5	20.0	20.2
19	18.7	18.0	18.2	---	---	---	20.8	20.0	20.4	20.3	20.1	20.2
20	19.6	18.0	18.5	---	---	---	20.7	20.0	20.4	20.3	20.0	20.2
21	19.2	18.5	18.8	---	---	---	21.8	20.0	20.7	20.1	19.5	19.8
22	19.2	18.6	18.8	19.7	18.6	19.1	20.9	20.5	20.7	19.8	19.0	19.4
23	19.1	18.5	18.8	19.8	19.1	19.4	20.8	20.0	20.4	19.3	18.5	18.9
24	19.2	18.5	18.9	19.8	19.1	19.4	20.4	20.0	20.3	19.2	18.0	18.8
25	20.2	18.7	19.3	19.9	19.1	19.5	20.3	20.0	20.2	19.2	18.0	18.7
26	19.7	19.1	19.3	19.9	19.1	19.5	20.4	19.6	20.1	19.2	18.0	18.7
27	19.4	18.5	19.1	19.9	19.1	19.5	20.7	20.0	20.4	19.2	18.0	18.7
28	19.1	18.0	18.6	19.9	19.1	19.5	20.7	20.0	20.5	19.3	18.0	18.9
29	18.9	17.5	18.3	19.9	19.1	19.5	20.7	20.0	20.4	19.3	18.5	19.0
30	18.5	17.5	18.4	19.8	19.1	19.4	20.4	20.2	20.3	19.6	19.0	19.3
31	---	---	---	22.4	19.1	20.2	20.4	20.2	20.3	---	---	---
MONTH	20.2	17.0	18.0	---	---	---	21.8	19.1	20.3	21.1	18.0	19.8

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.

WATER-DISCHARGE RECORDS

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 except those below 40 ft^3/s,which are fair. Since 1984, the town of Southern Pines withdraws water for public supply a short distance upstream from the gage causing some diurnal fluctuation at low to medium flows; an average of 2.6 ft^3/s was diverted during the year.

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

AVERAGE DISCHARGE.--48 years, 259 ft^3/s, 19.22 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,900 ft^3/s Sept. 18, 1945, gage height, 10.29 ft; minimum, 22 ft^3/s Oct. 5, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 850 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 21	0100	915	6.16	Mar. 2	1400	*1,760	*7.05
Jan. 24	1400	938	6.19				

Minimum discharge, 34 ft^3/s July 30, gage height, 1.36 ft; minimum daily, 37 ft^3/s July 28, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	89	235	220	372	1120	438	162	97	131	51	93
2	61	104	284	282	358	1680	448	154	119	130	61	88
3	57	127	340	338	338	1350	420	144	109	161	54	67
4	51	117	381	326	327	844	360	142	96	211	46	59
5	50	104	363	270	317	627	330	144	110	210	43	74
6	51	102	296	226	298	529	329	141	111	152	42	128
7	48	102	218	201	292	477	307	135	84	122	53	193
8	48	100	201	190	311	454	283	128	76	102	76	285
9	61	101	193	185	312	449	263	118	71	88	73	358
10	124	103	195	191	281	451	252	114	63	77	75	301
11	167	98	224	240	254	446	233	112	60	65	59	143
12	150	102	286	265	241	422	228	107	58	64	66	110
13	117	172	345	221	236	394	230	136	54	96	55	212
14	109	246	391	186	226	366	218	223	82	123	45	304
15	103	306	337	174	222	346	243	228	126	130	111	224
16	93	310	255	173	240	340	359	176	107	142	262	125
17	84	339	217	190	283	330	429	140	91	100	286	103
18	74	288	202	226	325	321	412	125	99	76	118	94
19	73	194	193	449	339	337	353	112	170	64	76	82
20	75	173	181	793	349	397	299	132	230	61	65	79
21	73	206	170	886	367	429	264	221	198	57	57	86
22	74	235	167	864	399	402	237	265	166	50	54	85
23	71	200	160	861	450	349	215	168	118	47	47	77
24	71	163	213	922	481	309	207	129	129	44	45	69
25	70	225	368	813	471	294	241	114	204	39	45	68
26	113	456	478	630	430	291	282	115	355	38	45	60
27	189	527	463	537	388	303	271	178	536	39	45	59
28	170	468	386	497	551	331	222	236	607	37	43	63
29	114	333	273	462	---	382	191	178	388	39	39	64
30	100	230	230	418	---	406	174	131	170	37	44	70
31	93	---	215	390	---	424	---	105	---	39	59	---
TOTAL	2795	6320	8460	12626	9458	15600	8738	4713	4884	2771	2240	3823
MEAN	90.2	211	273	407	338	503	291	152	163	89.4	72.3	127
MAX	189	527	478	922	551	1680	448	265	607	211	286	358
MIN	48	89	160	173	222	291	174	105	54	37	39	59
CFSM	.49	1.15	1.49	2.23	1.85	2.75	1.59	.83	.89	.49	.39	.70
IN.	.57	1.28	1.72	2.57	1.92	3.17	1.78	.96	.99	.56	.46	.78

CAL YR 1986 TOTAL 58424 MEAN 160 MAX 2320 MIN 22 CFSM .87 IN. 11.9
WTR YR 1987 TOTAL 82428 MEAN 226 MAX 1680 MIN 37 CFSM 1.23 IN. 16.8

PEE DEE RIVER BASIN

02133500 DROWNING CREEK NEAR HOFFMAN, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/21	0920	WATER	0.1	2.11	74	26	5.90	10.0		10.2	50
86/11/19	1015	WATER	0.1	3.98	196	25	5.30	13.0		8.3	
86/12/04	1000	WATER	0.1	5.16	386	26	4.10	10.0	2.0	8.4	
87/01/20	0930	WATER	0.1	5.95	765	26	4.80	7.0		8.4	
87/02/19	1000	WATER	0.1	4.99	337	31	5.00	4.0		11.6	
87/03/10	1500	WATER	0.1	5.36	451	28	5.10	9.0	16.0	9.5	
87/04/23	1440	WATER	0.1	4.14	213	23	6.10	18.0		8.5	
87/05/07	1100	WATER	0.1	3.12	135	22	5.90	16.0		8.4	
87/06/03	1400	WATER	0.1	2.70	110	21	6.30	21.0	2.8	6.5	
87/06/30	1645	WATER	0.1	3.32	147	20	5.60	24.0		6.3	
87/07/20	1515	WATER	0.1	1.94	62	20	6.20	23.0		6.8	
87/07/29	1410	WATER	0.1	1.48	39	20	6.20	26.0		6.8	
87/08/19	1000	WATER	0.1	2.22	78	25	6.00	24.0		6.6	
87/09/22	1455	WATER	0.1	2.17	84						
87/09/22	1455	WATER	0.15			21	5.70	19.0	2.2	7.2	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/21	0920	WATER	0.1	1	8	49					
86/11/19	1015	WATER	0.1	2							
86/12/04	1000	WATER	0.1		1	43					
87/01/20	0930	WATER	0.1	1							
87/02/19	1000	WATER	0.1	1							
87/03/10	1500	WATER	0.1	2	1K	45					
87/04/23	1440	WATER	0.1	5							
87/05/07	1100	WATER	0.1	3							
87/06/03	1400	WATER	0.1	6	4	7					
87/06/30	1645	WATER	0.1	5							
87/07/20	1515	WATER	0.1	6							
87/07/29	1410	WATER	0.1	5							
87/08/19	1000	WATER	0.1	5							
87/09/22	1455	WATER	0.15	4	5	29					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/12/04	1000	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	15
87/03/10	1500	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/06/03	1400	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/09/22	1455	WATER	0.15	10K	10K	25K	10K	50K	.2K	50K	10K

PEE DEE RIVER BASIN

02134480 BIG SWAMP NEAR TARHEEL, NC

LOCATION.--Lat 34°42'37", long 78°50'14", Robeson County, Hydrologic Unit 03040203, at downstream side of bridge on SR 1004 and 2.8 mi southwest of Tar Heel.

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 below 10 ft^3/s, which are poor.

EXTREMES FOR CURRENT YEARS.--Peak discharges greater than base discharge of 550 ft^3/s and maximum (*):

Water Year 1986

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug. 24	0600	*565	*10.88	No other peak greater than base discharge.			

Minimum discharge, 0.43 ft^3/s May 12, gage height, 4.89 ft.

Water Year 1987

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 5	0500	1,220	11.77	Mar. 31	1700	657	11.02
Jan. 24	0400	2,140	12.68	Apr. 20	1600	732	11.12
Mar. 3	1400	*2,670	*13.14				

Minimum discharge, 0.62 ft^3/s Sept. 25; minimum gage height, 4.98 ft July 25, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e12	42	239	109	114	99	115	21	29	31	25	115
2	e10	48	264	108	104	96	101	17	27	54	25	100
3	e20	66	298	108	97	90	94	15	28	66	24	88
4	e60	89	345	108	91	85	97	12	28	66	25	79
5	e80	106	386	104	87	81	112	9.4	27	51	26	73
6	e100	118	447	99	85	76	122	8.1	26	39	26	78
7	e98	126	493	94	96	71	126	6.4	21	29	25	80
8	e88	132	467	88	107	66	114	4.6	17	17	26	79
9	e70	138	411	81	113	61	96	2.7	12	9.7	35	97
10	e60	148	353	80	108	59	85	1.3	7.7	5.7	34	135
11	e56	158	305	81	116	57	78	.70	11	4.6	31	168
12	e52	163	273	82	137	55	71	.59	8.6	3.9	36	208
13	e60	160	255	80	157	54	67	1.3	7.8	2.5	58	263
14	e56	150	237	77	172	90	64	.85	4.2	2.5	86	290
15	e52	142	225	75	180	142	58	4.1	2.1	2.1	106	265
16	e50	137	221	73	178	166	53	5.0	3.8	1.3	115	164
17	e56	133	224	72	166	180	49	8.9	16	2.4	88	94
18	49	133	225	73	153	182	45	15	14	3.1	77	73
19	46	138	216	75	142	176	42	17	10	3.6	111	64
20	43	149	199	82	139	197	38	24	6.9	3.8	153	58
21	41	160	181	84	144	238	38	27	5.6	3.7	247	54
22	47	169	168	81	149	314	43	28	4.9	5.2	334	51
23	71	179	156	78	146	404	50	24	3.2	9.4	503	50
24	85	183	147	76	133	431	48	20	3.6	16	560	49
25	87	200	140	72	119	404	41	21	17	9.4	511	50
26	78	219	135	86	109	356	37	24	21	10	413	49
27	65	233	130	112	102	302	34	40	23	17	321	48
28	55	234	122	131	100	253	31	49	18	20	294	47
29	48	226	117	143	---	209	30	48	23	23	206	47
30	44	229	115	141	---	170	26	40	25	23	132	48
31	42	---	112	127	---	137	---	35	---	26	128	---
TOTAL	1781	4508	7606	2880	3544	5301	2005	530.94	451.4	560.9	4781	3064
MEAN	57.5	150	245	92.9	127	171	66.8	17.1	15.0	18.1	154	102
MAX	100	234	493	143	180	431	126	49	29	66	560	290
MIN	10	42	112	72	85	54	26	.59	2.1	1.3	24	47
CFSM	.25	.66	1.07	.41	.55	.75	.29	.07	.07	.08	.67	.45
IN.	.29	.73	1.24	.47	.58	.86	.33	.09	.07	.09	.78	.50

WTR YR 1986 TOTAL 37013.17 MEAN 101 MAX 560 MIN .59 CFSM .44 IN. 6.01

e Estimated

PEE DEE RIVER BASIN

02134480 BIG SWAMP NEAR TARHEEL, NC--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	64	218	342	667	1540	635	253	35	39	13	19
2	50	62	243	519	594	2460	593	222	34	39	13	30
3	52	66	250	891	555	2650	552	205	35	45	10	21
4	52	67	245	1150	521	2520	510	175	38	52	8.5	14
5	54	64	238	1200	485	2150	466	160	42	54	7.6	14
6	54	60	234	1080	447	1710	421	154	42	52	6.4	29
7	55	56	229	904	420	1310	378	151	37	41	7.5	44
8	56	54	225	727	402	1020	341	142	31	36	10	65
9	57	54	218	604	385	845	311	122	24	28	13	88
10	67	53	205	536	372	724	289	97	19	23	37	106
11	83	50	196	480	362	632	269	76	16	17	50	124
12	107	54	203	434	354	572	250	63	13	11	42	143
13	129	78	229	395	341	535	229	57	15	8.4	27	131
14	148	98	258	359	321	510	207	67	38	29	19	105
15	165	125	317	330	303	480	208	72	64	63	27	83
16	170	157	399	309	297	448	263	72	57	77	48	55
17	135	182	430	315	314	415	321	66	43	80	53	40
18	85	213	417	337	350	383	399	58	43	64	42	30
19	68	245	380	443	428	367	545	54	113	43	29	21
20	58	269	335	685	544	366	709	70	138	30	21	15
21	52	274	298	1030	614	369	702	79	132	20	16	11
22	48	259	274	1380	633	385	628	73	123	13	12	7.7
23	45	239	253	1940	645	408	564	65	117	7.0	7.0	4.5
24	42	217	247	2130	637	406	508	58	122	3.6	5.4	2.6
25	40	197	246	2080	628	390	457	59	129	1.8	4.5	1.0
26	50	174	246	1910	610	378	438	58	132	1.2	4.9	.88
27	76	159	256	1680	634	366	405	50	112	2.2	4.0	1.1
28	94	155	277	1430	795	440	365	51	89	3.8	2.8	1.2
29	106	165	298	1160	---	531	320	51	64	4.1	1.6	1.2
30	101	187	308	952	---	595	284	45	48	5.5	1.1	1.6
31	77	---	301	786	---	646	---	39	---	6.4	1.7	---
TOTAL	2423	4097	8473	28518	13658	26551	12567	2964	1945	900.0	545.0	1209.78
MEAN	78.2	137	273	920	488	856	419	95.6	64.8	29.0	17.6	40.3
MAX	170	274	430	2130	795	2650	709	253	138	80	53	143
MIN	40	50	196	309	297	366	207	39	13	1.2	1.1	.88
CFSM	.34	.60	1.19	4.02	2.13	3.74	1.83	.42	.28	.13	.08	.18
IN.	.39	.67	1.38	4.63	2.22	4.31	2.04	.48	.32	.15	.09	.20

CAL YR 1986 TOTAL 38111.20 MEAN 104 MAX 560 MIN .59 CFSM .46 IN. 6.19
WTR YR 1987 TOTAL 103850.59 MEAN 285 MAX 2650 MIN .88 CFSM 1.24 IN. 16.9

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.

WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Records good.

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

AVERAGE DISCHARGE.--58 years, 1,322 ft^3/s, 14.62 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,400 ft^3/s Sept. 24, 1945, gage height, 10.64 ft; minimum, 66 ft^3/s Oct. 9, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,140 ft^3/s Mar. 6, gage height, 9.42 ft; minimum, 126 ft^3/s Aug. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184	353	893	1370	4840	4720	2610	1770	447	722	128	252
2	178	395	918	1660	4280	6350	2640	1630	419	688	144	236
3	171	407	973	1920	3790	7200	2600	1500	403	657	152	214
4	163	400	1040	2270	3350	7490	2570	1440	418	659	145	211
5	157	386	1120	2480	2980	8000	2520	1370	425	738	140	250
6	150	369	1200	2550	2670	8080	2450	1270	388	966	152	420
7	144	348	1250	2490	2490	7770	2350	1170	344	1090	171	627
8	141	334	1240	2440	2330	7280	2260	1100	323	1100	190	797
9	141	330	1190	2420	2170	6680	2150	1020	312	960	183	898
10	155	328	1140	2400	2050	5970	2030	945	298	734	178	1100
11	193	319	1120	2330	1960	5180	1920	881	278	651	291	1250
12	208	330	1150	2190	1870	4450	1820	819	257	614	286	1320
13	235	394	1210	2030	1780	3850	1710	762	251	601	278	1260
14	277	457	1240	1870	1720	3390	1600	800	384	575	269	1150
15	316	550	1310	1720	1670	3020	1640	863	427	533	314	1080
16	359	618	1360	1600	1680	2730	1750	864	501	467	323	1030
17	394	659	1380	1560	1760	2510	1710	868	521	442	323	1010
18	415	707	1370	1580	1810	2350	1810	832	479	456	357	1000
19	420	740	1350	1690	1930	2270	1930	770	436	469	395	977
20	399	778	1340	1880	2070	2210	2080	726	490	457	434	906
21	359	836	1340	2170	2170	2140	2120	710	522	426	464	792
22	317	860	1350	3060	2230	2080	2080	731	560	383	466	684
23	293	878	1360	3560	2280	2030	2060	756	611	320	455	594
24	270	910	1410	4350	2320	1970	2070	753	654	274	488	485
25	253	934	1400	5160	2390	1930	2130	713	701	231	523	406
26	256	947	1350	5830	2470	1920	2120	644	711	202	496	320
27	263	944	1310	6250	2650	1900	2100	588	713	179	375	287
28	273	929	1300	6430	3010	1940	2050	549	725	160	261	263
29	293	906	1310	6330	---	2010	1980	527	732	145	234	242
30	313	890	1290	5970	---	2190	1870	511	728	136	239	232
31	324	---	1250	5430	---	2430	---	487	---	134	235	---
TOTAL	8014	18236	38464	94990	68720	124040	62730	28369	14458	16169	9089	20293
MEAN	259	608	1241	3064	2454	4001	2091	915	482	522	293	676
MAX	420	947	1410	6430	4840	8080	2640	1770	732	1100	523	1320
MIN	141	319	893	1370	1670	1900	1600	487	251	134	128	211
CFSM	.21	.50	1.01	2.50	2.00	3.26	1.70	.75	.39	.42	.24	.55
IN.	.24	.55	1.17	2.88	2.08	3.76	1.90	.86	.44	.49	.28	.61

CAL YR 1986 TOTAL 241364 MEAN 661 MAX 2050 MIN 123 CFSM .54 IN. 7.31
WTR YR 1987 TOTAL 503572 MEAN 1380 MAX 8080 MIN 128 CFSM 1.12 IN. 15.3

PEE DEE RIVER BASIN

02134500 LUMBER RIVER AT BOARDMAN, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/28	1105	WATER	0.1	2.52	272	224	7.10	16.0		6.5	90
86/11/20	1100	WATER	0.1	4.72	774	106	5.80	12.0		6.5	
86/12/02	1250	WATER	0.1	5.07	915	84	6.20	13.0	1.2	6.2	
87/01/06	1215	WATER	0.1	7.00	2550	70	5.40	5.0		9.6	
87/02/05	1116	WATER	0.1	7.31	2998						
87/02/05	1130	WATER	0.1			67	6.50	8.0		9.5	
87/03/17	1200	WATER	0.1	6.97	2512	50	5.70	10.0	1.0	6.8	
87/04/06	1300	WATER	0.1	6.92	2449	64	5.80	11.0		7.4	
87/05/20	1430	WATER	0.1	4.61	721	85	6.60	22.0		5.9	
87/06/11	1200	WATER	0.1	2.80	278	177	7.10	23.0	2.7	5.5	
87/06/30	1230	WATER	0.1	4.62	729	95	6.30	24.0		4.7	
87/07/20	1215	WATER	0.1	3.75	460	140	6.80	24.0		5.6	
87/07/29	1100	WATER	0.1	1.79	146	210	6.90	25.0		6.0	
87/08/19	1335	WATER	0.1	3.48	398	170	6.80	26.0		5.0	
87/09/21	1035	WATER	0.1	4.91	799						
87/09/21	1035	WATER	0.15			110	6.40	22.0	2.0	5.0	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/28	1105	WATER	0.1	37	1K	180	.45	.030	.600	.250	.190
86/11/20	1100	WATER	0.1	8			.18	.020	.400	.090	.050
86/12/02	1250	WATER	0.1	9	1	93	.02	.010	.400	.080	.030
87/01/06	1215	WATER	0.1	4			.27	.020	.600	.040	.020
87/02/05	1130	WATER	0.1	5			.50	.020	.300	.030	.010
87/03/17	1200	WATER	0.1	6	1K	69	.04	.020	.400	.030	.010
87/04/06	1300	WATER	0.1	6			.02	.010	.300	.030	.010
87/05/20	1430	WATER	0.1	17			.28	.080	.500	.200	.100
87/06/11	1200	WATER	0.1	30	4	150	.45	.050	.600	.330	.250
87/06/30	1230	WATER	0.1	18							
87/07/20	1215	WATER	0.1	27							
87/07/29	1100	WATER	0.1	35							
87/08/19	1335	WATER	0.1	36							
87/09/21	1035	WATER	0.15	20	2	170	.11	.040	.700	.160	.070

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/12/02	1250	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	28
87/03/17	1200	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	12
87/06/11	1200	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	17
87/09/21	1035	WATER	0.15	10K	10K	25K	10K	50K	.2K	50K	13

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.

WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Records good.

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

AVERAGE DISCHARGE.--7 years, 239 ft^3/s, 25.56 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft^3/s Feb. 2, 1983, gage height, 13.60 ft, from rating curve extended above 3,590 ft^3/s on basis of contracted-opening measurement of peak flow; minimum, 35 ft^3/s July 23, 1986, gage height, 0.92 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 1	0400	*5,880	*9.57	Sept. 7	0545	3,420	7.19
Sept. 6	1500	3,220	6.97				

Minimum discharge, 66 ft^3/s Oct. 6, 7, gage height, 1.14 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	156	361	271	292	3280	382	246	231	159	97	85
2	78	180	1350	266	325	1160	339	232	183	214	141	79
3	75	158	728	242	342	755	382	224	159	189	146	76
4	73	148	483	232	324	599	382	222	207	188	109	146
5	70	146	381	224	296	508	387	224	159	205	104	193
6	67	152	327	216	279	448	418	220	146	192	114	1380
7	67	219	292	213	267	407	451	202	137	167	161	2300
8	67	298	271	210	255	386	416	193	132	158	143	798
9	79	229	291	204	244	415	384	183	128	156	143	435
10	93	198	322	202	241	391	354	179	129	147	113	307
11	117	193	441	198	222	352	335	177	136	146	100	261
12	107	210	442	190	222	334	313	175	127	142	107	340
13	159	184	361	186	220	318	295	175	127	135	109	501
14	211	171	315	181	240	305	295	188	129	132	106	310
15	131	181	289	185	222	295	1180	181	123	129	100	244
16	109	182	266	190	225	289	674	186	157	120	100	244
17	101	170	250	195	240	278	538	169	176	114	100	259
18	98	164	267	325	245	273	429	169	194	113	99	213
19	96	157	240	620	272	340	377	181	667	113	97	197
20	97	185	227	431	250	297	345	174	423	107	97	204
21	98	189	214	346	295	280	323	173	353	103	90	176
22	97	168	206	337	409	271	306	169	238	102	87	165
23	90	164	210	292	531	261	307	163	225	100	83	157
24	88	184	1140	272	458	254	418	170	198	99	81	153
25	206	180	687	289	337	279	335	171	188	90	83	148
26	637	1110	456	289	313	271	315	168	297	88	85	143
27	234	696	379	260	539	269	289	158	232	94	83	139
28	175	409	337	255	2380	267	281	161	180	91	89	139
29	152	322	306	247	---	248	267	172	167	102	112	139
30	141	275	284	269	---	320	251	170	160	212	83	149
31	131	---	263	313	---	586	---	183	---	105	82	---
TOTAL	4024	7378	12386	8150	10485	14736	11768	5758	6108	4212	3244	10080
MEAN	130	246	400	263	374	475	392	186	204	136	105	336
MAX	637	1110	1350	620	2380	3280	1180	246	667	214	161	2300
MIN	67	146	206	181	220	248	251	158	123	88	81	76
CFSM	1.02	1.94	3.15	2.07	2.95	3.74	3.09	1.46	1.60	1.07	.82	2.65
IN.	1.18	2.16	3.63	2.39	3.07	4.32	3.45	1.69	1.79	1.23	.95	2.95

CAL YR 1986 TOTAL 62130 MEAN 170 MAX 1350 MIN 35 CFSM 1.34 IN. 18.2
WTR YR 1987 TOTAL 98329 MEAN 269 MAX 3280 MIN 67 CFSM 2.12 IN. 28.8

SANTEE RIVER BASIN

02137727 CATAWBA RIVER NEAR PLEASANT GARDENS, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/30	1400	WATER	0.1	1.60	140		6.90	13.0		10.1	3900
86/11/25	1550	WATER	0.1	1.76	172	58	6.90	11.0	1.6	9.3	
86/12/12	1030	WATER	0.1	2.71	446				5.3		
87/01/28	1210	WATER	0.1	2.10	255				1.5		
87/01/28	1210	WATER				36	6.80	3.0		12.8	
87/02/26	1445	WATER	0.1	2.30	313	28		4.0	2.3	11.8	
87/03/13	0930	WATER	0.1			27		7.0	1.9	11.0	
87/04/30	1030	WATER	0.1	2.20	255	35	6.90	16.0	2.1	9.8	
87/05/19	1530	WATER	0.1	1.91	182	41	7.10	18.0	9.7	8.8	3100
87/06/15	1215	WATER	0.1	1.63	126	38	7.10	21.0		9.0	
87/06/30	1130	WATER	0.1	1.71	162	44	7.10	20.0	5.0	8.8	
87/07/31	0945	WATER	0.1	1.49	107	40	6.80	22.0	20.0	7.6	
87/08/20	1000	WATER	0.1	1.37	96	55	6.90	20.0	8.2	7.8	450
87/09/29	0945	WATER	0.1	1.60	140	50	6.70	16.0	4.2	8.7	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/30	1400	WATER	0.1	16	6	70					
86/11/25	1550	WATER	0.1	21	2	48					
87/01/28	1210	WATER		10	3	33					
87/02/26	1445	WATER	0.1		3	36	.26	.050	.100	.020	.010K
87/03/13	0930	WATER	0.1		2	61					
87/04/30	1030	WATER	0.1	11	7	63					
87/05/19	1530	WATER	0.1	12	150	180	.24	.050	.400	.150	.010K
87/06/15	1215	WATER	0.1	13	12	67					
87/06/30	1130	WATER	0.1	13	15	56					
87/07/31	0945	WATER	0.1	13	23	83					
87/08/20	1000	WATER	0.1	15	14	62	.22	.050	.200	.050	.020
87/09/29	0945	WATER	0.1	14	6	50					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/25	1550	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/26	1445	WATER	0.1	10K	10K	25K	10K	50K		50K	10K
87/05/19	1530	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	45
87/08/20	1000	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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 gage. 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.--No estimated daily discharges. Records fair.

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

AVERAGE DISCHARGE.--65 years, (1923-87), 149 ft^3/s, 30.34 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,500 ft^3/s, Aug. 13, 1940, gage height, 11.4 ft, 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, 2 ft^3/s Jan. 9, 1956 (result of freezeup); minimum daily, 8 ft^3/s Sept. 7-9, 1925.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 1	0230	*2,580	4.82	Sept. 7	2000	2,060	4.41
Apr. 15	1630	2,420	4.70				

Minimum discharge, 19 ft^3/s Sept. 3, 4, 5, gage height, 0.98 ft; minimum daily, 19 ft^3/s Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	47	173	146	146	1740	326	205	220	87	36	21
2	32	55	489	140	161	749	249	160	171	101	45	21
3	33	62	538	139	218	508	245	155	143	105	65	20
4	29	59	340	123	212	419	252	148	130	144	57	19
5	28	73	261	112	193	343	217	140	122	150	49	28
6	27	75	215	106	182	306	206	132	109	121	45	184
7	26	83	189	100	173	298	225	125	101	82	41	967
8	26	194	171	99	168	304	250	117	97	74	38	440
9	27	141	167	102	160	349	321	111	92	69	38	163
10	30	113	184	101	150	424	312	107	87	65	37	185
11	31	107	236	97	143	334	283	106	84	55	37	346
12	32	115	334	102	129	282	257	87	81	52	36	199
13	44	106	263	101	124	241	239	99	81	49	34	181
14	79	96	210	95	122	211	222	135	85	45	33	138
15	85	92	184	94	122	192	1200	123	82	48	32	116
16	79	85	169	89	123	181	1210	112	116	46	31	105
17	64	83	155	103	132	177	1070	90	456	39	29	103
18	39	75	147	113	125	168	655	97	180	39	27	103
19	35	68	150	109	117	194	474	113	213	38	27	91
20	32	73	137	193	111	195	365	102	152	38	26	100
21	31	102	125	328	120	180	302	92	130	36	25	90
22	30	87	117	259	141	171	252	89	157	38	24	78
23	28	84	110	199	188	162	232	84	122	39	23	73
24	28	93	113	188	177	155	905	123	106	36	23	68
25	40	96	812	167	154	154	527	300	110	32	26	65
26	175	427	518	148	149	151	437	169	186	32	25	64
27	96	409	317	146	170	145	341	156	143	32	23	60
28	64	267	245	141	654	151	286	142	115	37	22	57
29	54	209	205	119	---	142	240	192	100	37	22	56
30	49	178	178	127	---	153	211	207	91	37	22	54
31	47	---	162	156	---	477	---	163	---	34	22	---
TOTAL	1453	3754	7614	4242	4764	9656	12311	4181	4062	1837	1020	4195
MEAN	46.9	125	246	137	170	311	410	135	135	59.3	32.9	140
MAX	175	427	812	328	654	1740	1210	300	456	150	65	967
MIN	26	47	110	89	111	142	206	84	81	32	22	19
CFSM	.70	1.88	3.68	2.05	2.55	4.67	6.15	2.02	2.03	.89	.49	2.10
IN.	.81	2.09	4.25	2.37	2.66	5.39	6.87	2.33	2.27	1.02	.57	2.34

CAL YR 1986 TOTAL 33635 MEAN 92.2 MAX 812 MIN 20 CFSM 1.38 IN. 18.8
WTR YR 1987 TOTAL 59089 MEAN 162 MAX 1740 MIN 19 CFSM 2.43 IN. 33.0

SANTEE RIVER BASIN

02138500 LINVILLE RIVER NEAR NEBO, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/29	1300	WATER	0.1			44	6.20	13.0		10.8	40
86/10/29	1500	WATER	0.1	1.25	54						
86/11/18	1435	WATER	0.1	1.29	74	28	6.30	10.0	71.0	11.7	
86/12/10	1505	WATER	0.1	1.70	191	25	5.80	9.0		11.6	
87/01/19	1400	WATER	0.1	1.48	110	27	6.10	6.0		12.5	
87/02/12	1400	WATER	0.1	1.54	129	29	6.10	6.0	1.0K	12.7	
87/03/18	1305	WATER	0.1	1.74	171	25	6.00	7.0		12.8	
87/04/14	1300	WATER	0.1	1.91	222	25	6.40	12.0		11.2	
87/05/14	1340	WATER	0.1	1.64	129	29	6.40	16.0	2.4	9.8	10
87/06/16	1330	WATER	0.1	1.63	129	14	6.70	22.0		9.7	20
87/07/21	1340	WATER	0.1	1.08	36	34	6.80	24.0		8.7	30
87/08/18	1430	WATER	0.1	1.00	27	38	6.50	24.0	1.5	8.4	20
87/09/14	1220	WATER	0.1	1.71	131	30	6.40	20.0		9.1	20

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/29	1300	WATER	0.1	9	5	56					
86/11/18	1435	WATER	0.1	8	8	27					
86/12/10	1505	WATER	0.1	6							
87/01/19	1400	WATER	0.1	5							
87/02/12	1400	WATER	0.1	6	2	30					
87/03/18	1305	WATER	0.1	7							
87/04/14	1300	WATER	0.1	7							
87/05/14	1340	WATER	0.1	8	8	32					
87/06/16	1330	WATER	0.1	9							
87/07/21	1340	WATER	0.1	13							
87/08/18	1430	WATER	0.1	11	4	40					
87/09/14	1220	WATER	0.1	8							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/18	1435	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/12	1400	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/14	1340	WATER	0.1	10K	10K	25K	10K	50K	.2K	70	10K
87/08/18	1430	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	20

SANTEE RIVER BASIN

0213875850 HIGH SHOALS CREEK NEAR DYSARTSVILLE, N. C.

LOCATION.--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.

DRAINAGE AREA.--2.38 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,200 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Basin above station is nearly 100 percent forested. Station is part of district's Natural Quality Network for determining the quality of streams relatively unaffected by man.

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

EXTREMES FOR CURRENT PERIOD.--May to September 1986: Maximum discharge during period, 22 ft^3/s Sept. 3, gage height, 2.15 ft; minimum, 0.62 ft^3/s July 21, gage height, 1.43 ft.

Water year 1987: Maximum discharge, 346 ft^3/s Feb. 28, gage height, 4.08 ft; minimum discharge, 1.4 ft^3/s Aug. 21, 23, 24, 27; minimum gage height, 1.45 ft Aug. 23, 24, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, MAY TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	1.9	e2.0	e1.5	1.3	4.1
2	---	---	---	---	---	---	---	1.9	e1.9	e1.6	1.3	e7.0
3	---	---	---	---	---	---	---	1.8	e1.9	e1.7	1.2	e14
4	---	---	---	---	---	---	---	1.9	e1.8	e1.5	1.3	e7.0
5	---	---	---	---	---	---	---	1.9	e1.7	e1.4	1.3	e4.0
6	---	---	---	---	---	---	---	1.8	e1.6	e1.4	1.6	e2.8
7	---	---	---	---	---	---	---	1.8	e1.6	e1.3	1.7	e2.6
8	---	---	---	---	---	---	---	1.8	e1.5	e1.2	1.5	e2.4
9	---	---	---	---	---	---	---	1.8	e1.5	e1.2	1.5	e2.2
10	---	---	---	---	---	---	---	1.8	e1.6	e1.1	1.8	e2.0
11	---	---	---	---	---	---	---	1.8	e6.0	e1.2	2.0	e1.8
12	---	---	---	---	---	---	---	1.8	e3.5	e1.2	4.4	e1.8
13	---	---	---	---	---	---	---	1.9	e2.5	e1.1	3.6	e1.7
14	---	---	---	---	---	---	---	2.1	e2.0	e1.2	2.2	e1.7
15	---	---	---	---	---	---	---	2.0	e1.9	e1.1	1.9	e1.6
16	---	---	---	---	---	---	---	1.8	e1.8	e1.4	1.7	e1.6
17	---	---	---	---	---	---	---	1.8	e1.7	e1.2	2.1	e1.6
18	---	---	---	---	---	---	---	2.1	e1.7	e1.0	3.3	e1.6
19	---	---	---	---	---	---	---	e2.2	e1.6	e.90	4.2	e1.6
20	---	---	---	---	---	---	---	e2.0	e1.6	e.80	4.7	e1.6
21	---	---	---	---	---	---	---	e1.7	e1.6	e.80	2.7	e1.6
22	---	---	---	---	---	---	---	e1.7	e1.5	e.90	4.0	e1.5
23	---	---	---	---	---	---	---	e1.7	e1.5	2.1	5.6	e1.5
24	---	---	---	---	---	---	---	e1.8	e1.5	1.5	3.0	e1.5
25	---	---	---	---	---	---	---	e1.8	e1.5	1.4	2.2	e1.5
26	---	---	---	---	---	---	---	e3.0	e1.5	1.4	2.0	e1.5
27	---	---	---	---	---	---	---	e9.0	e1.6	1.7	1.9	e1.5
28	---	---	---	---	---	---	---	e4.0	e1.6	1.5	1.9	e1.5
29	---	---	---	---	---	---	---	e2.6	e1.6	1.9	1.8	e1.5
30	---	---	---	---	---	---	---	e2.3	e1.6	1.5	1.7	e1.8
31	---	---	---	---	---	---	---	e2.1	---	1.3	1.8	---
TOTAL	---	---	---	---	---	---	---	69.6	56.9	41.00	73.2	80.1
MEAN	---	---	---	---	---	---	---	2.25	1.90	1.32	2.36	2.67
MAX	---	---	---	---	---	---	---	9.0	6.0	2.1	5.6	14
MIN	---	---	---	---	---	---	---	1.7	1.5	.80	1.2	1.5
CFSM	---	---	---	---	---	---	---	.94	.80	.56	.99	1.12
IN.	---	---	---	---	---	---	---	1.09	.89	.64	1.14	1.25

e Estimated

SANTEE RIVER BASIN

0213875850 HIGH SHOALS CREEK NEAR DYSARTSVILLE, N. C.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2.0	3.5	4.9	4.3	5.0	68	7.6	4.4	3.2	3.8	2.2	2.4
2	e1.9	3.9	22	4.1	5.5	14	6.6	4.3	3.1	5.0	2.7	2.3
3	e1.9	2.9	8.4	3.8	5.7	9.1	11	4.3	3.1	4.1	2.4	2.3
4	e1.8	2.6	5.3	3.7	5.3	7.3	12	4.2	4.7	4.2	2.2	4.2
5	e1.8	2.6	4.3	3.6	4.7	6.5	8.2	4.1	3.7	4.3	2.2	5.5
6	e1.8	2.5	3.7	3.5	4.4	6.0	7.2	4.1	3.1	4.0	2.4	5.5
7	e1.7	6.3	3.4	3.6	4.3	5.7	6.6	4.0	2.9	3.5	2.5	14
8	e1.7	5.5	3.3	3.6	4.1	5.6	6.1	3.8	2.9	3.3	2.4	6.3
9	e2.2	3.8	3.6	3.5	3.8	6.3	5.8	3.8	2.8	3.1	2.3	5.1
10	e2.3	3.1	3.6	3.5	3.7	5.8	5.5	3.7	2.8	3.0	2.3	3.7
11	e2.8	3.3	5.7	3.4	3.7	5.4	5.4	3.7	2.9	2.9	2.3	3.5
12	e2.5	3.1	5.3	3.3	3.7	5.1	5.2	5.5	2.8	2.8	2.3	3.5
13	e3.2	2.8	4.3	3.3	3.5	5.0	5.1	5.0	2.9	3.0	2.3	3.5
14	e4.3	2.6	3.8	3.3	3.6	5.0	5.1	4.7	2.7	3.0	2.2	2.9
15	e3.0	3.0	3.6	3.4	3.5	5.0	8.0	4.7	2.6	2.9	2.1	2.6
16	e2.2	2.8	3.3	3.4	4.4	4.9	6.8	4.8	2.6	2.7	2.1	2.7
17	e2.1	2.7	3.3	3.4	4.0	4.6	6.8	4.1	3.7	2.6	2.0	3.4
18	e2.0	2.6	3.3	6.0	4.1	4.7	7.1	3.8	4.0	2.6	1.9	2.6
19	e1.9	2.5	3.2	8.8	4.1	7.2	6.3	3.7	4.6	2.5	1.9	2.7
20	e1.8	3.1	3.1	5.9	4.5	5.8	5.8	3.7	5.0	2.4	1.8	2.6
21	e1.8	2.8	3.1	4.8	5.3	5.4	5.5	3.7	4.4	2.4	1.8	2.4
22	e1.7	2.6	2.9	4.9	6.9	5.0	5.3	3.7	4.6	2.3	1.8	2.4
23	e1.7	2.6	3.4	4.2	7.8	4.9	5.5	3.7	4.1	2.3	1.8	2.3
24	e1.7	2.6	25	4.0	5.9	4.7	5.5	3.6	3.5	2.2	1.8	2.3
25	e3.2	3.7	9.3	4.4	5.1	5.9	5.2	3.5	7.1	2.2	1.9	2.2
26	e8.6	24	5.9	4.2	4.8	5.2	5.0	3.4	30	2.2	1.9	2.1
27	e4.5	8.1	4.9	4.0	6.9	5.3	4.8	3.4	8.2	2.2	1.8	2.0
28	e3.0	4.7	4.4	3.9	76	5.0	4.8	3.4	5.3	2.2	3.7	2.3
29	e2.5	3.7	4.1	3.8	---	4.9	4.6	3.2	4.3	2.1	3.0	2.2
30	2.0	3.3	3.9	4.6	---	8.0	4.5	3.1	3.8	2.5	2.4	2.6
31	2.0	---	3.7	5.4	---	13	---	3.1	---	2.4	2.5	---
TOTAL	77.6	123.3	172.0	129.6	204.3	254.3	188.9	122.2	141.4	90.7	68.9	104.1
MEAN	2.50	4.11	5.55	4.18	7.30	8.20	6.30	3.94	4.71	2.93	2.22	3.47
MAX	8.6	24	25	8.8	76	68	12	5.5	30	5.0	3.7	14
MIN	1.7	2.5	2.9	3.3	3.5	4.6	4.5	3.1	2.6	2.1	1.8	2.0
CFSM	1.05	1.73	2.33	1.76	3.07	3.45	2.65	1.66	1.98	1.23	.93	1.46
IN.	1.21	1.93	2.69	2.03	3.19	3.97	2.95	1.91	2.21	1.42	1.08	1.63

WTR YR 1987 TOTAL 1677.3 MEAN 4.60 MAX 76 MIN 1.7 CFSM 1.93 IN. 26.2

e Estimated

SANTEE RIVER BASIN

0213875850 HIGH SHOALS CREEK NEAR DYSARTSVILLE, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1986 to September 1987.

REMARKS.--Basin above station is nearly 100 percent forested. Station is part of district's Natural Quality Network for determining the quality of streams relatively unaffected by man.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
MAY				
27...	1040	13	40	1.4
JUL				
21...	1555	0.68	4	0.01
AUG				
13...	1500	2.9	10	0.08
SEP				
02...	1100	3.9	11	0.12

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)
OCT											
28...	1445	2.1	--	--	--	--	--	--	--	--	--
DEC											
04...	1240	5.0	--	--	--	--	--	--	--	--	--
JAN											
19...	0830	9.8	23	6.77	8.0	--	--	720	11.4	102	--
19...	0840	9.7	--	--	--	--	--	--	--	--	--
FEB											
28...	0822	34	--	--	--	--	--	--	--	--	--
28...	0830	36	18	6.47	5.0	44	46	735	12.3	100	5
28...	0836	38	--	--	--	--	--	--	--	--	--
28...	0918	49	--	--	--	--	--	--	--	--	--
28...	0923	51	20	6.46	5.0	--	--	735	12.1	98	--
28...	1032	79	--	--	--	--	--	--	--	--	--
28...	1035	81	17	6.52	5.0	--	--	735	12.2	99	--
28...	1040	85	--	--	--	--	--	--	--	--	--
28...	1143	102	--	--	--	--	--	--	--	--	--
28...	1153	111	--	--	--	--	--	--	--	--	--
28...	1229	117	--	--	--	--	--	--	--	--	--
28...	1317	114	--	--	--	--	--	--	--	--	--
28...	1320	114	17	6.53	5.5	55	--	733	12.1	100	4
28...	1405	101	--	--	--	--	--	--	--	--	--
28...	1423	96	--	--	--	--	--	--	--	--	--
28...	1425	95	18	6.49	6.0	--	--	732	12.0	100	--
28...	1434	93	--	--	--	--	--	--	--	--	--
28...	1522	77	--	--	--	--	--	--	--	--	--
28...	1525	76	18	6.48	6.0	43	30	732	12.1	101	4
28...	1529	75	--	--	--	--	--	--	--	--	--
MAR											
09...	1210	6.4	--	--	--	--	--	--	--	--	--
MAY											
07...	1100	4.2	--	--	--	--	--	--	--	--	--
12...	2030	16	--	--	--	--	--	--	--	--	--
JUN											
22...	1255	3.5	--	--	--	--	--	--	--	--	--
25...	2330	51	--	--	--	--	--	--	--	--	--
25...	2400	47	--	--	--	--	--	--	--	--	--
26...	0030	55	--	--	--	--	--	--	--	--	--
JUL											
06...	1055	4.2	--	--	--	--	--	--	--	--	--
AUG											
18...	1300	2.0	29	6.30	19.0	--	--	732	8.6	97	--
28...	1117	2.0	--	--	--	--	--	--	--	--	--

SANTEE RIVER BASIN

0213875850 HIGH SHOALS CREEK NEAR DYSARTSVILLE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
OCT											
28...	--	--	--	--	--	--	--	--	--	--	--
DEC											
04...	--	--	--	--	--	--	--	--	--	--	--
JAN											
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
FEB											
28...	--	--	--	--	--	--	--	--	--	--	--
28...	0	1.1	0.43	1.3	33	0.3	0.90	5.6	0.50	<0.10	7.1
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	1	1.0	0.48	1.0	27	0.2	1.1	7.1	0.50	<0.10	4.9
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	1	0.94	0.46	0.90	26	0.2	1.0	6.5	0.50	<0.10	5.3
28...	--	--	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)
FEB											
28...	--	--	--	--	--	--	--	--	--	--	--
28...	22	20	0.03	2.1	<0.090	<0.010	<0.100	<0.010	<2.8	2.8	<2.9
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	12	18	0.02	3.7	<0.090	<0.010	<0.100	0.020	2.4	2.4	<2.5
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	16	17	0.02	3.3	<0.090	<0.010	<0.100	<0.010	<0.49	0.50	<0.60
28...	--	--	--	--	--	--	--	--	--	--	--

SANTEE RIVER BASIN

0213875850 HIGH SHOALS CREEK NEAR DYSARTSVILLE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	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)
FEB											
28...	--	--	--	--	--	--	--	--	--	--	--
28...	<13	<0.010	<0.010	500	<1	<1	22	1	9	9300	9
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	<11	<0.010	0.010	7400	<1	<1	14	3	11	10000	<5
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	<2.6	0.010	<0.010	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--

DATE	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)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
FEB											
28...	--	--	--	--	--	--	--	--	--	--	--
28...	250	<0.10	4	<1	20	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	280	<0.10	--	<1	30	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
MAR											
09...	--	--	--	--	--	--	--	--	--	--	--
MAY											
07...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
JUN											
22...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
JUL											
06...	--	--	--	--	--	--	--	--	--	--	--
AUG											
18...	--	--	--	--	--	<0.1	<1	<0.10	<1.0	<0.010	<0.1
28...	--	--	--	--	--	--	--	--	--	--	--

SANTEE RIVER BASIN

0213875850 HIGH SHOALS CREEK NEAR DYSARTSVILLE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	CHLORDANE, TOTAL (UG/L)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL (UG/L)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN TOTAL (UG/L)
AUG											
18...	<0.1	<1.0	<0.010	<0.1	<0.010	<0.1	<0.010	<0.1	<0.01	<0.1	<0.010
28...	--	--	--	--	--	--	--	--	--	--	--

DATE	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)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
AUG											
18...	<0.1	<0.010	<0.1	<0.010	<0.1	<0.01	<0.1	<0.010	<0.1	<0.010	<0.1
28...	--	--	--	--	--	--	--	--	--	--	--

DATE	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOTAL (UG/L)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)
AUG											
18...	<0.010	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01
28...	--	--	--	--	--	--	--	--	--	--	--

DATE	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE TOTAL (UG/L)	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)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT											
28...	--	--	--	--	--	--	--	--	--	4	0.02
DEC											
04...	--	--	--	--	--	--	--	--	--	3	0.04
JAN											
19...	--	--	--	--	--	--	--	--	--	9	0.24
19...	--	--	--	--	--	--	--	--	--	8	0.21
FEB											
28...	--	--	--	--	--	--	--	--	--	303	28
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	321	33
28...	--	--	--	--	--	--	--	--	--	339	45
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	938	200
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	1010	232
28...	--	--	--	--	--	--	--	--	--	1080	297
28...	--	--	--	--	--	--	--	--	--	972	291
28...	--	--	--	--	--	--	--	--	--	759	240
28...	--	--	--	--	--	--	--	--	--	599	184
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	480	131
28...	--	--	--	--	--	--	--	--	--	409	106
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	368	92
28...	--	--	--	--	--	--	--	--	--	364	76
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	295	60
MAR											
09...	--	--	--	--	--	--	--	--	--	5	0.09
MAY											
07...	--	--	--	--	--	--	--	--	--	2	0.02
12...	--	--	--	--	--	--	--	--	--	359	16
JUN											
22...	--	--	--	--	--	--	--	--	--	4	0.04
25...	--	--	--	--	--	--	--	--	--	490	67
25...	--	--	--	--	--	--	--	--	--	303	38
26...	--	--	--	--	--	--	--	--	--	359	53
JUL											
06...	--	--	--	--	--	--	--	--	--	2	0.02
AUG											
18...	<0.1	<0.01	<0.1	<0.1	<1.00	<1	<10	<0.01	<0.1	0	0.0
28...	--	--	--	--	--	--	--	--	--	2	0.01

SANTEE RIVER BASIN

0213875850 HIGH SHOALS CREEK NEAR DYSARTSVILLE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
SEP				
06...	1526	4.9	2	0.03
07...	0815	18	279	14
07...	0830	23	397	25
07...	0900	34	780	72
07...	0930	42	862	98
07...	1000	38	471	48
07...	1030	33	271	24
07...	1100	30	185	15

SANTEE RIVER BASIN

0214042720 NORTH HARPER CREEK NEAR KAWANA, NC

LOCATION.--Lat 36°00'31", Long 01°51'13", Avery County, Hydrologic Unit 03050101, on right bank 100 ft upstream from U.S. Forest Service Road °58 and 3.4 mile northwest of Kawana, N. C.

DRAINAGE AREA.--1.25 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,160 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Station is part of district's Natural Quality Network for determining the quality of streams relatively unaffected by man.

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

EXTREMES FOR CURRENT PERIOD.--May to September, 1986: Maximum discharge during period, 24 ft^3/s Aug. 18, gage height, 2.76 ft; minimum .28 ft^3/s Aug. 2, gage height 1.50 ft.

Water year 1987: Maximum discharge 94 ft^3/s Sept. 7, gage height, 3.50 ft; minimum discharge, .30 ft^3/s Aug. 21, 22, gage height 1.38 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, MAY TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	1.2	1.1	1.5	.33	3.8
2	---	---	---	---	---	---	---	1.2	1.0	1.1	.32	3.7
3	---	---	---	---	---	---	---	1.1	.98	.77	.87	6.4
4	---	---	---	---	---	---	---	1.1	.99	.64	.41	4.3
5	---	---	---	---	---	---	---	1.1	.97	.61	.50	3.2
6	---	---	---	---	---	---	---	1.2	.94	.56	.47	2.3
7	---	---	---	---	---	---	---	1.1	1.1	.53	.48	1.8
8	---	---	---	---	---	---	---	1.1	1.0	.51	.46	1.5
9	---	---	---	---	---	---	---	1.1	.91	.77	.41	1.3
10	---	---	---	---	---	---	---	1.1	1.0	.89	.41	1.2
11	---	---	---	---	---	---	---	1.0	.97	.59	.60	1.1
12	---	---	---	---	---	---	---	1.2	.89	.52	.57	1.1
13	---	---	---	---	---	---	---	1.2	.78	.75	.60	.96
14	---	---	---	---	---	---	---	1.2	.82	.79	.90	.90
15	---	---	---	---	---	---	---	1.0	.88	.53	.61	.87
16	---	---	---	---	---	---	---	1.0	.85	.49	.52	.87
17	---	---	---	---	---	---	---	1.1	.82	.46	.71	.83
18	---	---	---	---	---	---	---	1.2	.83	.45	4.6	.84
19	---	---	---	---	---	---	---	1.9	.83	.47	1.6	.84
20	---	---	---	---	---	---	---	1.6	.81	.57	4.3	.89
21	---	---	---	---	---	---	---	1.3	.78	.56	1.5	.88
22	---	---	---	---	---	---	---	1.2	.74	.91	1.2	.83
23	---	---	---	---	---	---	---	1.4	.70	1.0	1.8	.81
24	---	---	---	---	---	---	---	1.3	.70	.81	.89	.82
25	---	---	---	---	---	---	---	1.2	.67	.81	.68	.82
26	---	---	---	---	---	---	---	1.1	.66	.99	.61	.79
27	---	---	---	---	---	---	---	6.7	.65	2.3	.58	.78
28	---	---	---	---	---	---	---	1.9	.62	1.2	.77	.78
29	---	---	---	---	---	---	---	1.4	.63	.71	.57	.84
30	---	---	---	---	---	---	---	1.2	.62	.53	.54	.81
31	---	---	---	---	---	---	---	1.1	---	.34	.61	---
TOTAL	---	---	---	---	---	---	---	43.5	25.24	23.66	29.42	46.86
MEAN	---	---	---	---	---	---	---	1.40	.84	.76	.95	1.56
MAX	---	---	---	---	---	---	---	6.7	1.1	2.3	4.6	6.4
MIN	---	---	---	---	---	---	---	1.0	.62	.34	.32	.78
CFSM	---	---	---	---	---	---	---	1.12	.67	.61	.76	1.25
IN.	---	---	---	---	---	---	---	1.29	.75	.70	.88	1.39

SANTEE RIVER BASIN

0214042720 NORTH HARPER CREEK NEAR KAWANA, NC--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.97	2.3	4.0	4.3	2.8	26	5.5	5.8	9.0	2.2	1.0	.67
2	.93	2.5	11	3.8	4.1	16	5.0	5.3	7.3	3.2	1.1	.64
3	.85	1.9	10	3.5	4.0	13	5.1	4.8	6.2	2.6	1.1	.64
4	.83	1.8	8.1	3.2	3.8	11	4.6	4.4	5.6	2.4	.97	.64
5	.82	1.9	6.7	3.1	3.6	9.2	4.3	4.1	4.8	2.2	1.0	4.9
6	.79	2.0	5.6	2.9	3.6	8.2	4.3	3.7	4.2	2.1	1.7	11
7	.78	5.0	5.0	3.0	3.4	8.1	4.7	3.5	3.8	1.9	1.4	26
8	.82	4.4	4.5	2.9	3.5	8.8	6.3	3.3	3.5	2.8	.79	7.6
9	.95	3.5	4.7	2.7	3.2	13	6.3	3.1	3.3	2.2	.64	5.3
10	.95	3.2	5.5	2.7	3.0	12	5.8	2.9	3.1	1.9	.60	4.4
11	1.2	3.2	6.1	2.6	3.0	10	5.4	2.8	2.9	1.7	.55	4.0
12	1.1	3.1	5.2	2.5	3.0	8.4	5.0	2.8	2.8	1.6	.54	4.7
13	2.0	2.8	4.7	2.4	2.9	7.0	4.5	3.4	2.8	1.8	.55	4.1
14	2.6	2.6	4.3	2.4	2.9	6.1	4.4	3.1	2.5	1.7	.52	3.3
15	1.1	2.9	4.0	3.0	2.8	5.6	27	2.5	2.6	1.6	.49	3.0
16	1.0	2.7	3.8	2.7	2.9	5.2	26	2.4	3.7	1.5	.50	3.0
17	1.0	2.5	3.6	2.7	2.7	4.6	23	2.8	3.4	1.4	.47	3.0
18	.97	2.4	3.7	5.0	2.6	4.2	17	2.4	5.5	1.4	.42	2.6
19	.96	2.2	3.3	5.4	2.5	5.3	12	3.0	3.2	1.4	.43	2.9
20	.96	3.9	3.1	4.2	2.5	4.3	9.8	2.6	2.6	1.3	.38	2.6
21	.96	3.0	2.9	3.8	2.5	4.0	7.7	2.4	2.4	1.3	.36	2.2
22	.96	2.7	2.7	3.9	3.4	3.7	6.5	2.3	2.2	1.3	.40	2.0
23	.96	2.7	3.4	3.4	3.2	3.5	10	7.4	2.1	1.2	.65	1.9
24	.96	3.2	19	3.3	2.7	3.2	14	9.1	2.0	1.2	.70	1.8
25	6.3	3.4	11	3.3	2.7	3.3	12	8.0	3.4	1.2	.76	1.7
26	6.9	13	8.5	3.1	2.7	3.0	9.9	13	4.2	1.1	.72	1.7
27	2.7	7.2	7.1	2.9	3.0	2.9	8.9	13	2.6	1.1	.70	1.6
28	2.1	5.3	6.1	2.8	17	2.7	7.7	11	2.5	1.1	.70	1.5
29	1.9	4.5	5.4	2.7	---	2.6	6.7	15	2.3	1.1	.70	1.5
30	1.7	3.9	4.9	3.2	---	5.3	6.0	12	2.2	1.2	.70	1.6
31	1.6	---	4.4	2.9	---	10	---	11	---	1.1	.71	---
TOTAL	48.62	105.7	182.3	100.3	100	230.2	275.4	172.9	108.7	51.8	22.25	112.49
MEAN	1.57	3.52	5.88	3.24	3.57	7.43	9.18	5.58	3.62	1.67	.72	3.75
MAX	6.9	13	19	5.4	17	26	27	15	9.0	3.2	1.7	26
MIN	.78	1.8	2.7	2.4	2.5	2.6	4.3	2.3	2.0	1.1	.36	.64
CFSM	1.25	2.82	4.70	2.59	2.86	5.94	7.34	4.46	2.90	1.34	.57	3.00
IN.	1.45	3.15	5.43	2.98	2.98	6.85	8.20	5.15	3.23	1.54	.66	3.35

WTR YR 1987 TOTAL 1510.64 MEAN 4.14 MAX 27 MIN .36 CFSM 3.31 IN. 45.0

SANTEE RIVER BASIN

0214042720 NORTH HARPER CREEK NEAR KAWANA, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1986 to September 1987.

REMARKS.--Station is part of district's Natural Quality Network for determining the quality of streams relatively unaffected by man.

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

WATER QUALITY DATA, MAY TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
MAY				
27...	1240	5.2	10	0.14
JUL				
30...	1340	0.60	1	0.00
SEP				
04...	1330	7.0	5	0.09

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (NTU)	PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	SOLVED (PER-CENT SATUR-ATION)	HARD-NESS (MG/L AS CACO3)
OCT											
15...	1215	1.1	--	--	--	--	--	--	--	--	--
DEC											
08...	1448	4.4	--	--	--	--	--	--	--	--	--
JAN											
15...	1035	2.9	--	--	--	--	--	--	--	--	--
19...	0837	5.5	8	6.90	6.0	--	--	668	10.2	94	--
19...	0850	5.5	--	--	--	--	--	--	--	--	--
19...	1030	5.5	8	6.40	6.0	--	--	668	9.8	90	--
19...	1050	5.3	--	--	--	--	--	--	--	--	--
MAR											
16...	1240	5.3	--	--	--	--	--	--	--	--	--
APR											
23...	2030	14	--	--	--	--	--	--	--	--	--
23...	2100	31	--	--	--	--	--	--	--	--	--
29...	1200	6.8	--	--	--	--	--	--	--	--	--
MAY											
06...	1225	3.7	--	--	--	--	--	--	--	--	--
26...	1600	27	--	--	--	--	--	--	--	--	--
26...	1630	56	--	--	--	--	--	--	--	--	--
27...	1050	13	--	--	--	--	--	--	--	--	--
JUN											
02...	1230	7.2	--	--	--	--	--	--	--	--	--
22...	1040	2.3	--	--	--	--	--	--	--	--	--
JUL											
07...	1030	2.1	--	--	--	--	--	--	--	--	--
AUG											
18...	1000	0.45	14	5.60	16.5	--	--	683	8.7	100	--
27...	1215	0.86	--	--	--	--	--	--	--	--	--
SEP											
05...	1030	10	--	--	0.0	--	--	--	--	--	--
05...	1100	11	--	--	--	--	--	--	--	--	--
06...	0715	11	13	6.17	15.0	47	9.3	684	8.9	98	3
06...	0730	12	--	--	--	--	--	--	--	--	--
06...	0800	15	--	--	--	--	--	--	--	--	--
06...	0830	13	--	--	--	--	--	--	--	--	--
06...	0900	12	--	--	--	--	--	--	--	--	--
06...	1045	14	--	--	--	--	--	--	--	--	--
06...	1100	18	12	6.00	15.0	--	--	684	9.3	103	--
06...	1125	29	--	--	--	--	--	--	--	--	--
06...	1210	37	13	5.85	15.0	--	--	684	9.7	107	--
06...	1252	25	--	--	--	--	--	--	--	--	--
06...	1309	22	--	--	--	--	--	--	--	--	--
06...	1340	18	--	--	--	--	--	--	--	--	--
06...	1410	19	13	5.88	15.0	27	6.5	684	9.4	104	3
10...	1121	4.4	--	--	--	--	--	--	--	--	--

SANTEE RIVER BASIN

0214042720 NORTH HARPER CREEK NEAR KAWANA, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
SEP											
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
06...	0	0.86	0.20	1.0	38	0.3	0.40	7.8	1.0	0.10	4.7
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	1	0.95	0.22	0.70	28	0.2	0.50	10	0.80	0.10	3.8
10...	--	--	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)
JAN											
15...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	<0.090	<0.010	<0.100	0.040	0.26	0.30	<0.40
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	<0.090	<0.010	<0.100	0.040	0.46	0.50	<0.60
19...	--	--	--	--	--	--	--	--	--	--	--
SEP											
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
06...	14	18	0.02	0.42	--	<0.010	<0.100	0.020	1.8	1.8	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	27	18	0.04	1.4	--	<0.010	<0.100	0.040	0.76	0.80	--
10...	--	--	--	--	--	--	--	--	--	--	--

SANTEE RIVER BASIN

0214042720 NORTH HARPER CREEK NEAR KAWANA, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	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)
JAN											
15...	--	--	--	--	--	--	--	--	--	--	--
19...	<1.8	0.010	<0.010	80	<1	<1	1	<1	<1	20	<5
19...	--	--	--	--	--	--	--	--	--	--	--
19...	<2.6	0.010	<0.010	70	<1	<1	2	<1	<1	20	<5
19...	--	--	--	--	--	--	--	--	--	--	--
SEP											
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
06...	--	0.020	<0.010	1900	<1	<1	3	3	8	1700	5
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	0.020	<0.010	1200	<1	<1	1	<1	3	1100	6
10...	--	--	--	--	--	--	--	--	--	--	--

DATE	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)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
JAN											
15...	--	--	--	--	--	--	--	--	--	--	--
19...	<10	<0.10	<1	<1	<10	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	<10	<0.10	<1	<1	<10	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
AUG											
18...	--	--	--	--	--	<0.1	<1	<0.10	<1.0	<0.010	<0.1
27...	--	--	--	--	--	--	--	--	--	--	--
SEP											
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
06...	120	<0.10	<1	<1	30	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	<0.1	--	<0.10	--	<0.010	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	50	<0.10	<1	<1	<10	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--

SANTEE RIVER BASIN

0214042720 NORTH HARPER CREEK NEAR KAWANA, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	CHLORDANE, TOTAL (UG/L)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL (UG/L)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN TOTAL (UG/L)
AUG											
18...	<0.1	<1.0	<0.010	0.1	<0.010	1.1	<0.010	2.0	<0.01	<0.1	<0.010
27...	--	--	--	--	--	--	--	--	--	--	--
SEP											
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	<0.1	--	<0.010	--	<0.010	--	<0.010	--	<0.01	--	<0.010
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--

DATE	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)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
AUG											
18...	<0.1	<0.010	<0.1	<0.010	<0.1	<0.01	<0.1	<0.010	<0.1	<0.010	<0.1
27...	--	--	--	--	--	--	--	--	--	--	--
SEP											
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	<0.010	--	<0.010	--	<0.01	--	<0.010	--	<0.010	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--

SANTEE RIVER BASIN

0214042720 NORTH HARPER CREEK NEAR KAWANA, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOTAL (UG/L)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)
AUG											
18...	<0.010	0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01
27...	--	--	--	--	--	--	--	--	--	--	--
SEP											
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	<0.010	--	<0.01	--	<0.01	--	<0.01	--	<0.01	--	<0.01
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--

DATE	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE TOTAL (UG/L)	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)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT											
15...	--	--	--	--	--	--	--	--	--	0	0.0
DEC											
08...	--	--	--	--	--	--	--	--	--	0	0.0
JAN											
15...	--	--	--	--	--	--	--	--	--	0	0.0
19...	--	--	--	--	--	--	--	--	--	2	0.03
19...	--	--	--	--	--	--	--	--	--	2	0.03
19...	--	--	--	--	--	--	--	--	--	0	0.0
19...	--	--	--	--	--	--	--	--	--	0	0.0
MAR											
16...	--	--	--	--	--	--	--	--	--	0	0.0
APR											
23...	--	--	--	--	--	--	--	--	--	52	2.0
23...	--	--	--	--	--	--	--	--	--	86	7.2
29...	--	--	--	--	--	--	--	--	--	31	0.57
MAY											
06...	--	--	--	--	--	--	--	--	--	0	0.0
26...	--	--	--	--	--	--	--	--	--	6	0.44
26...	--	--	--	--	--	--	--	--	--	11	1.7
27...	--	--	--	--	--	--	--	--	--	3	0.11
JUN											
02...	--	--	--	--	--	--	--	--	--	2	0.04
22...	--	--	--	--	--	--	--	--	--	2	0.01
JUL											
07...	--	--	--	--	--	--	--	--	--	1	0.01
AUG											
18...	0.9	<0.01	<0.1	<0.1	<1.00	<1	<10	<0.01	<0.1	1	0.00
27...	--	--	--	--	--	--	--	--	--	1	0.00
SEP											
05...	--	--	--	--	--	--	--	--	--	252	6.8
05...	--	--	--	--	--	--	--	--	--	120	3.6
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	44	1.4
06...	--	--	--	--	--	--	--	--	--	105	4.3
06...	--	--	--	--	--	--	--	--	--	63	2.2
06...	--	--	--	--	--	--	--	--	--	43	1.4
06...	--	--	--	--	--	--	--	--	--	88	3.3
06...	--	<0.01	--	<0.1	--	<1	--	<0.01	--	196	9.5
06...	--	--	--	--	--	--	--	--	--	339	27
06...	--	--	--	--	--	--	--	--	--	224	22
06...	--	--	--	--	--	--	--	--	--	97	6.5
06...	--	--	--	--	--	--	--	--	--	74	4.4
06...	--	--	--	--	--	--	--	--	--	51	2.5
06...	--	--	--	--	--	--	--	--	--	57	3.0
10...	--	--	--	--	--	--	--	--	--	0	0.0

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 1,002.10 ft above National Vertical Datum of 1929. from topographic map.

REMARKS.--No estimated daily discharges. Records good below 1500 ft^3/s and fair above.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 7310 ft^3/s March 1, 1986, gage height, 14.01 ft; minimum, 75 ft^3/s July 23, Aug. 3, 4, 1986.

REVISIONS.--The maximum discharges reported for water years 1985 and 1986 have been revised to 6,210 ft^3/s, Aug. 17, 1985, gage height 12.91 ft, 5,320 ft^3/s, November 2, 1985, gage height 11.90 ft, and 3,520 ft^3/s, Nov. 4, 1985, gage height 8.83 ft, superseding figures published in the report for 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	1830	3,140	8.09	Apr. 15	1530	2,650	6.59
Mar. 1	0700	*7,310	*14.01	Apr. 24	0530	3,040	7.56

Minimum discharge, 86 ft^3/s Oct. 8, Sept. 4; minimum gage height, 1.64 ft Oct. 8; minimum daily, 88 ft^3/s Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	105	107	272	312	341	4910	725	618	419	215	132	99
2	108	155	974	323	393	2090	567	582	365	253	291	96
3	107	136	877	280	506	1380	576	544	321	238	175	89
4	98	116	549	260	460	1020	639	525	337	336	148	88
5	94	115	411	248	397	816	522	493	299	527	135	150
6	91	126	334	237	355	699	518	472	269	424	139	529
7	89	190	288	232	332	628	540	453	255	272	342	941
8	89	424	264	234	311	594	530	433	244	261	207	538
9	93	246	273	223	288	635	518	410	233	244	175	273
10	107	189	341	220	265	691	481	394	225	257	155	215
11	108	169	467	217	260	562	454	351	223	470	142	519
12	109	173	527	206	255	506	428	304	219	283	138	342
13	157	156	398	199	244	464	409	306	222	237	136	331
14	233	141	328	194	237	429	445	313	236	248	133	252
15	170	140	297	205	239	402	1490	306	224	205	127	210
16	126	143	271	208	249	387	2230	318	240	195	128	192
17	113	134	252	213	270	367	2160	282	459	183	133	190
18	108	128	258	366	259	347	1440	298	316	176	126	177
19	105	122	235	678	248	451	1040	306	550	171	127	165
20	104	140	217	552	254	392	865	381	309	164	117	183
21	103	202	205	419	309	357	763	313	282	157	106	161
22	101	155	195	408	380	335	690	293	266	151	102	150
23	100	143	192	348	594	319	709	276	241	147	100	143
24	100	149	1680	303	464	309	2190	730	227	154	97	139
25	141	153	1340	313	375	329	1350	620	549	146	97	137
26	560	1100	712	324	341	327	1090	418	1070	139	101	134
27	202	958	532	275	395	310	913	460	507	134	113	132
28	139	459	438	277	1600	325	812	400	326	129	101	132
29	118	334	377	259	---	298	729	438	264	124	99	136
30	109	273	339	279	---	464	674	444	233	134	94	140
31	102	---	305	375	---	1160	---	400	---	142	94	---
TOTAL	4089	7176	14148	9187	10621	22303	26497	12881	9930	6916	4310	6983
MEAN	132	239	456	296	379	719	883	416	331	223	139	233
MAX	560	1100	1680	678	1600	4910	2230	730	1070	527	342	941
MIN	89	107	192	194	237	298	409	276	219	124	94	88
CFSM	.66	1.19	2.27	1.47	1.89	3.58	4.39	2.07	1.65	1.11	.69	1.16
IN.	.76	1.33	2.62	1.70	1.97	4.13	4.90	2.38	1.84	1.28	.80	1.29

CAL YR 1986 TOTAL 84214 MEAN 231 MAX 1680 MIN 76 CFSM 1.15 IN. 15.6
WTR YR 1987 TOTAL 135041 MEAN 370 MAX 4910 MIN 88 CFSM 1.84 IN. 25.0

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.

WATER-DISCHARGE RECORDS

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, non-recording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good except for those above 100 ft^3/s, which are fair.

AVERAGE DISCHARGE.--35 years, 38.1 ft^3/s, 18.35 in/yr.

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 RECORD.--Maximum discharge, 4,850 ft^3/s Aug. 10, 1970, gage height, 15.68 ft; minimum, 2.9 ft^3/s Sept. 20, 21, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 550 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	1400	986	7.56	Apr. 24	0130	1,260	8.66
Feb. 28	1530	880	7.05	Apr. 24	1500	569	5.44
Mar. 1	0200	*2,970	*13.18	Apr. 25	0800	574	5.47

Minimum discharge, 7.8 ft^3/s Oct. 6, 7, 8; minimum daily, 8.2 ft^3/s Oct. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	24	28	37	54	1170	81	69	39	33	21	13
2	11	33	54	38	75	220	71	66	39	62	21	12
3	10	21	53	34	79	141	69	64	37	61	20	11
4	10	18	40	33	70	111	72	64	59	89	18	11
5	9.4	17	33	32	58	95	66	63	42	69	18	21
6	8.3	16	30	32	51	86	62	62	37	48	20	23
7	8.2	28	27	31	47	81	60	61	35	46	19	72
8	8.5	35	26	31	43	79	57	55	34	47	19	35
9	9.8	25	29	30	39	83	55	51	34	38	18	22
10	10	21	32	30	37	82	53	50	33	35	16	31
11	10	24	49	29	36	75	52	49	32	33	16	67
12	11	26	55	28	35	72	51	48	32	32	16	36
13	17	23	42	27	33	69	50	51	35	36	15	33
14	20	20	35	27	33	66	49	49	33	34	15	26
15	13	21	32	27	33	64	139	51	31	32	16	22
16	11	20	29	26	34	62	118	49	35	31	17	21
17	10	19	27	26	34	60	98	46	47	28	15	20
18	9.8	18	26	43	33	59	78	44	54	28	14	18
19	9.7	17	24	77	35	76	69	42	37	27	17	18
20	9.6	22	23	61	40	67	63	42	37	26	13	19
21	9.4	22	22	48	44	62	59	42	37	25	12	17
22	9.1	20	21	47	56	60	57	42	35	24	12	16
23	9.1	19	21	41	74	57	66	48	34	23	12	16
24	9.0	19	345	38	56	55	529	49	32	22	11	16
25	15	19	122	38	48	62	323	43	110	22	12	15
26	32	69	64	39	44	60	147	41	84	22	13	15
27	16	57	50	36	47	58	102	41	65	21	12	15
28	14	39	44	35	453	58	87	39	43	21	11	16
29	13	32	39	35	---	55	78	46	37	21	11	16
30	12	28	36	44	---	117	73	44	34	21	11	17
31	12	---	33	58	---	113	---	39	---	20	12	---
TOTAL	367.9	772	1491	1158	1721	3575	2934	1550	1273	1077	473	690
MEAN	11.9	25.7	48.1	37.4	61.5	115	97.8	50.0	42.4	34.7	15.3	23.0
MAX	32	69	345	77	453	1170	529	69	110	89	21	72
MIN	8.2	16	21	26	33	55	49	39	31	20	11	11
CFSM	.42	.91	1.71	1.32	2.18	4.09	3.47	1.77	1.50	1.23	.54	.82
IN.	.49	1.02	1.97	1.53	2.27	4.72	3.87	2.04	1.68	1.42	.62	.91

CAL YR 1986 TOTAL 8328.1 MEAN 22.8 MAX 345 MIN 4.2 CFSM .81 IN. 11.0
WTR YR 1987 TOTAL 17081.9 MEAN 46.8 MAX 1170 MIN 8.2 CFSM 1.66 IN. 22.5

SANTEE RIVER BASIN

02142000 LOWER LITTLE RIVER NEAR ALL HEALING SPRINGS, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/29	1135	WATER	0.1	.98	13	61	6.20	12.0		10.6	1200
86/11/18	1120	WATER	0.1	1.11	18	40	6.30	11.0	4.8	10.5	
86/12/10	1120	WATER	0.1	1.38	34	46	6.20	11.0		10.4	
87/01/15	1245	WATER	0.1			40	6.20	9.0		11.7	
87/01/15	1255	WATER	0.1	1.22	27						
87/02/23	1230	WATER	0.1	1.83	70	37	6.10	7.0	22.0	12.0	
87/03/12	1310	WATER	0.1	1.57	71	36	6.00	9.0		11.8	
87/04/09	1120	WATER	0.1	1.51	55	38	6.40	10.0		11.5	
87/05/13	1130	WATER	0.1	1.49	51	40	6.60	16.0	40.0	9.2	
87/06/15	1130	WATER	0.1	1.29	32	38	6.70	20.0		9.4	
87/07/20	1120	WATER	0.1	1.24	27	37	6.60	20.0		8.8	
87/08/17	1030	WATER	0.1	1.02	16	42	6.70	20.0	7.3	8.5	
87/09/17	1130	WATER	0.1	1.11	21	42	6.50	20.0		8.7	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/29	1135	WATER	0.1	14	7	78	.16	.030	.100	.060	.020
86/11/18	1120	WATER	0.1	14	5	42					
86/12/10	1120	WATER	0.1	12							
87/01/15	1245	WATER	0.1	8							
87/02/23	1230	WATER	0.1	9	28	75					
87/03/12	1310	WATER	0.1	9							
87/04/09	1120	WATER	0.1	11							
87/05/13	1130	WATER	0.1	18	24	69					
87/06/15	1130	WATER	0.1	12							
87/07/20	1120	WATER	0.1	13							
87/08/17	1030	WATER	0.1	12	5	15					
87/09/17	1130	WATER	0.1	46							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/02/23	1230	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/17	1030	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10

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.

WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Records fair.

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 RECORD.--Maximum discharge, 1,200 ft^3/s Mar. 1, 1987, gage height 7.96 ft, from rating curve extended above 330 ft^3/s; minimum, 0.67 ft^3/s Aug. 2, 3,1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	1845	497	6.07	June 25	0415	200	4.28
Feb. 28	1615	514	6.14	July 10	2145	194	4.23
Mar. 1	0245	*1,200	*7.96	Sept. 10	0015	160	3.91

Minimum discharge 1.2 ft^3/s Oct. 5, 6, 7, 8; minimum daily 1.3 ft^3/s Oct. 6, 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	5.9	5.3	10	20	376	18	8.0	3.9	4.3	2.9	2.2
2	1.6	5.4	12	19	23	36	12	7.3	4.1	9.9	2.9	1.9
3	1.5	4.8	12	14	26	19	11	7.1	3.9	5.3	3.0	1.9
4	1.5	4.4	7.7	10	21	14	11	7.1	6.0	5.5	2.7	1.8
5	1.4	4.2	6.0	8.2	15	10	9.0	6.8	5.1	7.9	2.7	4.5
6	1.3	4.0	5.1	6.8	12	7.8	8.4	6.7	3.9	4.8	5.5	3.8
7	1.3	27	4.7	6.3	9.8	6.6	7.8	6.4	3.7	4.2	4.3	22
8	1.3	23	4.8	5.9	8.4	7.1	7.3	7.0	3.4	3.9	3.5	12
9	1.7	11	5.3	5.4	7.1	10	7.2	6.2	3.5	3.7	3.1	13
10	2.0	7.0	7.8	5.4	6.8	8.8	7.0	6.3	3.4	27	2.9	35
11	1.8	12	23	5.1	6.4	6.7	6.9	5.9	3.3	22	2.8	35
12	1.9	16	21	4.8	6.1	6.0	7.0	5.7	3.6	8.7	2.8	12
13	4.4	8.3	12	4.7	5.8	5.4	6.8	10	3.8	8.1	2.6	8.1
14	9.1	6.2	8.1	4.7	5.8	5.2	6.7	11	3.7	6.9	2.5	5.6
15	3.3	7.1	6.8	4.7	5.7	4.9	18	10	3.3	5.6	2.8	5.0
16	2.7	6.4	5.9	4.4	6.3	4.9	48	9.8	3.5	5.3	3.1	4.6
17	2.4	5.6	5.3	4.5	6.0	4.6	26	9.3	3.7	4.7	2.8	4.1
18	2.3	5.1	4.9	15	6.7	4.7	19	6.9	3.6	4.4	2.4	3.6
19	2.3	4.7	4.5	45	7.2	19	14	6.1	3.7	4.4	2.4	3.3
20	2.3	6.5	4.2	21	7.5	10	11	5.9	3.6	3.9	2.2	3.4
21	2.2	6.2	4.0	13	6.8	7.2	9.2	5.4	3.3	3.7	2.1	3.1
22	2.2	5.3	3.8	17	7.4	6.2	7.8	5.1	4.2	3.6	2.0	2.9
23	2.2	5.0	3.7	11	16	5.8	7.4	4.8	3.9	3.5	1.9	2.8
24	2.4	4.7	129	9.3	10	5.6	47	4.5	3.3	3.4	1.8	2.7
25	5.6	4.5	51	10	8.2	7.3	33	4.3	50	3.4	1.9	2.7
26	11	6.8	22	10	7.1	6.7	21	4.1	14	3.7	2.1	2.7
27	4.9	6.8	14	8.3	23	6.6	15	6.9	8.4	3.4	2.1	2.7
28	4.1	5.7	10	7.5	270	8.0	11	4.7	6.0	3.4	2.0	3.1
29	3.9	5.1	8.2	7.0	---	6.6	9.5	4.3	5.0	3.1	1.9	3.1
30	3.7	5.0	7.1	16	---	31	8.9	4.0	4.4	3.2	1.7	5.7
31	3.5	---	6.2	26	---	38	---	4.0	---	3.1	1.9	---
TOTAL	93.4	229.7	425.4	340.0	561.1	695.7	431.9	201.6	179.2	188.0	81.3	214.3
MEAN	3.01	7.66	13.7	11.0	20.0	22.4	14.4	6.50	5.97	6.06	2.62	7.14
MAX	11	27	129	45	270	376	48	11	50	27	5.5	35
MIN	1.3	4.0	3.7	4.4	5.7	4.6	6.7	4.0	3.3	3.1	1.7	1.8
CFSM	.42	1.07	1.91	1.53	2.79	3.13	2.01	.91	.83	.84	.37	.99
IN.	.48	1.19	2.20	1.76	2.91	3.60	2.24	1.04	.93	.97	.42	1.11

CAL YR 1986 TOTAL 1805.1 MEAN 4.95 MAX 129 MIN .82 CFSM .69 IN. 9.35
WTR YR 1987 TOTAL 3641.6 MEAN 9.98 MAX 376 MIN 1.3 CFSM 1.39 IN. 18.9

SANTEE RIVER BASIN

0214253830 NORWOOD CREEK NEAR TROUTMAN, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/02	1145	WATER	0.1	1.29	2	79	6.60	20.0		7.9	340
86/11/04	1100	WATER	0.1	1.43	4	60	6.50	13.0	7.5	9.9	
86/12/11	1145	WATER	0.1	1.70	14						
86/12/11	1445	WATER	0.1			59	6.30	9.0		10.2	
87/01/28	1600	WATER	0.1	1.51	8						
87/02/26	1100	WATER	0.1	1.50	7	54	5.90	6.0	6.7	12.9	
87/03/26	1615	WATER	0.1	1.76	6	52	6.60	15.0		9.1	
87/04/27	1600	WATER	0.1	1.82	14	47	6.60	17.0		9.7	
87/05/20	1330	WATER	0.1	1.50	6	46	6.60	18.0	11.0	7.0	
87/06/24	1020	WATER	0.1	1.39	4	49	7.30	21.0		6.8	
87/07/28	1030	WATER	0.1	1.38	4	54	7.50	22.0		8.0	
87/08/19	1140	WATER	0.1	1.32	3	57	6.60	22.0	12.0	6.4	
87/09/21	1110	WATER	0.1	1.38	3	55	6.20	17.0		8.1	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/02	1145	WATER	0.1	25	8	62					
86/11/04	1100	WATER	0.1	22	9	58					
86/12/11	1445	WATER	0.1	11							
87/02/26	1100	WATER	0.1	18	1	51					
87/03/26	1615	WATER	0.1	20							
87/04/27	1600	WATER	0.1	19							
87/05/20	1330	WATER	0.1	20	36	83					
87/06/24	1020	WATER	0.1	22							
87/07/28	1030	WATER	0.1	21							
87/08/19	1140	WATER	0.1	23	11	43					
87/09/21	1110	WATER	0.1	24							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/04	1100	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/26	1100	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/20	1330	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/19	1140	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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 left 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..

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Datum of gage is 648.7 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Occasional diversions for irrigation by upstream golf course.

AVERAGE DISCHARGE.--22 years, 18.1 ft^3/s, 14.99 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,300 ft^3/s June 18, 1982, gage height, 11.70 ft; minimum, 0.35 ft^3/s Sept. 26, Oct. 2, 3, 1986 and Sept. 3, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 1	1545	530	6.13	May 13	1745	575	6.43
Jan.19	1045	635	6.82	Sept. 7	2215	1,180	9.32
Mar. 1	0430	1,430	9.92	Sept.11	0400	638	8.03
Apr.15	2200	*1,760	*10.50	Sept.12	2000	589	7.63

Minimum discharge, 0.35 ft^3/s Oct. 2, 3 and Sept. 3; minimum daily, 0.43 ft^3/s Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.55	8.8	7.9	177	30	e300	44	10	4.0	2.2	.96	.52
2	.47	6.6	40	45	30	e50	27	15	4.2	3.2	.92	.47
3	.43	2.7	17	18	29	e25	18	15	3.6	2.3	.80	.47
4	.45	2.3	8.4	12	20	e19	17	11	5.8	4.3	.72	1.7
5	.50	2.2	6.5	9.5	13	e16	14	11	5.8	6.3	.88	9.7
6	.54	2.0	5.5	8.4	11	e14	12	9.9	3.5	13	1.1	5.4
7	.51	1.8	4.9	7.9	11	e13	11	9.5	3.1	3.6	16	263
8	.53	3.1	5.1	7.2	9.9	e50	10	9.1	2.9	2.7	2.5	124
9	.76	1.9	6.3	7.1	8.7	e35	9.8	8.6	2.8	2.3	1.5	10
10	1.1	1.7	14	7.2	8.2	e20	9.3	8.3	2.7	2.2	1.2	8.1
11	1.0	2.8	41	6.7	8.1	e15	9.0	8.0	2.5	2.2	.99	176
12	.97	22	23	6.3	8.1	e16	8.8	8.0	2.3	2.0	.99	177
13	2.3	6.5	11	6.0	e7.2	e13	8.5	93	2.7	2.4	.87	98
14	17	3.4	8.1	5.8	e7.5	e12	8.2	22	2.8	2.4	.75	15
15	1.6	7.6	7.2	6.0	e8.3	e11	460	11	2.7	1.8	1.0	7.9
16	1.0	5.6	6.5	5.9	e9.6	e10	325	10	3.6	1.7	2.2	5.9
17	.90	3.5	6.1	6.4	e14	e10	44	7.5	2.9	1.5	1.4	4.7
18	.85	3.1	5.8	40	e28	e17	29	6.7	2.9	1.6	.87	3.9
19	.86	2.6	5.3	233	e18	e55	23	6.2	3.6	1.5	.76	3.4
20	.84	58	5.0	41	e13	e25	18	6.0	3.1	1.3	.68	3.4
21	.88	15	4.7	21	e11	e15	15	6.0	3.1	1.1	.59	3.1
22	.82	6.8	4.4	23	e20	e11	14	5.5	2.6	1.2	.56	2.8
23	.83	5.0	4.6	32	e27	e10	12	5.2	2.4	1.1	.66	2.6
24	.82	4.2	102	27	e13	e10	83	4.9	2.2	.95	.61	2.5
25	6.1	3.9	31	46	e11	e25	28	4.5	25	1.1	.65	2.5
26	23	11	13	50	e10	e15	20	4.2	6.0	1.1	.69	2.3
27	3.1	9.8	9.7	27	e100	e19	15	5.4	4.4	1.1	.61	2.3
28	1.6	5.6	8.2	19	e400	e27	13	4.3	2.9	2.1	.65	2.3
29	1.5	4.5	7.3	20	---	e17	12	4.2	2.5	1.2	.80	2.2
30	1.4	4.2	6.9	77	---	e120	11	4.0	2.5	1.1	.98	28
31	1.3	---	6.3	51	---	e80	---	3.7	---	1.1	.71	---
TOTAL	74.51	218.2	432.7	1049.4	884.6	1075	1328.6	337.7	121.1	73.65	44.60	969.16
MEAN	2.40	7.27	14.0	33.9	31.6	34.7	44.3	10.9	4.04	2.38	1.44	32.3
MAX	23	58	102	233	400	300	460	93	25	13	16	263
MIN	.43	1.7	4.4	5.8	7.2	10	8.2	3.7	2.2	.95	.56	.47
CFSM	.15	.44	.85	2.06	1.93	2.11	2.70	.66	.25	.14	.09	1.97
IN.	.17	.49	.98	2.38	2.01	2.44	3.01	.77	.27	.17	.10	2.20

CAL YR 1986 TOTAL 2522.98 MEAN 6.91 MAX 150 MIN .43 CFSM .42 IN. 5.72
WTR YR 1987 TOTAL 6609.16 MEAN 18.1 MAX 460 MIN .43 CFSM 1.10 IN. 15.0

e Estimated

SANTEE RIVER BASIN

02142900 LONG CREEK NEAR PAW CREEK, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/14	1110	WATER	0.1	1.62	16	105	6.60	19.0		7.2	74000
86/11/05	1245	WATER	0.1	1.21	2	195		14.0	4.5	7.8	
86/12/04	1330	WATER	0.1	1.48	8	137	6.50	8.0		11.3	
87/01/07	1240	WATER	0.1	1.47	8	124	6.50	5.0		12.9	
87/02/24	1150	WATER	0.1	.00	13	101	6.30	6.0	22.0	13.6	
87/03/10	1250	WATER	0.1	.00	20	85	6.20	9.0		11.4	
87/04/02	1300	WATER	0.1	1.71	26	99	6.30	11.0		11.6	
87/05/28	1050	WATER	0.1	1.34	4	148	7.00	21.0	9.5	7.8	
87/06/11	1100	WATER	0.1	1.18	2	154	7.00	20.0		7.3	
87/07/13	1540	WATER	0.1	1.22	3	165	7.30	26.0		7.3	
87/08/24	1130	WATER	0.1	.99	1	184	7.00	23.0	21.0	4.4	
87/09/15	1005	WATER	0.1	1.48	8	119	6.70	20.0		7.8	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/14	1110	WATER	0.1	30	210	430	.40	.230	.700	.650	.170
86/11/05	1245	WATER	0.1	58	1	150					
86/12/04	1330	WATER	0.1	37							
87/01/07	1240	WATER	0.1	38							
87/02/24	1150	WATER	0.1	28	9	120					
87/03/10	1250	WATER	0.1	25							
87/04/02	1300	WATER	0.1	29							
87/05/28	1050	WATER	0.1	59	13	140					
87/06/11	1100	WATER	0.1	62							
87/07/13	1540	WATER	0.1	67							
87/08/24	1130	WATER	0.1	83	10	180					
87/09/15	1005	WATER	0.1	41							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/05	1245	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/24	1150	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/28	1050	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/24	1130	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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 upsteam mill. City of Morganton diverted 2.0 ft^3/s for municipal water supply, of which an average of 2.6 ft^3/s was returned as treated effluent into Catawba River.

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

AVERAGE DISCHARGE.--51 years (1925-31, 1942-87), 134 ft^3/s, 21.87 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,300 ft^3/s Oct. 2, 1929 gage height, 18.40 ft, site then in use, 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, 3 ft^3/s Dec. 20, 1942; minimum daily, 4 ft^3/s Nov. 15, Dec. 20, 1942.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	1400	3,820	8.76	June 25	0800	5,420	11.15
Mar. 1	0430	*9,220	*15.80	June 26	0430	6,880	12.97

Minimum discharge, 10 ft^3/s Oct. 17, 18, 19, 24, 25, 30, 31, Nov. 1; minimum gage height, 0.81 ft, July 9; minimum daily, 11 ft^3/s Oct. 10, 18, 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	32	104	105	198	4650	321	158	98	125	57	66
2	12	65	459	138	210	901	244	158	106	143	64	40
3	30	56	382	125	268	409	255	155	108	121	77	50
4	12	54	204	110	282	367	389	151	143	100	72	65
5	12	62	151	101	217	337	316	146	119	114	59	201
6	30	43	122	99	188	233	264	137	105	108	57	163
7	29	47	104	98	175	214	234	140	99	126	74	305
8	18	162	109	101	164	210	214	136	72	236	72	266
9	31	108	108	104	152	233	199	133	94	172	71	139
10	11	88	109	105	140	248	189	128	90	36	50	87
11	12	70	168	110	125	201	183	124	91	123	61	62
12	15	67	239	107	139	209	177	123	90	109	56	74
13	71	82	174	103	136	186	175	112	89	66	62	111
14	94	44	136	96	122	178	169	163	91	107	54	85
15	72	60	125	94	118	171	566	142	88	94	48	70
16	48	65	116	90	128	167	418	165	85	82	50	70
17	48	75	96	91	131	160	382	130	85	83	62	131
18	11	71	97	160	130	155	283	123	96	82	53	88
19	11	58	75	451	131	219	234	120	230	77	54	75
20	11	50	67	366	128	197	210	141	101	73	64	68
21	43	63	97	304	149	184	197	118	125	73	17	56
22	41	63	99	196	182	173	188	129	125	72	20	72
23	30	63	79	164	339	165	206	120	109	63	35	60
24	29	61	1710	100	237	161	285	115	101	71	60	43
25	18	63	647	22	185	188	221	105	1210	71	44	58
26	284	475	264	155	162	165	204	113	2600	47	40	34
27	118	404	190	135	254	42	189	164	573	69	51	57
28	86	181	158	132	2710	206	182	113	216	77	39	48
29	65	137	138	132	---	183	174	139	160	61	43	59
30	44	110	128	127	---	311	175	117	142	55	37	73
31	32	---	125	206	---	520	---	108	---	62	60	---
TOTAL	1380	2979	6780	4427	7500	11943	7443	4126	7441	2898	1663	2776
MEAN	44.5	99.3	219	143	268	385	248	133	248	93.5	53.6	92.5
MAX	284	475	1710	451	2710	4650	566	165	2600	236	77	305
MIN	11	32	67	22	118	42	169	105	72	36	17	34
CFSM	.54	1.19	2.63	1.72	3.22	4.63	2.98	1.60	2.98	1.12	.64	1.11
IN.	.62	1.33	3.03	1.98	3.35	5.34	3.33	1.84	3.33	1.30	.74	1.24

CAL YR 1986 TOTAL 30929 MEAN 84.7 MAX 1710 MIN 11 CFSM 1.02 IN. 13.8
WTR YR 1987 TOTAL 61356 MEAN 168 MAX 4650 MIN 11 CFSM 2.02 IN. 27.4

SANTEE RIVER BASIN

02143000 HENRY FORK NEAR HENRY RIVER, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/06	1420	WATER	0.1	1.27	53	39	6.40	22.0		8.2	120
86/11/04	1345	WATER	0.1	1.26	52	29	6.30	16.0	6.2	9.5	
87/02/26	1330	WATER	0.1	1.75	160	24	6.00	7.0	2.6	12.4	
87/05/27	1130	WATER	0.1	2.00	172						
87/08/25	1435	WATER	0.1	.92	20	29	6.50	24.0	5.4	7.4	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/06	1420	WATER	0.1	10	1	56					
86/11/04	1345	WATER	0.1	8	10	28	.04	.010	.100	.010	.010K
87/02/26	1330	WATER	0.1	6	1K	19	.16	.010	.200	.010	.010K
87/08/25	1435	WATER	0.1	12	2	41	.14	.010	.100K	.010	.010K

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/04	1345	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/26	1330	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/25	1435	WATER	0.1	10K	10K	25K	51	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Records good.

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

AVERAGE DISCHARGE.--26 years, 50.2 ft^3/s, 26.53 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,220 ft^3/s Oct. 17, 1975, gage height, 19.74 ft, from rating curve extended above 3,400 ft^3/s on basis of contracted-opening measurement of peak flow; minimum, 6.1 ft^3/s July 20, 21, 1986; gage height, 1.50 ft.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	1230	1,150	6.92	June 18	1930	729	5.18
Mar. 1	0130	*3,160	*13.54	June 26	0030	617	4.73

Minimum discharge, 10 ft^3/s Oct. 6, 7, 8; minimum daily, 10 ft^3/s, Oct. 6, 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	27	51	44	68	1110	104	51	42	31	15	14
2	11	38	196	43	82	226	82	50	41	37	16	13
3	11	32	131	37	123	134	86	48	37	32	17	24
4	11	27	72	36	102	104	110	48	40	30	15	17
5	11	25	52	35	73	87	92	48	37	29	14	50
6	10	23	42	35	61	77	84	46	35	29	15	41
7	10	39	38	36	57	72	77	45	33	27	17	172
8	10	61	36	40	53	73	69	43	32	29	19	78
9	13	45	45	40	48	85	63	42	31	25	26	34
10	14	35	76	42	43	90	59	41	31	23	16	30
11	13	38	100	44	41	75	58	40	32	23	15	28
12	14	46	108	40	40	69	55	42	31	22	15	34
13	31	39	66	38	39	64	53	61	31	22	15	50
14	33	32	50	36	38	61	53	56	32	27	14	30
15	18	34	45	36	38	59	134	49	29	22	14	23
16	15	36	40	35	43	57	131	66	36	22	15	21
17	13	34	38	35	39	54	124	50	50	21	16	32
18	13	31	37	70	38	53	95	45	112	21	14	23
19	13	28	35	188	38	73	79	66	105	20	13	20
20	12	34	33	107	39	65	70	74	51	19	12	19
21	12	36	31	69	43	61	65	53	39	18	11	18
22	12	32	30	69	57	57	62	47	58	18	11	17
23	12	30	32	53	95	54	63	44	65	17	11	16
24	12	28	500	46	79	53	80	42	38	17	11	15
25	51	30	158	49	60	66	72	40	64	16	11	15
26	119	206	79	51	52	64	65	39	243	16	12	15
27	39	132	59	45	99	67	61	58	92	16	11	14
28	26	62	50	44	731	75	58	90	51	17	12	14
29	22	45	45	42	---	69	55	64	39	16	18	15
30	20	39	42	52	---	104	53	50	34	15	14	20
31	18	---	38	85	---	160	---	44	---	16	13	---
TOTAL	630	1344	2355	1622	2319	3518	2312	1582	1591	693	448	912
MEAN	20.3	44.8	76.0	52.3	82.8	113	77.1	51.0	53.0	22.4	14.5	30.4
MAX	119	206	500	188	731	1110	134	90	243	37	26	172
MIN	10	23	30	35	38	53	53	39	29	15	11	13
CFSM	.79	1.74	2.96	2.04	3.22	4.42	3.00	1.99	2.06	.87	.56	1.18
IN.	.91	1.95	3.41	2.35	3.36	5.09	3.35	2.29	2.30	1.00	.65	1.32

CAL YR 1986 TOTAL 11006 MEAN 30.2 MAX 500 MIN 6.7 CFSM 1.17 IN. 15.9
WTR YR 1987 TOTAL 19326 MEAN 52.9 MAX 1110 MIN 10 CFSM 2.06 IN. 28.0

SANTEE RIVER BASIN

02143040 JACOB FORK AT RAMSEY, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/06	1510	WATER	0.1	1.58	10	33	6.40	20.0		9.4	70
86/11/04	1435	WATER	0.1	1.86	26	23	6.30	14.0	1.7	10.3	
86/12/11	1300	WATER	0.1	2.47	103	18	6.00	10.0	7.6	10.9	
87/01/28	1400	WATER	0.1	2.05	44	20	5.80	2.0	1.0K	12.8	
87/02/26	1415	WATER	0.1	2.11	51	16	5.90	6.0	7.6	12.8	
87/03/26	1300	WATER	0.1	2.21	64	24	6.40	12.0	1.4	11.4	
87/04/27	1330	WATER	0.1	2.18	60	22	6.60	13.0	1.9	10.8	
87/05/27	1320	WATER	0.1	2.16	57	21	6.40	18.0	6.5	9.2	
87/06/24	1430	WATER	0.1	2.06	38	20	6.40	22.0	5.0	9.4	
87/07/28	1430	WATER	0.1	1.79	16	16	6.40	24.0	4.3	9.0	
87/08/25	1330	WATER	0.1	1.68	11	27	6.40	21.0	2.5	9.1	
87/09/21	1430	WATER	0.1	1.80	17	24	6.30	19.0	3.0	9.6	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/06	1510	WATER	0.1	8	1K	42					
86/11/04	1435	WATER	0.1	8	3	21					
86/12/11	1300	WATER	0.1	5							
87/01/28	1400	WATER	0.1	4							
87/02/26	1415	WATER	0.1	5	2	21					
87/03/26	1300	WATER	0.1	8							
87/04/27	1330	WATER	0.1	7							
87/05/27	1320	WATER	0.1	6	33	51					
87/06/24	1430	WATER	0.1	6							
87/07/28	1430	WATER	0.1	8							
87/08/25	1330	WATER	0.1	10	2	34					
87/09/21	1430	WATER	0.1	9							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/04	1435	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/26	1415	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/27	1320	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/25	1330	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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, by barometer.

REMARKS.--No estimated daily discharges. Records good.

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

AVERAGE DISCHARGE.--36 years, 89.2 ft^3/s, 17.50 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,450 ft^3/s Aug. 10, 1970, gage height, 10.61 ft; minimum, 1.7 ft^3/s July 21, 1986.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 1	1030	*4,550	*7.70	No other peaks greater than base discharge.			

Minimum discharge, 9.2 ft^3/s Aug. 24, gage height, 0.67 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	37	89	128	186	3740	200	80	51	30	18	14
2	20	45	174	155	199	815	137	109	52	41	24	13
3	18	37	146	118	209	344	128	89	48	36	21	13
4	18	32	99	98	155	235	184	82	47	51	23	14
5	17	31	83	87	120	172	129	107	59	157	20	23
6	15	31	77	85	106	137	112	82	47	57	17	33
7	14	104	65	81	97	125	111	76	42	43	30	58
8	16	131	65	81	91	146	108	70	41	40	30	64
9	18	74	78	77	88	183	100	67	38	34	31	76
10	23	54	105	77	84	148	94	65	37	30	25	33
11	21	104	216	74	81	118	94	61	39	110	19	31
12	22	149	200	70	81	112	92	75	44	41	19	27
13	28	89	122	68	79	107	91	75	41	35	19	33
14	80	62	92	65	77	97	93	71	43	34	21	25
15	31	76	83	59	78	95	127	66	40	31	20	22
16	25	81	76	59	82	95	142	63	35	30	22	22
17	23	67	70	60	88	94	149	60	45	28	21	22
18	22	61	68	220	86	92	129	57	41	28	19	23
19	22	52	64	617	94	275	107	55	176	27	15	24
20	22	74	59	241	93	150	96	58	67	26	15	25
21	21	89	55	154	90	115	93	61	58	37	14	21
22	22	64	55	146	91	103	87	57	51	24	11	20
23	21	60	55	131	142	98	82	57	51	21	10	19
24	21	58	659	106	113	93	327	54	54	20	9.7	19
25	39	55	633	115	100	153	174	51	70	19	13	19
26	198	141	186	141	91	144	117	49	66	19	14	19
27	76	167	134	117	553	114	101	122	69	17	10	19
28	48	102	108	102	1500	176	90	64	45	26	9.9	19
29	35	81	93	98	---	123	82	57	34	22	18	20
30	33	71	85	203	---	299	81	62	31	18	18	87
31	30	---	76	305	---	387	---	51	---	21	15	---
TOTAL	1019	2279	4170	4138	4854	9085	3657	2153	1562	1153	571.6	857
MEAN	32.9	76.0	135	133	173	293	122	69.5	52.1	37.2	18.4	28.6
MAX	198	167	659	617	1500	3740	327	122	176	157	31	87
MIN	14	31	55	59	77	92	81	49	31	17	9.7	13
CFSM	.48	1.10	1.94	1.93	2.51	4.24	1.76	1.00	.75	.54	.27	.41
IN.	.55	1.23	2.24	2.22	2.61	4.88	1.97	1.16	.84	.62	.31	.46

CAL YR 1986 TOTAL 17339.2 MEAN 47.5 MAX 659 MIN 2.1 CFSM .69 IN. 9.32
WTR YR 1987 TOTAL 35498.6 MEAN 97.3 MAX 3740 MIN 9.7 CFSM 1.41 IN. 19.1

SANTEE RIVER BASIN

02143500 INDIAN CREEK NEAR LABORATORY, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/14	1330	WATER	0.1	1.07	70	105	6.60	18.0		8.4	44000
86/11/05	1420	WATER	0.1	.88	30	120	6.40	15.0	6.0	9.4	
86/12/17	1355	WATER	0.1			76	6.40	8.0		11.5	
87/01/28	1035	WATER	0.1	1.22	105	60	6.10	3.0		13.2	
87/02/24	1430	WATER	0.1	1.23	108	53	6.30	7.0	29.0	12.3	
87/03/26	1045	WATER	0.1	1.32	140	60	6.40	12.0		11.0	
87/04/27	1045	WATER	0.1	1.19	101	54	7.90	14.0		9.8	
87/05/28	1310	WATER	0.1	1.05	62	65	6.60	21.0	22.0	8.6	
87/06/29	1300	WATER	0.1	.91	33	50	6.70	21.0		9.0	
87/07/29	1150	WATER	0.1	.83	24	91	6.80	25.0		7.8	
87/08/24	1400	WATER	0.1	.67	9	111	6.60	24.0	11.0	8.1	
87/09/29	1100	WATER	0.1			69	6.70	18.0		8.8	
87/09/29	1110	WATER	0.1	.81	22						

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/14	1330	WATER	0.1	18	53	170	.69	.140	.800	.410	.190
86/11/05	1420	WATER	0.1	26	3	90					
86/12/17	1355	WATER	0.1	18	4	85					
87/01/28	1035	WATER	0.1	14	9	67					
87/02/24	1430	WATER	0.1	15	16	82					
87/03/26	1045	WATER	0.1	16	13	69					
87/04/27	1045	WATER	0.1	18	13	83					
87/05/28	1310	WATER	0.1	19	21	78					
87/06/29	1300	WATER	0.1	18	27	86					
87/07/29	1150	WATER	0.1	24	22	92					
87/08/24	1400	WATER	0.1	35	2	110					
87/09/29	1100	WATER	0.1	22	18	65					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
87/02/24	1430	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/24	1400	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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. WRD 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 treted effluent to South Fork Catawba River below mouth of Long Creek, causing some diurnal fluctuation; an average of 1.2 ft^3/s was diverted during the year.

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

AVERAGE DISCHARGE.--35 years, 35.1 ft^3/s, 14.99 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,500 ft^3/s Oct. 16, 1971, gage height, 9.10 ft, from rating curve extended above 2,400 ft^3/s on basis of contracted-opening measurement of peak flow; minimum, 0.4 ft^3/s Oct. 7, 1954; minimum daily, 0.55 ft^3/s July 14, 1986.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	1230	891	5.11	Mar. 1	0730	*2,230	*7.42

Minimum discharge, 1.2 ft^3/s, Aug. 25-28; minimum daily, 1.2 ft^3/s Aug. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	10	32	131	60	1310	56	30	23	7.9	3.7	4.1
2	3.2	12	78	80	63	117	48	30	30	9.5	3.0	4.0
3	3.1	10	48	49	62	74	48	30	19	8.9	2.5	3.6
4	3.2	9.7	32	40	48	59	57	29	18	9.0	2.2	3.1
5	3.2	9.8	25	36	42	52	46	29	20	8.2	2.6	8.8
6	3.0	9.6	22	33	39	48	43	27	16	7.2	3.2	9.2
7	2.8	26	21	31	39	45	41	26	15	6.4	27	26
8	2.5	36	23	29	37	52	39	25	14	6.2	14	14
9	4.1	19	25	27	33	65	38	25	13	6.0	12	8.9
10	6.0	14	31	28	31	57	36	23	12	5.4	4.8	5.5
11	4.0	16	84	27	31	47	36	22	12	7.6	4.2	23
12	4.3	57	62	26	32	45	36	22	13	7.5	4.2	18
13	9.8	31	39	26	30	42	34	30	13	6.5	3.3	25
14	40	22	31	25	30	41	34	29	14	6.1	2.8	10
15	9.8	26	27	25	33	39	132	26	13	5.1	3.0	7.0
16	6.1	24	24	25	36	38	73	24	13	4.4	3.4	5.7
17	6.3	20	22	26	35	37	62	22	16	4.1	3.1	5.4
18	5.7	18	23	83	41	36	52	21	15	3.9	2.5	4.9
19	5.3	16	22	211	45	71	45	20	15	3.4	2.0	4.7
20	5.3	33	21	71	41	50	41	20	15	3.0	4.8	5.1
21	5.3	31	20	50	38	43	39	20	15	2.4	2.5	4.8
22	5.3	22	19	54	45	40	36	20	12	2.1	1.9	4.3
23	5.2	19	18	52	69	38	34	19	14	2.5	1.5	4.1
24	5.2	18	405	46	46	36	89	18	13	3.6	1.3	3.9
25	28	17	105	62	41	49	58	17	11	2.8	1.3	3.9
26	74	44	58	80	38	46	44	17	15	3.2	1.2	3.8
27	19	40	44	56	284	43	39	22	13	4.0	1.3	3.5
28	12	27	38	47	867	52	36	22	10	4.9	1.3	3.7
29	11	23	35	46	---	42	33	23	8.9	3.9	2.5	4.0
30	9.8	21	32	99	---	108	31	20	8.1	6.5	2.6	28
31	8.1	---	30	86	---	92	---	17	---	9.0	2.5	---
TOTAL	314.1	681.1	1496	1707	2236	2914	1436	725	439.0	171.2	128.2	260.0
MEAN	10.1	22.7	48.3	55.1	79.9	94.0	47.9	23.4	14.6	5.52	4.14	8.67
MAX	74	57	405	211	867	1310	132	30	30	9.5	27	28
MIN	2.5	9.6	18	25	30	36	31	17	8.1	2.1	1.2	3.1
CFSM	.32	.71	1.52	1.73	2.51	2.96	1.51	.74	.46	.17	.13	.27
IN.	.37	.80	1.75	2.00	2.62	3.41	1.68	.85	.51	.20	.15	.30

CAL YR 1986 TOTAL 6306.5 MEAN 17.3 MAX 405 MIN .55 CFSM .54 IN. 7.38
WTR YR 1987 TOTAL 12507.5 MEAN 34.3 MAX 1310 MIN 1.2 CFSM 1.08 IN. 14.6

SANTEE RIVER BASIN

02144000 LONG CREEK NEAR BESSEMER CITY, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/08	1420	WATER	0.1	.89	2	146	6.90	18.0		5.0	190
86/11/12	1320	WATER	0.1	2.44	83						
86/11/12	1335	WATER	0.1			89	6.70	13.0	80.0	8.3	
87/02/09	1420	WATER	0.1	1.86	34	68	6.10	6.0	12.0	11.9	
87/05/19	1440	WATER	0.1	1.57	21	75	6.80	21.0	12.0	7.2	
87/08/11	1410	WATER	0.1	.99	4	115	6.60	24.0	40.0	5.3	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/08	1420	WATER	0.1	44	8	120	.43	.050	.200	.120	.020
86/11/12	1335	WATER	0.1	31	110	240					
87/02/09	1420	WATER	0.1	25	5	60					
87/05/19	1440	WATER	0.1	29	18	76					
87/08/11	1410	WATER	0.1	37	29	130					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/12	1335	WATER	0.1	10	10K	25K	10K	50K	.2K	50K	16
87/02/09	1420	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/19	1440	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/11	1410	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	16

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 mile north of Lowell, 2.5 miles upstream from bridge on Interstate Highway 85, and 3.0 miles 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.

REMARKS.--Records good except those for estimated daily discharges, 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 9.2 ft^3/ from Long Creek and 19.0 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). Several measurements of water temperature were made during the year. City of Gastonia and Duke Power Co. telephone telemeter at station.

AVERAGE DISCHARGE.--33 years (water years 1943-71, 1984-1987) 792 ft^3/s, 17.13 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,800 ft^3/s Aug. 11, 1970 gage height, 17.38 ft; minimum, 19 ft^3/s July 14, 19, 1986; gage height, 0.70 ft; minimum daily 31 ft^3/s Oct. 8, 1954.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 2	0700	*19,500	*15.72	No other peaks greater than base discharge.			

Minimum discharge, 32 ft^3/s Oct. 7, gage height 0.85 ft, result of regulation; minimum daily, 129 ft^3/s Oct. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	175	329	705	1180	1460	16600	1930	843	585	567	262	204
2	207	471	1090	1350	1320	19100	1430	903	617	647	275	183
3	174	423	1530	1030	1550	8920	1210	892	538	617	316	208
4	190	358	1280	878	1400	2680	1380	829	554	522	310	191
5	176	336	884	777	1270	1660	1380	842	744	746	286	256
6	137	319	738	720	1110	1400	1200	757	564	590	275	430
7	129	415	660	702	993	1210	1110	758	545	537	574	787
8	155	1000	595	690	930	1210	1050	726	480	477	414	975
9	166	725	645	660	859	1410	981	715	425	586	481	872
10	188	527	819	695	802	1340	927	693	425	586	359	548
11	209	1050	1210	652	771	1190	906	669	430	607	330	526
12	213	870	1710	646	727	1080	898	654	430	492	261	427
13	224	719	1220	627	736	1030	854	731	406	614	264	467
14	669	583	924	604	732	1020	857	730	458	449	256	419
15	484	585	773	600	727	953	1500	756	468	471	246	401
16	337	630	700	e600	736	908	1880	727	443	402	280	339
17	281	519	658	e650	797	881	1760	720	447	383	256	326
18	246	504	613	e2500	802	865	1550	633	472	378	248	323
19	250	479	593	e5000	881	1370	1270	615	636	382	239	378
20	212	540	568	e2500	849	1300	1100	639	906	348	274	341
21	205	710	514	e1600	833	1060	986	687	656	331	235	328
22	243	572	528	e1450	844	e900	939	644	525	326	207	305
23	153	488	535	1220	1310	e850	887	615	582	308	214	257
24	203	506	2980	1040	1310	e1000	1910	633	541	297	160	290
25	224	482	5330	993	1080	e1200	2050	556	1110	256	132	262
26	1120	655	3730	1130	953	e1120	1330	527	2220	259	200	242
27	1000	1620	1870	1030	2150	983	1090	1120	2380	277	205	271
28	543	1340	1090	925	7850	1120	979	830	2350	301	148	239
29	426	843	905	870	---	1130	910	670	1000	324	155	240
30	336	712	806	1010	---	1630	874	680	674	294	193	555
31	301	---	740	1800	---	2260	---	612	---	305	178	---
TOTAL	9576	19310	36943	36129	35782	79380	37128	22406	22611	13679	8233	11590
MEAN	309	644	1192	1165	1278	2561	1238	723	754	441	266	386
MAX	1120	1620	5330	5000	7850	19100	2050	1120	2380	746	574	975
MIN	129	319	514	600	727	850	854	527	406	256	132	183
CFSM	.49	1.02	1.89	1.85	2.03	4.06	1.96	1.15	1.20	.70	.42	.61
IN.	.57	1.14	2.18	2.13	2.11	4.69	2.19	1.32	1.34	.81	.49	.68

CAL YR 1986 TOTAL 173893 MEAN 476 MAX 5330 MIN 56 CFSM .76 IN. 10.3
WTR YR 1987 TOTAL 332767 MEAN 912 MAX 19100 MIN 129 CFSM 1.45 IN. 19.6

e Estimated

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 Statesville Avenue (U. S. Highway 21) in Charlotte, 3.4 mi upstream from Stewart Creek, and 0.2 mi upstream from Kennedy Branch.

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 those for estimated daily discharges, which are poor. 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.

AVERAGE DISCHARGE.--6 years, 7.53 ft^3/s, 17.13 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,430 ft^3/s June 18, 1982, gage height, 7.58 ft; no flow part of each day Aug. 1, 3, 4, 1987 as a result of upstream construction; minimum daily discharge, 0.16 ft^3/s Aug. 1, 2, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 550 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 28	1230	Unknown	Unknown	Sept. 11	0030	*770	*4.97

No flow part of each day Aug. 1, 3, 4, result of upstream construction; minimum daily, 0.20 ft^3/s Aug. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.38	9.7	5.3	79	7.1	e90	8.6	2.6	1.7	1.0	.23	.36
2	.36	1.6	18	14	9.4	e14	6.6	2.8	1.6	1.3	.31	.33
3	.31	.83	4.4	4.9	6.6	e8.0	5.9	2.6	1.7	.79	.23	.76
4	.29	.73	2.3	3.3	4.7	e5.5	5.9	3.0	2.6	3.0	.37	.77
5	.24	1.0	1.7	2.6	3.9	e5.0	4.6	2.6	1.8	40	.24	13
6	.25	.70	1.4	2.4	3.6	e4.7	4.3	2.4	1.3	13	.33	4.8
7	.25	2.7	1.3	2.1	4.1	e4.5	4.0	2.4	1.3	1.9	2.4	121
8	.28	.94	2.2	1.9	3.2	e18	3.8	2.4	1.3	1.3	.29	16
9	1.4	.66	2.4	1.8	2.8	e12	3.7	2.7	1.2	1.0	.66	2.4
10	.72	.68	7.7	2.1	2.7	e7.0	3.5	2.2	1.2	.82	.28	9.9
11	.41	4.4	21	1.8	e2.7	e5.8	3.2	2.1	1.1	.85	.41	151
12	.32	9.4	6.4	1.7	e2.7	e5.0	3.2	2.6	1.0	15	.30	90
13	.71	2.1	3.1	1.6	e2.7	e4.8	3.4	12	1.2	4.2	.26	32
14	12	1.1	2.1	1.6	e3.0	e4.5	3.2	4.2	1.2	1.5	.27	7.7
15	.51	7.1	2.1	1.7	e3.3	e4.2	49	12	1.6	1.1	.50	3.4
16	.41	1.6	1.7	1.7	e3.3	4.2	23	5.8	1.5	.68	.59	2.3
17	.40	1.2	1.6	2.3	e5.3	e4.1	9.4	2.7	1.1	.61	.42	1.9
18	.41	1.0	1.8	25	e10	e4.1	6.2	2.4	1.0	.62	.32	1.6
19	.57	.95	1.4	64	e6.0	e25	4.5	2.1	1.2	.60	.24	1.5
20	.52	31	1.4	11	e5.5	e7.0	4.0	2.1	1.2	.56	.21	1.5
21	.46	4.7	1.3	5.6	e5.0	e5.0	3.5	2.0	1.1	.56	.29	1.5
22	.50	1.9	1.2	13	e6.0	e4.1	3.3	1.9	.94	.57	.34	1.4
23	.52	1.4	2.5	16	e10	e3.8	3.1	1.8	.90	.52	.31	1.3
24	.45	1.2	47	14	e4.8	e3.8	14	1.8	.82	.45	.35	1.2
25	13	1.8	8.6	26	e4.5	e5.5	4.5	1.7	19	.47	.35	1.1
26	10	4.3	3.6	17	e4.2	e5.0	3.4	1.6	3.9	.44	.28	1.1
27	.91	1.8	2.5	7.9	e90	e25	3.2	1.8	2.0	38	.25	1.1
28	.70	1.3	2.1	6.7	e200	e15	2.9	1.6	1.1	5.9	.23	1.1
29	.70	1.2	1.8	6.9	---	e6.0	2.7	1.6	.99	.48	.26	1.0
30	.80	1.9	1.7	17	---	e20	2.6	1.5	.98	1.1	.20	13
31	.99	---	1.5	13	---	e10	---	1.4	---	.30	.29	---
TOTAL	49.77	100.89	163.1	369.6	417.1	340.6	203.2	92.4	59.53	138.62	12.01	486.02
MEAN	1.61	3.36	5.26	11.9	14.9	11.0	6.77	2.98	1.98	4.47	.39	16.2
MAX	13	31	47	79	200	90	49	12	19	40	2.4	151
MIN	.24	.66	1.2	1.6	2.7	3.8	2.6	1.4	.82	.30	.20	.33
CFSM	.27	.56	.88	2.00	2.50	1.84	1.13	.50	.33	.75	.06	2.71
IN.	.31	.63	1.02	2.30	2.60	2.12	1.27	.58	.37	.86	.07	3.03

CAL YR 1986 TOTAL 1157.69 MEAN 3.17 MAX 58 MIN .16 CFSM .53 IN. 7.21
WTR YR 1987 TOTAL 2432.82 MEAN 6.67 MAX 200 MIN .20 CFSM 1.12 IN. 15.2

e Estimated

SANTEE RIVER BASIN

02146211 IRWIN CREEK AT STATESVILLE AVENUE AT CHARLOTTE, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1981, April 1982 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1982 to current year.
WATER TEMPERATURE: April 1982 to current year.

INSTRUMENTATION.--Water-quality monitor since April 1982.

REMARKS.--Station operated as part of the Charlotte-Mecklenburg County Water-Quality Study. Interruptions in the minimums for the day were due to malfunctions of the monitor.

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 recorded, >1000 microsiemens July 16-21, 30, 31, Aug. 1, 2, 3, Sept. 28, 29, 30, 1986; Aug. 15, 21-31, Sept. 2, 3, 1987. minimum recorded 44 microsiemens Feb. 27, 1984.
WATER TEMPERATURE: Maximum, 34.7°C June 29, 1987; minimum, 0.0°C several days during January, December, 1985 and January of 1986.

EXTREMES FOR CURRENT PERIOD.--
SPECIFIC CONDUCTANCE: Maximum recorded,>1000 microsiemens, Aug. 15, 21-31, Sept. 2, 3; minimum recorded 54 microsiemens Sept. 11.
WATER TEMPERATURE: Maximum recorded, 34.7°C June 29; minimum not determined.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
FEB												
10...	1345	400	6.60	8.0	--	13.0	--	1.3	100	11	21	12
JUN												
12...	1430	650	7.17	25.5	--	10.4	--	--	--	--	--	--
AUG												
26...	1300	1010	7.78	26.0	--	8.0	--	4.8	400	150	100	35
SEP												
24...	1115	802	7.23	17.5	742	7.0	75	4.2	290	99	66	30

DATE	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	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, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRATE TOTAL (MG/L AS N)
FEB												
10...	20	28	0.9	6.9	20	44	<0.20	5.4	190	0.26	0.0	1.48
JUN												
12...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
26...	39	17	0.9	6.6	10	160	<0.20	14	530	0.71	0.0	--
SEP												
24...	42	23	1	17	19	120	<0.20	6.0	420	0.57	0.0	--

SANTEE RIVER BASIN

02146211 IRWIN CREEK AT STATESVILLE AVENUE AT CHARLOTTE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)
FEB 10...	1.40	--	1.52	2.0	0.030	<0.010	0	0	2	<1	100
JUN 12...	--	--	--	--	--	--	--	--	--	--	--
AUG 26...	0.800	0.920	0.600	0.77	<0.010	<0.010	1	<0	<1	<1	100
SEP 24...	1.60	3.84	3.70	4.8	0.060	<0.010	1	<0	2	2	<100

DATE	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)
FEB 10...	<100	1	<1	1	<1	50	<50	1200	140	2	<1
JUN 12...	--	--	--	--	--	--	--	--	--	--	--
AUG 26...	120	<1	<1	2	1	<50	<50	1500	<50	12	2
SEP 24...	<100	<1	<1	4	<1	50	<50	1900	60	5	<1

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB 10...	460	520	<0.20	<0.2	<1	<1	<1	<1	60	<50	--
JUN 12...	--	--	--	--	--	--	--	--	--	--	--
AUG 26...	1500	1500	<0.20	<0.2	<2	<2	<1	<1	150	<50	--
SEP 24...	1200	1200	<0.20	0.2	<2	<2	<1	<1	90	<50	13

SANTEE RIVER BASIN

02146211 IRWIN CREEK AT STATESVILLE AVENUE AT CHARLOTTE, NC--Continued

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	739	171	406	---	---	---	---	---	---
2	---	---	---	526	271	401	---	---	---	---	---	---
3	---	---	---	612	531	565	---	---	---	---	---	---
4	---	---	---	629	589	607	---	---	---	---	---	---
5	---	---	---	622	461	539	---	---	---	---	---	---
6	---	---	---	646	489	579	---	---	---	---	---	---
7	---	---	---	645	241	501	---	---	---	446	408	421
8	---	---	---	529	342	421	---	---	---	418	404	411
9	536	318	478	656	529	588	---	---	---	434	412	422
10	656	482	590	694	655	678	---	---	---	455	383	423
11	673	531	586	679	205	518	---	---	---	435	425	430
12	797	692	757	332	184	243	---	---	---	444	432	439
13	801	175	752	400	341	371	---	---	---	456	437	447
14	452	168	289	511	396	449	---	---	---	457	449	454
15	707	464	587	514	189	293	---	---	---	463	437	453
16	821	714	768	438	333	399	---	---	---	503	453	467
17	846	794	824	443	397	429	---	---	---	490	379	436
18	853	812	839	441	414	431	---	---	---	---	---	---
19	886	827	857	532	453	499	---	---	---	---	---	---
20	886	836	875	543	111	286	---	---	---	---	---	---
21	892	854	877	373	221	297	---	---	---	---	---	---
22	892	854	879	430	374	401	---	---	---	---	---	---
23	892	848	864	457	423	437	---	---	---	---	---	---
24	877	829	852	475	452	462	---	---	---	---	---	---
25	871	184	572	474	428	445	---	---	---	---	---	---
26	447	210	318	435	231	345	---	---	---	---	---	---
27	601	457	540	462	325	385	---	---	---	---	---	---
28	683	608	644	500	436	475	---	---	---	---	---	---
29	721	675	703	525	425	469	---	---	---	---	---	---
30	742	709	725	507	429	483	---	---	---	---	---	---
31	740	701	725	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	739	111	447	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	311	256	284	670	568	610
2	---	---	---	---	---	---	358	313	335	735	673	698
3	---	---	---	---	---	---	401	359	386	740	703	722
4	---	---	---	---	---	---	432	403	415	734	710	724
5	---	---	---	---	---	---	466	434	450	706	536	629
6	---	---	---	---	---	---	487	464	475	532	438	491
7	---	---	---	---	---	---	509	485	498	482	448	460
8	---	---	---	---	---	---	496	479	488	497	476	483
9	---	---	---	---	---	---	477	455	466	482	420	464
10	---	---	---	---	---	---	472	457	465	432	408	421
11	---	---	---	---	---	---	473	458	467	442	409	425
12	---	---	---	---	---	---	473	451	462	452	392	426
13	---	---	---	---	---	---	465	442	456	414	218	337
14	---	---	---	---	---	---	478	461	470	317	246	276
15	---	---	---	---	---	---	675	114	371	380	173	314
16	---	---	---	---	---	---	243	162	209	378	225	285
17	---	---	---	---	---	---	312	237	280	486	379	430
18	---	---	---	---	---	---	345	314	331	520	454	484
19	---	---	---	---	---	---	396	338	362	531	382	483
20	---	---	---	---	---	---	393	342	371	503	403	472
21	---	---	---	---	---	---	372	350	363	477	431	464
22	---	---	---	---	---	---	401	365	377	483	431	463
23	---	---	---	---	---	---	409	366	387	529	462	497
24	---	---	---	---	---	---	413	199	277	517	484	497
25	---	---	---	---	---	---	371	307	339	508	395	472
26	---	---	---	---	---	---	440	373	403	542	455	509
27	---	---	---	---	---	---	451	435	442	509	426	476
28	---	---	---	---	---	---	457	442	448	497	461	482
29	---	---	---	---	---	---	482	441	458	510	450	487
30	---	---	---	---	---	---	566	482	510	534	502	511
31	---	---	---	---	---	---	---	---	---	534	511	523
MONTH	---	---	---	---	---	---	675	114	401	740	173	484

SANTEE RIVER BASIN

02146211 IRWIN CREEK AT STATESVILLE AVENUE AT CHARLOTTE, NC--Continued

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	537	379	506	560	436	513	781	590	724	974	936	949
2	610	539	566	---	---	---	926	763	826	1030	973	995
3	656	614	635	---	---	---	782	715	754	1110	602	1020
4	620	317	451	---	---	---	885	742	829	669	496	574
5	462	347	413	---	---	---	841	712	778	695	112	290
6	540	468	507	---	---	---	853	693	776	313	151	229
7	575	542	556	---	---	---	722	249	389	247	81	155
8	577	481	543	---	---	---	650	445	554	339	161	254
9	658	545	591	---	---	---	680	385	524	435	345	390
10	662	539	599	---	---	---	670	544	615	522	59	416
11	688	581	629	---	---	---	845	649	752	215	54	145
12	674	600	638	---	---	---	775	626	689	175	89	139
13	640	578	616	---	---	---	842	748	783	218	117	169
14	615	536	580	---	---	---	947	809	862	284	222	250
15	601	403	519	---	---	---	>1000	>1000	>1000	339	286	310
16	510	290	418	---	---	---	881	562	688	394	343	367
17	608	512	555	---	---	---	738	645	694	447	395	418
18	754	611	693	---	---	---	828	725	762	640	449	548
19	673	636	656	---	---	---	977	812	843	693	650	674
20	669	624	643	---	---	---	970	918	955	689	637	659
21	660	623	644	---	---	---	>1000	>1000	>1000	706	609	659
22	714	647	692	---	---	---	>1000	>1000	>1000	735	664	700
23	738	680	711	669	640	652	>1000	>1000	>1000	801	650	719
24	784	711	763	723	673	694	>1000	>1000	>1000	792	654	731
25	791	316	615	786	723	753	>1000	>1000	>1000	816	705	747
26	495	317	421	835	786	802	>1000	>1000	>1000	765	701	724
27	499	343	395	852	103	756	>1000	>1000	>1000	765	709	730
28	546	476	511	465	213	374	1070	1040	1060	752	642	700
29	581	501	529	637	474	570	1230	1070	1130	795	687	737
30	594	506	547	673	208	535	1330	970	1170	719	121	331
31	---	---	---	590	343	506	1000	944	968	---	---	---
MONTH	791	290	571	---	---	---	1330	249	843	1110	54	524

> Actual value is known to be greater than the value shown

TEMPERATURE, WATER, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	26.1	22.1	24.1	15.2	7.5	14.3	---	---	---	---	---	---
2	27.6	22.4	24.7	18.5	14.9	16.3	---	---	---	---	---	---
3	26.0	22.1	24.1	15.7	13.3	14.4	---	---	---	---	---	---
4	26.9	22.0	24.3	16.3	12.8	14.2	---	---	---	---	---	---
5	28.0	22.9	25.0	16.2	13.9	15.0	---	---	---	---	---	---
6	24.8	20.1	22.3	19.3	15.6	17.0	---	---	---	---	---	---
7	21.2	18.2	19.7	16.9	15.8	16.4	---	---	---	---	---	---
8	20.9	17.7	19.3	18.7	15.2	16.5	---	---	---	---	---	---
9	20.7	18.6	19.4	21.4	16.1	18.6	---	---	---	---	---	---
10	19.6	17.4	18.8	17.7	14.1	15.7	---	---	---	---	---	---
11	17.1	15.7	16.4	14.0	13.2	13.7	---	---	---	---	---	---
12	18.3	16.0	17.1	13.7	12.7	13.2	---	---	---	---	---	---
13	20.1	17.7	18.5	12.7	8.7	11.7	---	---	---	---	---	---
14	23.0	18.1	20.7	9.5	6.4	7.9	---	---	---	---	---	---
15	20.1	15.1	17.5	8.8	6.5	7.5	---	---	---	---	---	---
16	17.9	12.7	15.0	10.3	8.9	9.6	---	---	---	---	---	---
17	17.2	11.3	14.3	11.4	10.1	10.8	---	---	---	---	---	---
18	17.2	11.6	14.3	12.3	11.2	11.7	---	---	---	---	---	---
19	16.4	10.4	13.1	12.7	9.5	11.0	---	---	---	---	---	---
20	15.7	9.4	12.6	9.3	6.8	8.3	---	---	---	---	---	---
21	16.4	10.0	13.1	10.2	7.4	8.7	---	---	---	---	---	---
22	17.0	10.4	13.5	9.2	6.1	7.4	---	---	---	---	---	---
23	17.3	11.6	14.5	8.7	6.5	7.7	---	---	---	---	---	---
24	18.7	12.8	15.7	11.9	8.7	10.3	---	---	---	---	---	---
25	17.0	14.8	15.9	12.9	11.7	12.2	---	---	---	---	---	---
26	18.3	16.6	17.4	13.7	10.4	11.9	---	---	---	---	---	---
27	18.6	15.4	16.9	13.7	11.5	12.6	---	---	---	---	---	---
28	18.1	12.9	15.4	12.1	11.5	11.7	---	---	---	---	---	---
29	15.2	11.8	13.6	13.6	7.9	11.1	---	---	---	---	---	---
30	17.9	12.2	14.7	10.3	9.2	10	---	---	---	---	---	---
31	16.5	12.3	14.5	---	---	---	---	---	---	---	---	---
MONTH	28.0	9.4	17.6	21.4	6.1	12.2	---	---	---	---	---	---

SANTEE RIVER BASIN

02146211 IRWIN CREEK AT STATESVILLE AVENUE AT CHARLOTTE, NC--Continued

TEMPERATURE, WATER, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	13.9	7.9	10.6	20.9	15.7	18.0
2	---	---	---	---	---	---	14.8	8.4	11.6	21.2	15.7	18.1
3	---	---	---	---	---	---	12.4	10.4	11.6	20.5	16.0	18.4
4	---	---	---	---	---	---	12.4	8.4	10.1	20.6	16.8	18.4
5	---	---	---	---	---	---	12.2	7.7	9.6	19.7	15.2	17.0
6	---	---	---	---	---	---	14.8	7.8	10.8	20.0	13.8	16.8
7	---	---	---	---	---	---	13.7	8.6	11.1	21.2	15.8	18.2
8	---	---	---	---	---	---	15.9	9.9	12.5	21.8	16.9	19.0
9	---	---	---	---	---	---	17.0	9.9	13.1	20.5	15.0	17.7
10	---	---	---	---	---	---	17.3	9.6	13.1	22.0	15.5	18.4
11	---	---	---	---	---	---	17.3	10.7	13.5	21.3	16.6	18.8
12	---	---	---	---	---	---	17.9	11.4	14.4	20.8	17.6	19.3
13	---	---	---	---	---	---	18.6	13.2	15.4	22.7	18.8	20.2
14	---	---	---	---	---	---	15.3	13.7	14.2	19.3	18.5	19.0
15	---	---	---	---	---	---	16.4	13.8	14.8	22.4	17.6	19.5
16	---	---	---	---	---	---	16.1	13.5	14.4	21.2	17.9	19.4
17	---	---	---	---	---	---	15.2	12.2	13.3	21.7	17.5	19.3
18	---	---	---	---	---	---	15.1	12.0	13.3	22.0	18.1	20.0
19	---	---	---	---	---	---	18.6	12.4	15.4	25.6	18.7	21.3
20	---	---	---	---	---	---	19.7	13.9	16.6	21.9	19.2	20.2
21	---	---	---	---	---	---	20.1	14.7	17.3	22.5	17.9	19.4
22	---	---	---	---	---	---	20.5	14.8	17.7	21.4	17.8	19.4
23	---	---	---	---	---	---	19.3	16.1	17.7	23.3	16.5	19.8
24	---	---	---	---	---	---	19.1	16.1	17.9	24.7	19.0	21.3
25	---	---	---	---	---	---	15.9	13.4	14.8	25.9	18.8	21.5
26	---	---	---	---	---	---	17.4	12.2	14.6	23.3	19.4	21.2
27	---	---	---	---	---	---	17.4	12.4	14.8	24.3	18.9	21.0
28	---	---	---	---	---	---	18.4	14.0	15.8	22.2	18.7	19.8
29	---	---	---	---	---	---	17.9	12.0	14.9	23.8	18.9	20.5
30	---	---	---	---	---	---	20.5	14.2	17.0	23.7	19.5	20.7
31	---	---	---	---	---	---	---	---	---	23.6	20.4	21.1
MONTH	---	---	---	---	---	---	20.5	7.7	14.1	25.9	13.8	19.4

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	24.4	16.4	21.3	31.5	24.1	29.1	27.6	25.0	26.1	23.5	20.6	21.9
2	25.4	21.8	23.4	---	---	---	26.6	25.2	26.0	24.4	20.0	21.8
3	26.5	22.5	24.1	---	---	---	28.7	25.4	26.5	24.6	20.7	22.0
4	24.9	22.4	23.5	---	---	---	27.4	26.0	26.5	21.7	20.3	20.9
5	25.4	20.7	22.7	---	---	---	27.5	25.7	26.5	20.1	16.8	18.2
6	25.8	20.8	22.8	---	---	---	27.3	26.0	26.7	20.8	18.4	19.5
7	26.1	20.0	22.6	---	---	---	26.7	25.0	25.7	22.0	19.7	20.5
8	27.5	21.2	23.7	---	---	---	26.6	24.5	25.5	22.6	20.2	21.2
9	27.5	22.3	24.3	---	---	---	26.3	23.6	25.5	22.7	20.5	21.5
10	25.9	21.7	23.5	---	---	---	26.8	24.7	25.7	23.7	19.8	21.6
11	23.7	21.5	22.6	---	---	---	26.6	25.3	25.9	21.7	19.2	20.5
12	27.8	22.0	24.2	---	---	---	26.3	24.8	25.7	22.1	20.1	20.8
13	24.5	22.5	23.6	---	---	---	27.2	24.7	25.9	22.0	20.5	21.1
14	24.1	21.7	22.7	---	---	---	30.6	23.8	26.3	22.9	20.3	21.5
15	24.4	21.9	23.1	---	---	---	28.5	25.3	26.7	23.6	20.0	21.6
16	25.9	23.1	24.4	---	---	---	29.0	23.8	26.1	23.5	20.5	21.9
17	27.2	23.6	25.1	---	---	---	29.3	24.0	26.0	24.8	21.4	22.8
18	31.7	26.1	28.2	---	---	---	28.8	24.6	26.4	25.4	22.4	23.3
19	27.8	26.0	26.7	---	---	---	28.8	24.6	26.4	22.9	21.4	22.2
20	31.7	25.6	27.9	---	---	---	31.4	25.3	28.1	23.8	21.3	22.2
21	31.9	26.3	28.5	---	---	---	---	---	---	22.8	19.3	20.9
22	33.5	27.6	29.7	---	---	---	---	---	---	22.4	18.6	20.0
23	33.3	27.3	29.9	---	---	---	---	---	---	21.4	17.7	19.3
24	32.9	27.4	29.9	28.3	25.9	27.1	---	---	---	20.1	16.8	18.5
25	29.8	27.6	28.6	28.4	25.7	26.8	---	---	---	21.3	16.5	18.7
26	31.0	28.6	29.6	26.9	24.9	25.9	---	---	---	21.8	17.2	19.2
27	32.4	28.6	30.4	27.0	23.0	25.4	---	---	---	20.7	17.5	19.1
28	33.9	28.6	30.6	26.6	24.5	25.5	28.5	23.1	25.1	22.9	19.0	20.4
29	34.7	27.6	30.6	27.2	24.2	25.3	27.4	22.1	24.3	21.6	18.6	19.9
30	31.9	27.5	30.1	26.3	24.2	25.1	23.5	21.6	22.5	20.9	19.1	20.2
31	---	---	---	28.0	23.6	25.4	22.5	20.9	21.7	---	---	---
MONTH	34.7	16.4	25.9	---	---	---	---	---	---	25.4	16.5	20.8

SANTEE RIVER BASIN

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.

WATER-DISCHARGE RECORDS

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 except those below 15 ft^3/s, which are fair. Since July 2, 1981, wash water from upstream city water filtration plants enters creek below gage via sewer to waste water 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.

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

AVERAGE DISCHARGE.--25 years, 43.2 ft^3/s, 19.11 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,880 ft^3/s May 30, 1975, gage height, 18.04 ft; minimum, 2.8 ft^3/s July 13, 14, 1986.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 28	1130	2,400	9.03	Sept. 11	2245	2,850	9.88
Sept. 7	1845	*3,260	*10.61				

Minimum discharge, 3.0 ft^3/s Oct. 6; minimum daily, 3.2 ft^3/s Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	84	51	451	30	642	35	17	24	15	6.5	5.6
2	3.8	18	128	68	58	74	27	40	11	18	6.5	5.7
3	3.8	7.7	31	31	32	48	27	20	15	9.8	7.4	6.4
4	3.5	6.9	16	23	24	41	27	23	30	30	6.3	6.5
5	3.2	22	12	20	20	36	22	19	14	36	6.2	98
6	3.3	14	12	18	20	30	21	16	9.6	71	7.5	39
7	3.5	27	11	14	26	28	18	18	9.1	17	34	751
8	3.7	13	20	16	17	119	17	18	9.8	13	6.9	90
9	27	8.0	22	15	15	85	16	18	12	13	12	17
10	11	8.1	71	17	15	39	16	19	10	11	6.2	46
11	4.7	49	134	14	15	32	16	18	10	14	6.8	844
12	3.4	97	40	14	15	36	15	25	9.9	47	6.4	655
13	7.9	17	21	14	15	26	15	32	10	57	5.9	150
14	125	9.3	14	14	19	24	15	25	9.0	15	6.3	29
15	5.5	62	13	15	20	23	241	45	13	11	5.7	21
16	4.2	14	12	13	21	23	164	26	16	11	6.8	18
17	4.3	12	12	20	35	21	58	15	9.3	13	6.3	15
18	4.1	8.8	12	170	64	21	30	14	84	12	5.8	16
19	4.0	8.1	12	351	39	159	23	14	14	7.2	5.8	15
20	4.2	218	10	48	27	32	21	15	26	7.0	6.4	15
21	4.2	30	9.6	29	21	25	19	14	15	7.2	6.1	13
22	4.2	13	8.9	85	52	22	19	14	9.3	7.3	5.4	12
23	3.7	10	18	94	61	22	18	12	11	6.8	5.3	11
24	3.7	9.5	336	75	24	22	112	12	12	6.6	5.3	11
25	94	19	45	149	19	60	23	11	64	6.8	5.3	11
26	111	44	23	83	22	32	20	11	21	30	5.7	11
27	9.6	17	16	40	494	49	18	11	16	103	5.9	10
28	6.4	10	14	36	1090	58	17	11	9.5	128	5.4	11
29	6.1	9.5	13	38	---	23	16	12	9.8	9.2	19	11
30	6.1	14	12	64	---	254	16	9.9	11	23	17	102
31	5.4	---	13	52	---	100	---	9.6	---	11	4.9	---
TOTAL	488.3	879.9	1162.5	2091	2310	2206	1102	564.5	524.3	766.9	247.0	3046.2
MEAN	15.8	29.3	37.5	67.5	82.5	71.2	36.7	18.2	17.5	24.7	7.97	102
MAX	125	218	336	451	1090	642	241	45	84	128	34	844
MIN	3.2	6.9	8.9	13	15	21	15	9.6	9.0	6.6	4.9	5.6
CFSM	.51	.96	1.22	2.20	2.69	2.32	1.20	.59	.57	.81	.26	3.31
IN.	.59	1.07	1.41	2.53	2.80	2.67	1.34	.68	.64	.93	.30	3.69

CAL YR 1986 TOTAL 7640.1 MEAN 20.9 MAX 336 MIN 3.1 CFSM .68 IN. 9.26
WTR YR 1987 TOTAL 15388.5 MEAN 42.2 MAX 1090 MIN 3.2 CFSM 1.37 IN. 18.6

SANTEE RIVER BASIN

02146300 IRWIN CREEK NEAR CHARLOTTE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/08	1100	WATER	0.1	.44	4	263	7.50	18.0		9.0	1200
86/11/12	1020	WATER	0.1	2.55	201	105	6.60	13.0	65.0	9.1	
87/02/09	1050	WATER	0.1	.74	15	246	6.60	4.0	9.1	12.9	
87/05/19	1015	WATER	0.1	.71	13	235	7.20	23.0	5.6	8.0	
87/08/11	1120	WATER	0.1	.53	7	252	7.60	26.0	2.8	7.9	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/08	1100	WATER	0.1	94	1	250	.06	.180	.300	.070	.040
86/11/12	1020	WATER	0.1	28	140	270					
87/02/09	1050	WATER	0.1	69	6	200					
87/05/19	1015	WATER	0.1	73	5	170					
87/08/11	1120	WATER	0.1	73	4	190					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/08	1100	WATER	0.1				10K				16
86/11/12	1020	WATER	0.1	11	10K	25	26	55	.2K	50K	120
87/02/09	1050	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	30
87/05/19	1015	WATER	0.1	10K	10K	100	10K	50K	.2K	50K	11
87/08/11	1120	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.--2.72 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Annual maximum, water years 1967-70, December 1982 to current year.

REVISED RECORDS.--WDR NC-85-1: 1984 (P).

GAGE.--Water-stage recorder with 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 those for estimated daily discharges, which are poor. The drainage area is urbanized and has an impervious area of about 25 percent.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,680 ft^3/s June 7, 1985, gage height, 8.47 ft; no flow for periods in 1986, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 350 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 19	0745	353	5.41	June 18	1730	983	7.08
Feb. 28	Unknown	*Unknown	*Unknown	Sept. 7	1715	510	5.90
Apr. 16	1630	400	5.57	Sept. 11	0600	958	7.02

No flow July 30 to Aug. 5, 11-14, 17-28, Aug. 31-Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	5.8	5.6	33	1.4	e25	2.2	1.0	3.9	.48	.00	.00
2	.04	.58	9.7	3.3	5.9	e5.0	2.0	1.2	1.4	.36	.00	.00
3	.03	.30	1.7	1.7	1.8	e3.2	1.8	2.6	.56	.30	.00	.00
4	.04	.25	.94	1.4	1.4	e2.6	1.7	1.9	2.4	.69	.00	.00
5	.04	.60	.75	1.2	1.3	e1.7	1.5	1.1	1.3	.55	.00	7.5
6	.03	.25	.62	1.1	1.2	e1.5	1.5	1.0	.45	.23	.17	2.6
7	.01	1.8	.62	1.1	2.3	e1.5	1.4	.99	.40	.20	3.3	51
8	.02	.45	1.3	.88	1.2	e9.0	1.3	.88	.37	.25	.07	1.5
9	4.2	.27	2.0	.78	1.0	e5.0	1.2	.79	.34	.21	.80	.42
10	1.3	.24	5.7	.96	.97	e3.0	1.2	.77	.34	.13	.01	3.9
11	.21	4.5	10	.71	e1.0	e2.3	1.1	.75	.33	.11	.00	74
12	.17	14	2.4	.67	e.98	e2.0	1.2	1.0	.36	5.9	.00	18
13	1.5	.87	1.2	.63	e.95	e2.0	1.1	.99	.33	6.4	.00	3.5
14	13	.41	.97	.62	e1.5	e1.8	1.1	.82	.34	1.2	.00	.77
15	.21	6.3	.81	.89	e1.3	e1.6	16	2.2	.81	.24	.01	.45
16	.16	.85	.84	.69	e2.5	e1.5	24	1.2	1.0	.20	.02	.35
17	.14	1.3	.63	1.3	e3.0	e1.5	7.0	.71	.30	.16	.00	.32
18	.14	.61	.62	16	e5.0	e1.5	2.7	.63	50	.13	.00	.33
19	.17	.74	.63	33	e4.0	e18	1.9	.57	2.5	.12	.00	.30
20	.20	13	.62	3.0	e1.9	e4.0	1.7	.63	7.2	.08	.00	.39
21	.20	1.2	.63	2.0	e1.8	e2.5	1.6	.53	1.8	.08	.00	.33
22	.19	.55	.62	12	e2.5	e1.9	1.5	.50	.70	.07	.00	.28
23	.17	.48	1.8	7.4	e6.0	e1.8	1.4	.51	.55	.04	.00	.28
24	.20	.49	29	5.6	e2.6	e1.8	11	.56	.50	.04	.00	.26
25	8.4	2.3	3.0	13	e2.2	e5.0	1.4	.53	.90	.02	.00	.29
26	9.1	7.7	1.7	4.3	e2.2	e2.5	1.2	.57	.67	.03	.00	.32
27	.33	1.4	1.3	2.3	e40	e15	1.1	.62	.45	1.0	.00	.34
28	.20	.68	1.1	2.0	e130	e6.0	1.1	.59	.38	1.4	.00	.39
29	.20	.62	1.0	1.8	---	e3.0	1.0	.47	.36	.03	.91	.50
30	.21	1.4	.99	2.2	---	e12	1.0	.43	.33	.00	.60	3.1
31	.18	---	1.1	1.6	---	e3.5	---	.36	---	.00	.00	---
TOTAL	41.03	69.94	89.89	157.13	227.90	148.7	95.9	27.40	81.27	20.65	5.89	171.42
MEAN	1.32	2.33	2.90	5.07	8.14	4.80	3.20	.88	2.71	.67	.19	5.71
MAX	13	14	29	33	130	25	24	2.6	50	6.4	3.3	74
MIN	.01	.24	.62	.62	.95	1.5	1.0	.36	.30	.00	.00	.00
CFSM	.49	.86	1.07	1.86	2.99	1.76	1.18	.32	.99	.24	.07	2.10
IN.	.56	.96	1.23	2.15	3.12	2.03	1.31	.37	1.11	.28	.08	2.34

CAL YR 1986 TOTAL 617.18 MEAN 1.69 MAX 29 MIN .00 CFSM .62 IN. 8.44
WTR YR 1987 TOTAL 1137.11 MEAN 3.12 MAX 130 MIN .00 CFSM 1.15 IN. 15.6

e Estimated

SANTEE RIVER BASIN

02146470 LITTLE HOPE CREEK AT SENECA PLACE AT CHARLOTTE, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--July 1980, November 1982 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1982 to current year.
WATER TEMPERATURE: November 1982 to current year.

INSTRUMENTATION.--Water-quality monitor since November 1982.

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 recorder tape lost in the mail.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 727 microsiemens Mar. 24, 1986; minimum recorded, 32 microsiemens May 15, 1985.
WATER TEMPERATURE: Maximum recorded, 34.0°C July 19, 1986; minimum recorded, 0.0°C Jan. 20, 21, 22, Dec. 26, 27, 1985, Jan. 9, 27, 28, 29, 1986.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 510 microsiemens Jan. 23; minimum recorded, 44 microsiemens June 19.
WATER TEMPERATURE: Maximum recorded, 30.2°C July 13; minimum recorded, 1.7°C Jan. 24.

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	205	196	200	179	74	119	---	---	---	---	---	---
2	201	197	199	153	116	136	144	86	117	---	---	---
3	201	197	199	168	154	160	190	137	166	---	---	---
4	202	199	200	176	169	172	208	191	200	---	---	---
5	205	201	204	199	166	185	218	208	211	---	---	---
6	206	204	205	190	185	188	250	197	213	---	---	---
7	207	206	206	193	129	171	220	115	160	---	---	---
8	208	204	206	382	146	167	166	85	122	---	---	---
9	208	92	154	467	364	401	202	134	171	221	218	220
10	155	112	134	377	313	339	211	194	198	225	214	219
11	163	149	156	318	300	312	216	205	209	222	218	220
12	171	164	167	316	293	305	---	---	---	219	214	216
13	209	63	171	292	230	278	---	---	---	218	207	213
14	121	57	96	243	197	219	---	---	---	214	208	211
15	144	122	133	243	218	232	---	---	---	220	202	213
16	156	145	151	271	244	257	---	---	---	221	162	213
17	161	156	159	296	270	283	---	---	---	205	181	189
18	168	161	165	319	295	306	---	---	---	204	64	111
19	171	167	170	---	---	---	---	---	---	---	---	---
20	172	169	171	---	---	---	---	---	---	---	---	---
21	174	171	172	---	---	---	---	---	---	---	---	---
22	174	171	172	---	---	---	---	---	---	198	101	137
23	173	170	172	---	---	---	---	---	---	510	111	258
24	177	171	174	---	---	---	---	---	---	305	156	232
25	175	66	132	---	---	---	---	---	---	221	93	153
26	122	72	93	---	---	---	---	---	---	251	128	177
27	153	123	138	---	---	---	---	---	---	253	202	214
28	166	154	160	---	---	---	---	---	---	208	195	200
29	171	167	168	---	---	---	---	---	---	205	201	203
30	178	172	174	---	---	---	---	---	---	346	205	236
31	181	177	179	---	---	---	---	---	---	323	218	246
MONTH	209	57	167	---	---	---	---	---	---	---	---	---

SANTEE RIVER BASIN

02146470 LITTLE HOPE CREEK AT SENECA PLACE AT CHARLOTTE, NC--Continued

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	217	209	212	---	---	---	190	183	186	183	173	179
2	211	129	175	---	---	---	193	190	191	186	179	184
3	202	171	190	---	---	---	197	188	191	189	136	179
4	208	202	204	---	---	---	198	188	194	223	179	200
5	208	203	205	---	---	---	200	186	194	226	214	220
6	208	203	206	---	---	---	205	185	195	237	218	226
7	205	165	177	---	---	---	220	191	203	259	238	247
8	202	172	189	---	---	---	300	201	241	287	256	272
9	203	196	200	---	---	---	263	202	227	288	277	284
10	205	197	201	---	---	---	226	188	209	285	254	271
11	---	---	---	---	---	---	221	180	205	267	254	260
12	---	---	---	---	---	---	220	183	203	253	241	246
13	---	---	---	---	---	---	222	179	202	253	241	247
14	---	---	---	---	---	---	246	197	212	254	231	241
15	---	---	---	---	---	---	266	81	143	238	167	217
16	---	---	---	---	---	---	179	74	133	213	176	199
17	---	---	---	---	---	---	183	104	151	226	213	217
18	---	---	---	---	---	---	197	141	177	233	221	226
19	---	---	---	---	---	---	208	196	203	234	221	228
20	---	---	---	---	---	---	218	210	213	239	228	233
21	---	---	---	---	---	---	226	214	219	236	222	229
22	---	---	---	---	---	---	231	218	224	233	219	227
23	---	---	---	---	---	---	231	218	225	230	218	225
24	---	---	---	---	---	---	231	85	128	257	225	234
25	---	---	---	---	---	---	161	147	153	261	244	253
26	---	---	---	---	---	---	167	161	163	258	239	247
27	---	---	---	---	---	---	172	167	169	274	258	264
28	---	---	---	---	---	---	174	168	171	296	240	259
29	---	---	---	---	---	---	176	172	174	264	238	248
30	---	---	---	---	---	---	180	172	177	246	225	236
31	---	---	---	---	---	---	---	---	---	239	220	230
MONTH	---	---	---	---	---	---	300	74	189	296	136	233

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	235	137	209	229	166	213	190	182	187	---	---	---
2	201	150	178	236	186	213	201	187	194	---	---	---
3	279	201	221	247	216	241	214	194	205	---	---	---
4	226	158	200	232	208	220	208	153	187	---	---	---
5	210	166	191	218	204	209	169	139	150	---	---	---
6	216	192	206	216	208	214	209	116	135	---	---	---
7	215	199	207	231	216	223	255	89	128	---	---	---
8	220	202	210	260	233	248	144	118	132	---	---	---
9	210	200	206	264	249	260	162	136	143	---	---	---
10	214	201	209	248	239	244	159	127	154	---	---	---
11	216	210	214	244	218	230	150	113	127	---	---	---
12	217	200	210	228	96	212	178	121	148	---	---	---
13	220	209	215	178	96	140	---	---	---	---	---	---
14	221	205	214	167	116	145	---	---	---	---	---	---
15	222	179	212	186	167	177	---	---	---	---	---	---
16	202	190	195	192	185	187	---	---	---	---	---	---
17	204	185	195	193	185	189	---	---	---	223	218	221
18	199	45	154	197	184	191	---	---	---	226	216	221
19	117	44	70	228	186	201	---	---	---	230	212	222
20	133	69	113	201	187	194	---	---	---	229	215	223
21	131	90	113	215	190	199	---	---	---	233	205	220
22	154	133	141	212	189	197	---	---	---	226	208	219
23	186	155	161	204	192	198	---	---	---	231	212	222
24	305	193	256	254	203	226	---	---	---	233	216	224
25	301	226	273	244	223	234	---	---	---	234	216	225
26	249	206	223	228	213	223	---	---	---	234	209	223
27	274	213	245	211	146	204	---	---	---	234	208	221
28	282	209	244	148	114	130	---	---	---	233	212	222
29	244	223	237	166	149	159	---	---	---	231	212	222
30	256	221	245	180	166	175	---	---	---	222	115	145
31	---	---	---	186	180	183	---	---	---	---	---	---
MONTH	305	44	199	264	96	203	---	---	---	---	---	---

SANTEE RIVER BASIN

02146470 LITTLE HOPE CREEK AT SENECA PLACE AT CHARLOTTE, NC--Continued

TEMPERATURE, WATER, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	23.3	21.6	22.4	14.1	13.0	13.7	---	---	---	---	---	---
2	23.7	22.0	22.7	18.3	14.0	15.6	---	---	---	---	---	---
3	23.1	21.7	22.5	14.8	12.6	13.8	---	---	---	---	---	---
4	23.1	21.6	22.3	15.7	11.7	13.4	---	---	---	---	---	---
5	23.0	21.9	22.5	15.7	13.3	14.5	---	---	---	---	---	---
6	22.2	18.7	20.1	18.7	14.8	16.3	---	---	---	---	---	---
7	18.3	16.7	17.3	16.2	14.9	15.8	---	---	---	---	---	---
8	18.1	16.2	17.0	---	---	---	---	---	---	---	---	---
9	19.6	17.3	18.5	---	---	---	---	---	---	8.6	2.4	5.3
10	18.7	15.4	17.6	---	---	---	---	---	---	9.1	6.0	7.6
11	15.1	13.9	14.5	---	---	---	---	---	---	8.3	3.6	5.8
12	16.8	14.6	15.5	---	---	---	---	---	---	8.2	2.0	4.5
13	19.3	16.4	17.7	---	---	---	---	---	---	9.2	2.1	5.3
14	21.9	17.0	19.8	---	---	---	---	---	---	9.2	3.7	6.5
15	17.1	13.8	15.4	---	---	---	---	---	---	11.9	8.1	9.5
16	14.8	11.4	13.1	---	---	---	---	---	---	10.7	9.1	9.7
17	14.6	11.1	12.6	---	---	---	---	---	---	9.0	6.9	8.4
18	13.9	11.5	12.7	---	---	---	---	---	---	6.9	4.6	6.1
19	13.1	9.9	11.5	---	---	---	---	---	---	---	---	---
20	12.7	9.1	10.6	---	---	---	---	---	---	---	---	---
21	13.2	9.8	11.3	---	---	---	---	---	---	---	---	---
22	13.9	10.4	11.9	---	---	---	---	---	---	---	---	---
23	14.8	11.7	13.1	---	---	---	---	---	---	5.3	2.6	3.7
24	15.3	13.1	14.0	---	---	---	---	---	---	7.0	1.7	4.2
25	16.0	14.5	15.2	---	---	---	---	---	---	6.5	3.2	4.9
26	17.8	15.7	16.5	---	---	---	---	---	---	5.7	2.9	4.1
27	18.5	14.2	15.8	---	---	---	---	---	---	6.5	1.9	3.7
28	16.5	11.8	13.9	---	---	---	---	---	---	7.9	3.0	4.7
29	14.3	11.3	12.7	---	---	---	---	---	---	9.0	2.8	5.5
30	16.0	11.5	13.5	---	---	---	---	---	---	11.8	7.0	8.7
31	15.6	11.8	13.5	---	---	---	---	---	---	10.4	5.6	7.6
MONTH	23.7	9.1	16.1	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	9.6	4.8	6.9	---	---	---	15.3	7.0	10.1	26.3	16.6	20.0
2	8.6	6.8	7.6	---	---	---	16.1	7.7	11.3	27.2	16.6	20.1
3	12.9	8.5	9.9	---	---	---	13.0	9.5	11.1	22.1	11.9	19.4
4	12.0	7.0	9.0	---	---	---	14.1	6.9	9.5	23.9	16.9	19.7
5	10.1	6.9	8.1	---	---	---	14.5	6.5	9.0	22.3	15.0	17.5
6	10.3	6.1	8.2	---	---	---	17.2	6.1	10.5	24.3	13.5	17.8
7	13.8	9.1	10.8	---	---	---	15.2	7.8	10.8	24.4	16.0	19.3
8	14.0	6.6	9.6	---	---	---	19.0	8.7	12.3	26.2	17.4	20.3
9	10.8	3.8	6.2	---	---	---	19.5	8.6	12.9	26.1	15.1	19.4
10	11.2	2.8	6.2	---	---	---	20.3	8.5	13.1	27.1	15.6	20.1
11	---	---	---	---	---	---	19.5	9.5	13.3	24.9	16.7	20.2
12	---	---	---	---	---	---	19.1	10.4	14.1	24.7	18.2	20.6
13	---	---	---	---	---	---	21.2	12.1	15.6	24.1	18.8	21.0
14	---	---	---	---	---	---	14.5	12.6	13.8	20.6	18.4	19.4
15	---	---	---	---	---	---	17.3	13.8	15.1	24.3	18.2	20.1
16	---	---	---	---	---	---	18.6	11.7	14.0	24.9	17.6	20.1
17	---	---	---	---	---	---	15.7	11.1	12.8	25.8	17.1	20.3
18	---	---	---	---	---	---	16.2	11.6	13.6	26.5	17.2	21.0
19	---	---	---	---	---	---	20.4	12.4	15.4	27.3	18.0	21.6
20	---	---	---	---	---	---	22.5	13.0	16.7	22.1	19.3	20.2
21	---	---	---	---	---	---	20.9	14.3	16.9	23.1	17.6	19.9
22	---	---	---	---	---	---	24.7	14.4	18.3	23.6	17.5	20.1
23	---	---	---	---	---	---	21.9	16.0	18.1	26.9	17.0	21.1
24	---	---	---	---	---	---	22.8	16.9	19.6	27.1	19.0	22.0
25	---	---	---	---	---	---	16.8	13.8	16.0	27.8	19.2	22.4
26	---	---	---	---	---	---	22.0	12.6	15.9	25.7	19.4	22.1
27	---	---	---	---	---	---	22.2	12.8	16.2	26.6	20.9	22.9
28	---	---	---	---	---	---	22.6	14.4	17.1	26.7	20.4	22.9
29	---	---	---	---	---	---	23.1	11.9	16.4	27.8	20.0	23.3
30	---	---	---	---	---	---	25.6	15.0	18.8	29.1	20.5	23.9
31	---	---	---	---	---	---	---	---	---	28.3	20.7	24.0
MONTH	---	---	---	---	---	---	25.6	6.1	14.3	29.1	11.9	20.7

SANTEE RIVER BASIN

02146470 LITTLE HOPE CREEK AT SENECA PLACE AT CHARLOTTE, NC--Continued

TEMPERATURE, WATER, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.3	21.2	23.7	27.5	23.4	25.3	26.4	23.3	24.5	21.5	19.6	20.5
2	28.8	20.8	24.2	27.7	24.1	25.4	25.9	23.6	24.5	21.5	18.2	19.9
3	29.9	21.3	24.8	27.6	24.0	25.5	27.8	23.8	25.2	23.4	18.7	20.4
4	26.2	21.5	23.1	27.2	23.7	25.1	26.5	24.4	25.3	20.9	17.6	19.2
5	27.9	20.0	22.8	27.9	23.6	25.3	27.0	23.7	25.0	18.9	14.1	17.7
6	28.1	18.1	22.3	27.5	23.7	25.5	25.6	23.9	24.7	22.0	18.8	20.2
7	28.1	18.6	22.7	27.0	24.6	25.8	26.9	23.3	24.6	23.8	19.9	21.6
8	28.5	19.7	23.4	27.2	23.2	24.9	26.7	22.4	24.2	26.7	19.4	22.4
9	27.8	20.2	23.5	27.6	24.3	25.8	28.7	22.5	25.3	24.8	20.2	22.0
10	26.5	20.8	23.4	27.7	25.3	26.4	26.9	24.1	25.3	25.7	19.4	22.1
11	23.1	19.9	21.6	27.5	25.3	26.5	25.2	22.7	23.5	24.0	18.9	21.1
12	28.3	20.6	23.6	27.7	24.9	26.5	24.5	21.9	22.8	26.6	19.4	21.9
13	24.1	21.9	23.1	30.2	23.7	25.8	24.2	21.6	22.4	26.4	20.7	22.6
14	25.4	21.2	23.1	28.7	24.4	26.1	21.6	19.6	20.8	27.7	19.4	23.0
15	26.1	21.6	23.4	25.9	22.8	24.4	21.5	20.7	21.1	28.1	18.6	23.0
16	26.5	21.8	23.5	26.3	21.5	23.7	23.8	20.4	21.8	26.9	19.4	23.0
17	27.2	21.4	23.9	25.3	21.7	23.5	25.6	21.3	23.0	27.7	21.8	24.2
18	28.1	21.4	23.5	26.4	21.8	23.7	24.9	21.4	23.1	28.1	22.3	24.6
19	24.4	20.7	22.4	27.1	21.8	24.2	24.6	21.9	23.2	24.1	21.6	23.1
20	26.6	21.6	23.4	27.5	22.7	24.7	23.9	21.5	22.6	26.0	21.6	23.2
21	27.3	22.2	24.4	27.7	22.9	25.0	24.3	20.7	22.5	25.4	18.7	21.6
22	28.5	22.7	24.9	27.8	23.8	25.4	24.5	21.5	22.9	24.3	17.6	20.4
23	28.2	22.4	24.7	28.3	23.9	25.5	24.4	21.2	22.9	23.3	16.7	19.5
24	27.9	22.6	25.0	28.4	24.3	25.9	22.8	18.7	20.8	20.9	15.9	18.4
25	25.1	22.6	23.8	28.3	25.1	26.4	24.8	17.6	21.4	23.2	15.8	19.0
26	25.5	21.8	23.2	27.9	25.1	26.2	24.4	20.7	22.6	23.9	16.7	19.7
27	26.5	21.8	23.7	27.7	23.7	25.4	24.7	22.1	23.4	22.5	17.0	19.6
28	26.1	19.8	22.6	27.5	23.4	25.2	23.9	22.0	23.0	24.3	19.2	21.2
29	26.0	19.8	22.5	26.5	22.8	24.3	27.0	19.8	23.1	23.2	18.2	20.6
30	26.1	21.6	23.7	25.2	22.9	23.9	23.0	20.2	21.7	24.4	19.6	21.5
31	---	---	---	26.0	22.8	24.1	22.0	20.1	21.0	---	---	---
MONTH	29.9	18.1	23.5	30.2	21.5	25.2	28.7	17.6	23.2	28.1	14.1	21.2

SANTEE RIVER BASIN

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.

WATER-DISCHARGE RECORDS

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).

AVERAGE DISCHARGE.--10 years, 77.1 ft^3/s, 24.58 in/yr.

REMARKS.--Records good. The city of Charlotte diverted an average of 92.0 ft^3/s for municipal water supply from Catawba River at Mountain Island Lake. An average of 18.8 ft^3/s of treated 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. The drainage area is urbanized and has an impervious area of about 20 percent.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,100 ft^3/s June 7, 1985, gage height, 12.61 ft; minimum, 11 ft^3/s Sept. 24, 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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 28	1130	3,150	8.58	Sept. 11	0645	*3,970	*9.40
Sept. 7	1730	3,540	8.99				

Minimum discharge, 12 ft^3/s Oct. 2, 6, gage height 1.76 ft; minimum daily, 17 ft^3/s Oct. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	121	98	643	47	775	51	32	52	59	23	24
2	17	41	206	89	114	96	47	52	45	48	23	23
3	17	27	56	47	55	66	45	53	31	29	24	23
4	20	26	35	39	43	56	47	48	53	40	23	27
5	21	30	33	37	40	49	40	39	40	42	24	214
6	23	28	31	37	38	48	39	32	29	164	25	109
7	24	42	31	37	55	46	36	33	28	30	107	1240
8	24	34	40	35	36	202	35	32	28	29	34	151
9	78	25	51	34	32	130	35	31	27	29	46	124
10	43	24	125	37	31	62	34	30	27	28	26	48
11	28	68	205	32	32	50	34	31	26	27	25	1060
12	23	232	65	30	32	51	34	60	27	54	23	309
13	27	37	42	30	31	47	34	58	27	87	24	145
14	378	29	36	31	34	46	32	41	28	34	23	45
15	28	118	36	34	42	44	447	151	29	28	24	e38
16	25	36	35	32	44	45	405	67	37	27	25	32
17	25	36	33	44	71	42	178	34	28	24	23	28
18	24	30	33	296	90	40	72	33	135	25	22	26
19	23	28	32	638	59	314	47	33	39	24	23	24
20	24	269	31	76	42	55	38	32	63	24	24	24
21	25	46	30	57	35	46	37	33	37	25	23	28
22	25	30	32	222	74	43	37	32	27	23	22	24
23	25	28	36	179	96	42	34	31	27	24	22	24
24	25	29	436	117	38	40	196	31	27	24	23	27
25	160	52	58	281	35	100	45	30	142	24	22	24
26	225	139	38	131	40	62	38	30	36	33	23	24
27	31	51	35	63	740	118	35	30	27	101	23	24
28	26	33	33	55	1450	124	35	31	22	186	22	25
29	26	31	33	55	---	47	33	30	25	26	36	24
30	25	33	32	69	---	261	33	30	28	27	82	78
31	24	---	31	59	---	143	---	28	---	31	24	---
TOTAL	1508	1753	2048	3566	3476	3290	2253	1258	1197	1376	913	4016
MEAN	48.6	58.4	66.1	115	124	106	75.1	40.6	39.9	44.4	29.5	134
MAX	378	269	436	643	1450	775	447	151	142	186	107	1240
MIN	17	24	30	30	31	40	32	28	22	23	22	23

CAL YR 1986 TOTAL 17089 MEAN 46.8 MAX 439 MIN 15
WTR YR 1987 TOTAL 26654 MEAN 73.0 MAX 1450 MIN 17

e Estimated

SANTEE RIVER BASIN

02146507 LITTLE SUGAR CREEK AT ARCHDALE DRIVE AT CHARLOTTE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/16	1025	WATER	0.1	2.08	26	481	7.40	21.0		8.2	10K

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/16	1025	WATER	0.1	118	14	350	.19	14.000	16.000	5.300	4.200

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/16	1025	WATER	0.1								31

SANTEE RIVER BASIN

02146579 IRVINS CREEK AT LEBANON ROAD NEAR MINT HILL, NC

LOCATION--Lat 35°09'58", long 80°41'24", 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.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WRD NC 84-1: 1983.

GAGE.--Water-stage recorder. Datum of gage is 646.88 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. The drainage area is urbanized and has an impervious area of about 10 percent.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,150 ft^3/s (revised) Aug.19, 1986, gage height, 8.37 ft, from rating curve extended above 720 ft^3/s; no flow at times in 1983, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 28	1145	557	6.09	Sept. 7	1900	784	7.17
Mar. 1	0100	338	4.93	Sept. 9	1830	569	6.15
Sept. 7	0515	*1,150	*8.53	Sept. 11	0130	788	7.19

Minimum daily, 0.12 ft4/s Aug. 27, 28.

REVISIONS.--The peak discharges and annual maximum (*) reported for water years 1983 to 1986 have been revised as shown in the following table. They supersede figures published in the reports for 1983 to 1986.

Water Year	Date	Time	Discharge (ft^3/s)	Gage ht. (ft)	Water Year	Date	Time	Discharge (ft^3/s)	Gage ht. (ft)
1983	Dec. 12	0115	789	7.19	1984	Mar. 28	0945	845	7.43
	Feb. 14	1500	404	5.30		July 29	1345	410	5.33
	Mar. 06	1015	422	5.39					
	Mar. 17	2015	*812	*7.29	1985	May 16	0015	514	5.86
						June 06	1945	509	5.83
						June 07	2015	*840	*7.41
1984	Dec. 06	0900	*1,080	*8.29		Aug. 17	1930	764	7.08
	Dec. 12	0100	663	6.62		Aug. 21	1015	556	6.08
	Jan. 10	2115	913	7.71					
	Feb. 13	2030	750	7.02	1986	Oct. 4	0245	489	5.72
	Feb. 23	0815	426	5.41		Aug. 5	0145	773	7.12
	Feb. 27	1330	581	6.21		Aug. 19	2115	*1,100	*8.37

SANTEE RIVER BASIN

02146579 IRVINS CREEK AT LEBANON ROAD NEAR MINT HILL, NC--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.39	2.7	7.3	60	4.2	81	5.5	2.1	e.83	11	e.54	.24
2	.35	.96	20	13	7.1	10	4.7	2.0	e.80	2.0	e.40	.22
3	.33	.65	8.9	6.2	5.6	6.5	4.4	2.0	e.78	1.0	e.32	.22
4	.34	.60	5.2	4.7	4.4	5.1	4.2	2.0	e.78	1.1	e.27	.25
5	.28	.67	4.1	4.0	3.9	4.4	3.8	1.9	1.2	6.5	e.24	6.4
6	.24	.68	3.6	3.5	3.8	4.0	3.5	1.8	.80	4.9	e.23	5.7
7	.22	.96	3.6	3.4	4.5	3.7	3.4	1.8	.73	1.3	6.9	302
8	.27	.82	4.3	3.2	3.8	12	3.4	1.7	.67	.87	3.5	20
9	1.9	.76	6.3	3.1	3.5	12	3.2	1.6	.63	.69	e1.3	76
10	1.1	.79	7.7	3.3	3.5	6.4	3.1	1.6	.61	.67	e.90	13
11	.49	1.8	13	3.4	3.4	4.7	3.1	1.5	.59	.65	e.45	103
12	.41	11	9.2	3.5	3.4	4.5	3.0	1.5	.61	.61	e.35	15
13	.46	1.8	6.6	3.3	3.2	4.2	2.9	4.6	.58	1.3	e.25	16
14	5.2	1.1	5.4	3.3	3.3	3.8	2.9	2.3	.64	.64	e.60	4.0
15	.51	4.9	5.0	3.5	3.4	3.6	8.2	8.8	.61	.85	e1.2	2.4
16	.46	1.8	4.6	3.5	4.6	3.4	5.0	4.0	.68	.44	e.40	1.8
17	.45	1.5	4.4	4.1	5.3	3.3	4.2	3.1	.62	.39	e.18	1.5
18	.43	1.3	4.3	23	8.5	3.3	3.6	e2.8	.65	.39	e.16	1.3
19	.46	1.2	4.0	92	7.5	27	3.2	e2.5	.69	.36	e.15	1.2
20	.41	13	3.9	10	6.0	7.0	3.0	e2.1	.87	.35	e.14	1.2
21	.40	3.9	3.8	6.2	4.9	5.1	2.8	e1.7	.74	.32	e.14	1.1
22	.40	2.4	3.7	39	6.6	4.2	2.7	e1.6	.50	.31	e.15	.91
23	.39	2.0	3.9	17	9.3	3.8	2.5	e1.4	1.1	.29	e.15	.88
24	.39	1.7	18	12	5.0	3.6	5.9	e1.3	.65	.28	e.14	.86
25	3.7	5.6	8.4	27	4.3	5.6	3.7	e1.2	5.6	.27	e.13	.87
26	4.6	51	6.1	15	4.3	4.9	2.9	e1.1	1.0	.25	e.13	.84
27	.67	8.7	5.3	7.6	75	30	2.6	e1.0	.78	6.3	e.12	.85
28	.57	3.6	4.9	6.0	199	19	2.3	e1.0	.58	3.0	.12	.90
29	.54	3.1	4.6	5.3	---	6.3	2.1	e.95	.49	1.4	4.7	.83
30	.54	3.1	4.6	5.8	---	18	2.2	e.92	.46	e1.2	2.2	2.0
31	.55	---	4.5	4.8	---	9.8	---	e.88	---	e.80	.24	---
TOTAL	27.45	134.09	199.2	399.7	401.3	320.2	108.0	64.75	26.27	50.43	26.70	581.47
MEAN	.89	4.47	6.43	12.9	14.3	10.3	3.60	2.09	.88	1.63	.86	19.4
MAX	5.2	51	20	92	199	81	8.2	8.8	5.6	11	6.9	302
MIN	.22	.60	3.6	3.1	3.2	3.3	2.1	.88	.46	.25	.12	.22
CFSM	.17	.85	1.22	2.45	2.72	1.96	.68	.40	.17	.31	.16	3.68
IN.	.19	.95	1.41	2.82	2.83	2.26	.76	.46	.19	.36	.19	4.10

CAL YR 1986 TOTAL 1179.71 MEAN 3.23 MAX 126 MIN .04 CFSM .61 IN. 8.33
WTR YR 1987 TOTAL 2339.54 MEAN 6.41 MAX 302 MIN .12 CFSM 1.22 IN. 16.5

e Estimated

SANTEE RIVER BASIN

02146579 IRVINS CREEK AT LEBANON ROAD NEAR MINT HILL, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1980, December 1982 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1982 to current year.
WATER TEMPERATURE: December 1982 to current year.

INSTRUMENTATION.--Water-quality monitor since December 1982.

REMARKS.--Station operated as part of 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, 308 microsiemens Feb. 17, 1987; minimum, 23 microsiemens July 29, 1984 and June 7, 1985.
WATER TEMPERATURE: Maximum, 33.5°C Aug. 5, 1986; minimum, 0.0°C Jan. 20, 1985, several days during December, 1985 and January, 1986.

EXTREMES FOR CURRENT PERIOD.--
SPECIFIC CONDUCTANCE: Maximum, 303 microsiemens Feb. 17; minimum, 28 microsiemens Sept. 11.
WATER TEMPERATURE: Maximum, 31.4°C July 6, minimum, 1.7°C Jan. 29.

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	180	172	175	204	97	125	140	123	128	145	66	95
2	179	172	175	136	111	123	130	103	109	97	79	89
3	181	173	177	173	136	154	112	104	109	107	98	102
4	184	174	178	188	153	175	119	113	116	116	108	111
5	181	176	179	193	180	187	128	119	123	122	115	118
6	183	178	179	192	153	179	131	125	127	129	122	125
7	183	176	180	193	176	188	134	131	133	136	124	128
8	183	170	176	208	182	191	139	134	137	136	129	131
9	179	108	147	210	174	195	147	126	139	137	134	135
10	135	114	125	220	179	198	128	120	125	145	135	137
11	154	137	146	223	121	183	129	112	120	136	116	127
12	159	153	155	126	58	88	123	114	119	134	124	128
13	186	122	172	149	81	95	127	123	124	140	132	135
14	117	59	87	164	149	158	134	128	131	137	132	134
15	130	109	119	167	108	126	139	135	138	142	132	136
16	143	131	139	149	120	136	147	140	142	146	135	139
17	150	143	146	158	152	155	152	147	150	135	128	132
18	154	146	150	185	159	166	151	147	149	132	73	99
19	185	94	149	188	161	170	157	149	152	82	52	72
20	190	147	163	169	96	129	157	154	156	97	80	89
21	183	149	161	127	111	120	157	154	155	104	97	100
22	191	148	164	128	126	127	158	153	155	102	57	74
23	155	146	152	138	128	132	157	141	150	87	69	80
24	159	149	153	156	139	147	143	80	109	96	84	89
25	162	63	136	162	119	139	119	100	109	95	61	82
26	114	62	83	136	75	114	124	119	122	84	72	78
27	131	114	125	115	96	106	131	125	128	92	85	88
28	142	131	134	127	117	122	133	130	132	97	91	94
29	175	142	152	143	128	136	143	132	136	102	97	99
30	180	147	157	149	139	145	145	141	143	109	101	103
31	177	151	156	---	---	---	143	141	142	108	102	105
MONTH	191	59	151	223	58	147	158	80	133	146	52	108

SANTEE RIVER BASIN

02146579 IRVINS CREEK AT LEBANON ROAD NEAR MINT HILL, NC--Continued

SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG C, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	110	107	109	71	49	64	106	97	100	147	142	145
2	111	94	105	83	72	78	112	106	107	148	143	146
3	106	99	102	90	84	86	115	110	112	160	147	150
4	111	106	108	96	90	93	121	109	113	153	148	150
5	114	111	112	100	96	98	116	111	114	150	146	148
6	120	113	115	108	100	102	120	112	115	149	146	148
7	118	112	114	109	106	108	131	114	120	150	147	148
8	117	113	115	113	82	100	126	112	119	150	147	148
9	124	118	120	90	85	88	126	113	121	152	147	148
10	121	118	120	98	91	94	135	114	124	151	148	150
11	125	120	122	108	99	102	130	117	125	153	147	150
12	132	122	126	109	105	106	134	119	127	155	150	152
13	130	124	127	111	107	108	140	121	130	157	112	142
14	134	126	130	119	110	113	140	132	136	149	124	140
15	134	122	127	120	113	116	141	93	117	151	73	135
16	125	101	113	121	113	117	110	104	106	124	91	112
17	308	101	122	123	112	117	115	108	110	141	125	132
18	279	118	184	122	115	118	120	112	116	147	141	143
19	115	107	113	111	64	80	126	116	121	153	147	149
20	113	104	107	96	83	89	131	120	126	153	150	151
21	118	111	113	104	96	99	138	126	132	154	151	152
22	122	108	116	110	104	106	141	130	136	154	150	152
23	110	99	103	117	107	111	144	132	139	157	150	153
24	117	107	112	118	109	114	140	107	120	157	154	155
25	121	115	118	117	102	108	123	109	115	158	151	155
26	131	118	122	110	100	104	130	123	124	159	153	156
27	129	70	87	112	60	98	134	129	131	160	152	156
28	72	49	62	90	71	80	141	134	137	160	152	156
29	---	---	---	104	90	97	147	137	141	168	136	151
30	---	---	---	105	80	90	155	142	146	161	153	157
31	---	---	---	96	88	91	---	---	---	162	153	157
MONTH	308	49	115	123	49	99.2	155	93	123	168	73	148
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	164	151	159	174	60	145	174	165	170	158	144	153
2	169	156	161	126	83	108	176	165	171	164	145	155
3	170	161	166	152	127	136	177	164	171	169	152	161
4	170	140	159	144	137	142	182	170	176	175	165	169
5	156	138	145	148	74	135	182	173	177	174	62	108
6	163	156	159	133	106	122	190	176	180	120	76	94
7	163	159	161	142	124	131	181	63	111	96	29	63
8	166	163	164	153	143	147	157	104	133	90	65	79
9	167	164	166	161	150	155	159	116	141	92	38	79
10	169	165	167	165	149	158	172	160	166	82	67	74
11	170	167	169	167	152	161	177	167	172	70	28	61
12	171	168	169	175	159	166	175	159	170	85	66	77
13	174	169	172	174	132	160	179	165	173	81	67	73
14	171	166	169	161	141	154	180	171	175	103	82	90
15	169	163	166	163	144	153	183	165	177	121	103	109
16	168	166	167	168	155	162	177	167	170	131	121	125
17	171	165	168	174	153	164	186	169	178	134	126	130
18	168	163	166	174	151	165	186	171	180	139	128	134
19	167	150	160	178	153	166	190	177	184	147	136	140
20	163	148	155	178	160	170	188	175	183	148	134	140
21	160	144	150	182	155	170	191	174	184	143	133	140
22	169	152	160	182	153	170	189	172	183	144	134	140
23	170	129	159	195	163	178	197	178	189	141	133	137
24	164	132	154	189	168	179	197	186	191	140	131	136
25	167	75	119	192	167	181	200	187	194	139	128	135
26	145	116	131	189	171	182	199	178	191	144	132	138
27	158	146	150	190	75	175	199	182	190	142	127	136
28	163	153	157	145	86	115	200	185	193	141	127	135
29	177	156	163	150	140	145	199	63	186	142	127	137
30	181	156	167	161	153	157	123	73	101	154	108	122
31	---	---	---	170	157	163	152	124	140	---	---	---
MONTH	181	75	159	195	60	155	200	63	171	175	28	119

YEAR MAXIMUM 308 MINIMUM 28 MEAN 136

SANTEE RIVER BASIN

02146579 IRVINS CREEK AT LEBANON ROAD NEAR MINT HILL, NC--Continued

TEMPERATURE, WATER, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	24.7	20.9	22.6	15.1	13.9	14.5	9.9	9.1	9.5	6.2	4.7	5.7
2	24.7	21.2	22.8	18.1	15.0	16.2	10.3	9.2	9.8	7.0	5.7	6.4
3	24.4	20.9	22.5	15.9	13.7	14.8	11.4	9.3	10.4	6.4	4.1	5.3
4	24.8	20.2	22.5	16.1	13.0	14.4	9.5	7.6	8.6	6.2	3.9	5.0
5	24.4	21.7	23.0	16.2	14.2	15.2	9.0	6.8	7.7	7.1	4.2	5.6
6	22.1	17.8	19.8	18.7	15.5	16.9	7.7	5.3	6.6	7.2	3.5	5.2
7	19.2	17.1	18.2	17.2	15.9	16.7	7.8	4.1	6.1	8.2	4.0	6.3
8	20.2	16.8	18.4	19.1	15.6	17.2	9.1	6.7	7.9	8.1	5.9	7.1
9	19.9	18.4	19.1	20.3	17.5	18.8	13.3	9.2	11.2	7.7	4.6	6.3
10	19.5	16.8	18.6	18.1	14.3	15.9	14.9	12.8	13.7	9.8	7.4	8.6
11	16.7	15.1	16.0	14.6	13.7	14.0	13.4	9.8	11.3	8.3	5.8	7.4
12	18.6	15.6	17.0	14.2	13.6	13.9	10.0	9.0	9.6	7.8	4.6	6.2
13	20.0	17.8	18.8	13.9	8.9	12.5	8.7	6.0	7.4	7.9	4.2	6.2
14	22.2	18.6	20.7	8.8	6.2	7.2	6.8	4.2	5.7	8.9	5.2	7.2
15	18.4	14.1	16.2	9.9	6.9	8.7	8.4	5.7	6.9	11.7	8.5	10.0
16	15.1	12.3	13.5	10.7	9.6	10.1	9.3	6.0	7.6	11.3	10.3	10.6
17	14.9	10.9	12.9	12.4	10.5	11.4	10.6	7.4	8.9	10.0	8.5	9.3
18	14.7	11.6	13.0	14.0	12.4	13.0	10.2	7.9	9.5	8.4	7.0	7.8
19	18.2	10.3	12.2	13.3	10.6	11.8	8.0	6.2	7.3	8.3	7.5	8.0
20	13.4	8.8	10.9	10.4	9.5	10.0	8.3	5.9	7.1	8.2	6.8	7.6
21	13.8	10.0	11.6	11.4	9.2	10.1	6.6	4.8	5.9	8.4	7.5	7.9
22	14.7	10.3	12.3	11.3	7.7	9.5	5.9	3.6	4.5	6.4	4.0	5.0
23	15.3	11.5	13.4	11.2	9.1	10.1	6.2	2.9	4.6	6.0	4.5	5.2
24	16.3	12.9	14.4	14.4	10.2	12.3	7.5	6.3	6.9	7.1	3.4	5.2
25	16.5	14.8	15.5	13.8	12.5	13.3	8.0	6.9	7.3	6.8	4.9	5.7
26	18.6	16.4	17.5	16.4	11.8	13.3	8.5	6.6	7.6	5.5	4.4	5.0
27	17.6	15.4	16.5	14.6	13.0	13.9	8.0	5.7	6.7	4.7	2.6	3.4
28	15.6	13.3	14.5	13.0	12.6	12.8	6.5	4.1	5.4	5.0	2.3	3.4
29	15.2	12.2	13.7	14.3	11.2	12.7	6.9	3.3	5.2	5.8	1.7	3.8
30	15.5	12.2	13.8	12.3	10.1	11.4	6.7	3.7	5.2	8.6	5.4	6.7
31	15.0	12.4	13.8	---	---	---	6.2	2.8	4.8	6.6	4.2	5.6
MONTH	24.8	8.8	16.6	20.3	6.2	13.1	14.9	2.8	7.64	11.7	1.7	6.41
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	6.5	3.3	5.0	9.7	5.0	7.6	14.8	6.7	10.0	21.5	14.6	17.6
2	6.4	5.3	5.9	10.6	6.5	8.2	14.5	7.1	10.6	23.2	14.9	18.0
3	10.0	6.2	7.8	12.8	5.9	8.8	12.3	9.5	10.8	20.9	15.8	18.0
4	9.5	6.2	7.8	11.5	6.4	9.1	11.7	6.9	8.9	19.8	14.6	17.5
5	8.5	6.5	7.3	13.0	6.2	8.6	12.1	6.4	8.6	19.3	13.5	15.5
6	9.0	5.7	7.4	12.8	5.8	8.6	15.3	6.2	9.9	20.1	11.9	15.3
7	10.8	7.6	8.7	14.6	6.3	9.4	13.0	7.3	10.1	20.5	14.3	16.9
8	9.9	5.8	7.5	12.1	9.3	10.3	16.5	8.4	11.7	21.9	15.8	18.0
9	6.5	3.5	4.9	12.8	11.0	11.6	17.8	8.5	12.3	21.2	13.3	16.5
10	7.2	2.0	4.7	11.8	7.3	9.6	18.3	8.5	12.8	22.3	14.1	17.3
11	8.0	3.0	5.7	9.6	5.9	7.2	18.7	11.0	14.2	21.0	15.4	17.6
12	11.5	6.4	8.5	10.0	6.3	7.8	19.5	11.5	15.1	20.0	15.9	17.6
13	10.6	6.0	8.0	11.8	5.7	8.3	21.9	13.4	16.7	19.1	16.2	17.5
14	9.1	5.9	7.7	13.3	6.0	9.0	16.5	14.2	15.6	17.2	16.0	16.6
15	9.6	7.4	8.3	14.5	6.9	10.3	19.3	15.0	16.6	21.0	15.3	17.6
16	7.4	2.3	4.9	10.4	7.5	9.0	19.2	15.2	16.7	24.0	17.2	20.0
17	4.5	3.0	3.9	13.0	6.0	8.7	17.8	14.1	15.6	23.6	18.0	20.2
18	6.1	4.1	5.1	8.3	6.0	7.3	18.6	13.2	15.5	23.9	17.2	20.1
19	7.2	4.8	6.0	9.5	6.7	8.2	21.2	14.0	16.9	24.1	18.3	20.6
20	8.6	4.7	6.7	13.5	7.3	10.0	22.2	14.0	17.5	20.9	18.4	19.5
21	9.2	6.6	7.7	15.7	7.6	10.6	22.8	14.6	17.9	21.8	17.1	18.8
22	7.2	6.4	6.8	15.8	7.7	11.1	23.1	14.6	18.4	21.6	17.2	19.1
23	9.1	5.2	7.0	16.8	8.3	12.3	21.3	17.0	18.7	23.4	16.7	19.5
24	8.9	5.4	7.0	16.1	8.4	11.6	20.4	17.3	18.4	24.0	18.1	20.7
25	9.9	6.6	8.0	15.0	10.4	12.5	17.7	13.6	16.1	25.2	18.6	21.3
26	7.3	6.3	6.9	16.8	12.2	14.8	19.3	12.2	14.8	23.7	19.5	21.4
27	6.7	4.9	5.8	17.0	11.4	14.2	18.7	11.5	14.9	24.5	19.9	21.6
28	6.5	4.4	5.3	20.5	12.4	15.7	18.6	12.7	14.9	23.9	19.2	21.2
29	---	---	---	16.0	13.0	14.4	19.6	10.2	14.0	24.8	19.7	22.4
30	---	---	---	17.2	13.4	15.7	21.0	12.9	16.4	24.9	19.1	21.7
31	---	---	---	15.6	8.5	12.9	---	---	---	24.6	19.7	21.9
MONTH	11.5	2.0	6.65	20.5	5.0	10.4	23.1	6.2	14.4	25.2	11.9	19.0

SANTEE RIVER BASIN

02146579 IRVINS CREEK AT LEBANON ROAD NEAR MINT HILL, NC--Continued

TEMPERATURE, WATER, DEGREES CENTIGRADE, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.1	20.4	22.2	27.4	22.6	24.5	27.6	22.9	24.8	22.7	19.4	20.8
2	26.4	19.6	22.5	27.9	23.6	25.0	27.2	23.0	24.9	23.1	17.7	20.0
3	27.4	21.2	23.7	28.2	23.4	25.1	29.1	23.5	25.9	22.5	18.5	20.3
4	25.4	22.0	23.1	26.9	23.2	24.9	27.9	24.1	25.7	20.3	18.5	19.5
5	26.3	20.1	22.4	28.8	23.3	25.3	29.0	23.4	25.6	18.3	16.5	17.3
6	25.7	18.2	21.4	31.4	25.6	29.0	27.1	22.9	24.3	22.0	18.1	19.9
7	26.4	18.4	21.8	27.0	24.9	25.7	26.2	23.3	24.1	23.6	21.0	22.0
8	26.7	19.5	22.7	29.5	22.2	25.5	27.2	22.0	23.7	25.4	21.7	23.1
9	26.3	20.4	23.0	29.4	23.4	26.1	27.5	22.1	24.2	25.6	21.7	22.8
10	25.8	20.9	23.0	30.0	24.0	26.4	25.4	23.0	24.1	28.1	21.2	24.0
11	23.4	19.9	21.6	29.5	24.1	26.2	23.3	21.9	22.4	25.8	20.9	23.3
12	27.1	20.7	23.2	28.6	24.2	26.2	24.7	20.8	22.2	24.1	22.1	23.2
13	24.6	22.1	23.4	28.5	23.1	25.2	25.0	20.1	21.8	25.3	23.1	24.1
14	26.1	21.8	23.4	28.2	23.8	25.3	21.7	18.2	20.1	25.8	22.1	23.8
15	26.4	21.9	23.6	26.1	22.3	24.2	21.4	20.1	20.7	23.8	19.9	22.1
16	25.6	22.3	23.7	25.9	19.6	23.3	24.0	19.5	21.3	24.5	20.1	21.8
17	26.5	22.1	23.9	26.6	20.5	23.3	26.3	19.9	22.4	24.4	20.7	22.4
18	26.4	22.3	23.9	26.9	20.4	23.4	25.6	20.6	22.9	24.7	21.4	22.9
19	24.5	21.6	22.9	27.6	20.7	23.7	26.0	21.1	23.4	24.8	20.6	22.4
20	26.3	21.2	23.0	28.5	20.4	24.4	26.3	20.7	22.9	23.9	21.2	22.4
21	26.7	21.3	23.5	28.0	21.3	24.6	25.6	20.0	22.4	22.1	17.9	19.9
22	27.6	22.4	24.4	29.4	22.6	25.2	26.3	21.2	23.0	20.5	17.2	18.7
23	27.2	22.2	24.0	28.8	23.0	25.3	27.1	19.3	22.8	20.4	15.7	17.7
24	27.5	22.5	24.6	28.2	22.3	25.1	24.3	19.8	22.3	20.4	15.6	17.9
25	24.3	21.8	22.8	29.8	23.3	25.7	24.4	18.2	21.1	20.2	15.2	17.8
26	24.8	21.4	22.6	29.1	23.2	25.5	26.5	20.4	23.0	20.8	15.9	18.4
27	25.7	20.8	22.7	29.5	22.9	25.2	26.5	22.1	23.8	20.9	15.1	18.4
28	25.2	17.4	20.7	27.2	21.9	24.3	26.0	21.5	23.6	22.7	17.0	20.0
29	25.8	17.0	20.7	26.6	22.3	24.1	25.4	20.9	23.0	22.3	17.7	19.8
30	27.3	19.6	22.8	25.6	22.2	23.8	22.5	19.9	21.4	22.4	18.8	20.8
31	---	---	---	28.5	22.1	24.5	22.5	19.5	20.9	---	---	---
MONTH	27.6	17.0	22.9	31.4	19.6	25.0	29.1	18.2	23.1	28.1	15.1	20.9

YEAR MAXIMUM 31.4 MINIMUM 1.7 MEAN 15.6

SANTEE RIVER BASIN

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.

WATER-DISCHARGE RECORDS

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

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

AVERAGE DISCHARGE.--25 years, 40.9 ft^3/s, 14.03 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,690 ft^3/s Mar. 24, 1979, gage height, 16.7 ft from floodmark; no flow Nov. 15, 1972, result of upstream construction; minimum, not affected by construction, 0.17 ft^3/s July 19,1986.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 19	0930	2,010	9.76	Sept. 9	2130	*4,060	*13.95
Feb. 28	Unknown	2,700	11.54	Sept. 11	0345	3,110	12.30
Sept. 7	2245	3,110	12.30				

Minimum discharge, 0.73 ft^3/s Aug. 28, 29, gage height, 0.84 ft; minimum daily, 0.84 ft^3/s Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	33	53	466	25	e200	43	11	5.7	44	4.3	3.3
2	1.9	17	147	105	57	e70	32	11	13	37	4.1	2.8
3	1.6	7.5	61	43	44	e40	28	12	5.3	14	2.9	2.8
4	1.7	5.6	28	27	27	e30	28	15	31	9.8	2.2	6.9
5	1.7	6.8	18	21	22	e25	24	12	21	14	1.8	73
6	1.4	6.2	15	17	20	e24	23	9.2	5.5	83	1.8	90
7	1.2	11	12	16	28	e23	21	9.0	4.7	11	138	1350
8	1.3	11	15	14	20	e300	20	8.2	4.4	7.2	67	406
9	29	6.4	31	13	17	e100	21	7.6	4.2	5.5	35	1060
10	20	5.3	62	15	15	e50	18	7.4	4.1	4.5	7.4	360
11	6.4	14	102	13	15	e35	18	7.0	4.1	4.0	5.4	1040
12	3.3	120	62	12	e14	e45	17	7.9	4.2	8.8	4.0	148
13	3.0	25	35	11	e14	e33	16	37	4.2	7.7	3.2	148
14	104	11	21	11	e14	e25	15	18	4.3	6.1	2.7	30
15	9.4	60	17	12	e16	e21	135	50	4.2	6.3	3.1	16
16	5.2	22	16	11	e30	e20	72	46	5.2	3.2	4.4	12
17	4.1	18	14	17	e80	e19	57	14	4.5	2.6	3.2	10
18	3.4	14	13	171	e100	e18	32	10	29	2.4	2.5	8.4
19	3.0	10	11	662	e50	e300	23	8.3	15	2.3	2.2	7.6
20	3.1	125	10	79	e30	e70	20	7.7	20	2.1	1.9	7.5
21	2.9	44	9.8	44	e20	e33	17	7.5	19	2.0	1.8	7.5
22	2.8	18	9.3	285	e40	e22	16	7.4	5.6	1.7	1.8	7.1
23	2.7	13	9.7	153	e150	e18	15	6.9	4.8	1.5	1.5	6.1
24	2.6	11	143	87	e35	e18	64	6.8	7.5	1.4	1.3	6.3
25	38	58	52	201	e18	51	27	6.4	54	1.3	1.0	5.8
26	85	206	26	126	e23	42	18	6.1	20	1.2	.97	5.7
27	13	73	19	54	e500	194	14	6.1	8.4	12	.88	5.5
28	6.3	25	16	41	e1000	158	13	6.1	5.8	64	.84	4.9
29	4.9	18	14	34	---	48	11	6.1	4.7	5.4	1.2	6.0
30	4.5	14	13	40	---	137	11	5.7	4.4	9.2	45	27
31	3.7	---	11	33	---	87	---	5.5	---	6.4	5.9	---
TOTAL	372.9	1008.8	1065.8	2834	2424	2256	869	378.9	327.8	381.6	359.29	4864.2
MEAN	12.0	33.6	34.4	91.4	86.6	72.8	29.0	12.2	10.9	12.3	11.6	162
MAX	104	206	147	662	1000	300	135	50	54	83	138	1350
MIN	1.2	5.3	9.3	11	14	18	11	5.5	4.1	1.2	.84	2.8
CFSM	.30	.85	.87	2.31	2.19	1.84	.73	.31	.28	.31	.29	4.09
IN.	.35	.95	1.00	2.66	2.28	2.12	.82	.36	.31	.36	.34	4.57

CAL YR 1986 TOTAL 8169.62 MEAN 22.4 MAX 721 MIN .26 CFSM .57 IN. 7.67
WTR YR 1987 TOTAL 17142.19 MEAN 47.0 MAX 1350 MIN .84 CFSM 1.19 IN. 16.1

e Estimated

SANTEE RIVER BASIN

02146600 McALPINE CREEK AT SARDIS ROAD NEAR CHARLOTTE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/16	1110	WATER	0.1	1.08	5	141	6.70	15.0		8.3	1200
86/11/13	1040	WATER	0.1	1.39	23	98	6.50	12.0	110.0	9.4	
87/02/05	1530	WATER	0.1	1.38	21	119	6.30	8.0	23.0	12.8	
87/05/06	1600	WATER	0.1	1.20	9	145	7.80	20.0	9.5	12.9	
87/08/04	1530	WATER	0.1	.94	2	151	7.00	30.0	25.0	6.0	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/16	1110	WATER	0.1	40	24	130					
86/11/13	1040	WATER	0.1	32	44	170	.16	.010	.400	.120	.030
87/02/05	1530	WATER	0.1	43	5	110	.18	.040	.200	.050	.010
87/05/06	1600	WATER	0.1	70	5	130	.14	.030	.200	.050	.010
87/08/04	1530	WATER	0.1	60	31	130	.07	.060	.300	.070	.020

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/13	1040	WATER	0.1	10K	10K	25K	19	50K	.2K	50K	24
87/02/05	1530	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/06	1600	WATER	0.1	10K	10K	85	11	50K	.2K	50K	10K
87/08/04	1530	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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 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. 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 fair. Creek channel improved by dredging in 1928. The drainage area is in the eastern part of the city and has an impervious area of about 15 percent.

AVERAGE DISCHARGE.--25 years, 7.86 ft^3/s, 15.36 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,150 ft^3/s June 10, 1982, gage height, 10.89 ft, from rating curve extended above 1,400 ft^3/s on basis of computation of peak flow through culvert; no flow Aug. 31, Sept. 1, 2, 1962, Sept. 19-23, 1963, Sept. 3, 4, Oct. 5, 1968, Oct. 8, 27, 28, 1970, Mar. 28, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 6, 1962 reached a stage of 7.5 ft, former site and datum, from floodmarks, discharge, 1,040 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 28	1015	669	5.53	Sept. 9	2015	*1,660	8.93
Mar. 1	0100	520	4.78	Sept. 11	0100	1,640	8.90
Sept. 7	1715	511	4.73				

Minimum discharge, 0.01 ft^3/s Aug. 27, gage height, 0.63; minimum daily, 0.02 ft^3/s Aug. 25, 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	8.4	10	101	2.4	102	4.2	1.1	2.3	.66	.43	.07
2	.10	1.6	27	10	16	9.9	3.2	1.1	2.2	1.2	.15	.07
3	.09	.60	4.6	3.2	5.0	4.7	3.0	2.3	.53	.64	.12	.09
4	.07	.37	1.7	2.0	2.9	3.4	2.8	3.0	21	1.4	.08	.06
5	.07	.77	1.2	1.6	2.2	2.7	2.1	1.8	3.1	.56	.07	18
6	.06	.64	1.1	1.3	2.1	2.4	1.9	.96	.72	.60	.19	16
7	.03	1.1	.96	1.2	4.3	2.1	1.8	.91	.54	.31	13	134
8	.04	1.5	1.7	1.1	1.9	26	1.8	.85	.40	.25	4.6	8.8
9	7.8	.52	6.2	1.1	1.5	19	1.7	.73	.33	.22	2.6	225
10	3.4	.41	9.4	1.5	1.4	5.3	1.6	.73	.33	.19	.29	12
11	.69	3.4	25	1.1	1.4	3.1	1.6	.96	.27	.16	.18	229
12	.24	30	6.5	.94	1.4	3.3	1.5	.83	.31	6.7	.12	43
13	.48	1.8	2.6	.84	1.4	2.5	1.5	6.9	.28	5.0	.07	16
14	45	.97	1.6	.84	1.8	2.1	1.6	1.9	.29	.95	.05	2.3
15	.65	e22	1.4	1.2	2.5	2.0	32	13	.34	.28	.49	1.2
16	.26	e3.6	1.2	1.0	4.0	1.8	13	2.9	.72	.14	.18	.82
17	.19	e1.7	1.1	2.5	8.5	1.7	14	.97	.39	.17	.14	.69
18	.16	e.74	1.1	47	10	1.6	5.2	.82	14	.11	.09	.52
19	.25	e.62	.97	114	6.0	55	2.6	.85	2.0	.11	.07	.52
20	.28	e30	.75	8.1	3.6	5.3	1.9	.89	8.3	.12	.07	.49
21	.33	e3.9	.73	3.8	2.5	3.4	1.7	.90	2.3	.12	.04	.45
22	.26	e1.5	.73	52	8.7	2.6	1.6	.80	.57	.11	.04	.43
23	.31	e.90	1.0	24	11	2.1	1.8	.73	.38	.08	.03	.29
24	.29	e.86	46	15	2.9	2.0	15	.76	.31	.07	.04	.26
25	19	e.94	4.6	52	2.2	13	2.3	.66	5.0	.07	.02	.26
26	20	e20	2.0	17	3.7	4.9	1.6	.69	.91	.06	.03	.26
27	1.0	3.2	1.5	5.8	135	27	1.4	.54	.47	3.6	.02	.29
28	.41	1.3	1.2	4.2	270	15	1.3	.49	.29	12	.02	.26
29	.38	1.0	1.1	3.8	---	4.0	1.1	.51	.24	.32	2.7	.26
30	.28	1.2	1.1	5.5	---	28	1.2	.51	.31	.16	.86	3.9
31	.25	---	.96	3.4	---	17	---	.55	---	2.9	.15	---
TOTAL	102.45	145.54	167.00	488.02	516.3	374.9	128.0	50.64	69.13	39.26	26.94	715.29
MEAN	3.30	4.85	5.39	15.7	18.4	12.1	4.27	1.63	2.30	1.27	.87	23.8
MAX	45	30	46	114	270	102	32	13	21	12	13	229
MIN	.03	.37	.73	.84	1.4	1.6	1.1	.49	.24	.06	.02	.06
CFSM	.48	.70	.78	2.27	2.65	1.74	.61	.24	.33	.18	.13	3.43
IN.	.55	.78	.89	2.61	2.76	2.01	.69	.27	.37	.21	.14	3.83

CAL YR 1986 TOTAL 1261.64 MEAN 3.46 MAX 66 MIN .03 CFSM .50 IN. 6.75
WTR YR 1987 TOTAL 2823.43 MEAN 7.74 MAX 270 MIN .02 CFSM 1.11 IN. 15.1

e Estimated

SANTEE RIVER BASIN

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 waste 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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1974 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 516.29 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1977 at datum 1.00 ft higher.

REMARKS.--Records good except those above 800 ft^3/s, which are fair, and those for 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 is the eastern side of the city of Charlotte and has an impervious area of about 12 percent.

AVERAGE DISCHARGE.--13 years, 141 ft^3/s, 20.72 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,340 ft^3/s Dec. 6, 1983, gage height, 12.95 ft; minimum, 0.45 ft^3/s Sept. 30, 1983; minimum daily, 0.46 ft^3/s Sept. 30, 1983.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1964, about 12.9 ft, (former datum), Apr. 1, 1973, from information by waste treatment plant operator.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,450 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 1	0100	5,170	11.45	Sept. 11	1215	5,130	11.41
Sept. 10	0545	*5,390	*11.69				

Minimum discharge, 0.87 ft^3/s Aug. 29; minimum daily, 1.1 ft^3/s Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	48	139	982	54	3640	166	25	16	8.2	e9.0	7.5
2	4.9	48	724	1320	93	957	86	26	30	102	e8.0	4.8
3	4.2	20	418	190	147	250	70	26	14	28	e7.0	3.8
4	3.4	15	91	74	64	105	66	30	91	16	e6.0	5.2
5	3.1	14	49	54	49	70	52	28	212	18	e5.0	152
6	2.7	15	37	43	44	54	46	22	20	120	e4.0	105
7	2.5	14	32	40	58	48	43	21	15	24	e150	1530
8	2.2	25	31	37	51	365	41	20	13	15	e40	2420
9	73	15	53	35	39	751	40	19	11	13	e160	752
10	74	12	235	34	38	192	37	19	10	12	16	3340
11	23	14	445	34	36	84	36	18	9.6	12	11	3410
12	12	669	319	30	33	84	34	18	9.1	11	9.4	1360
13	8.0	154	102	28	32	88	33	25	8.8	22	7.6	1520
14	600	32	50	26	32	71	32	59	8.6	20	5.9	316
15	33	210	41	27	36	54	460	51	8.6	20	4.7	67
16	15	71	36	27	51	41	390	231	9.3	13	4.4	41
17	11	36	32	32	70	39	348	32	10	8.9	4.5	33
18	8.8	33	30	222	152	39	159	22	72	6.8	4.0	26
19	7.4	24	28	2150	138	862	58	20	205	5.7	3.4	22
20	7.0	514	24	1080	90	406	45	19	26	4.7	2.8	21
21	7.0	424	23	186	56	124	39	19	93	4.3	2.2	19
22	6.5	47	21	944	67	71	36	20	19	3.6	1.9	e17
23	6.4	32	21	1310	308	48	34	22	13	3.2	1.8	e15
24	6.2	27	703	471	80	41	149	20	14	2.8	1.6	e13
25	82	225	476	604	48	90	69	17	55	2.5	1.5	e11
26	554	359	72	1100	48	121	38	16	70	2.2	1.4	e9.0
27	44	993	46	242	1440	361	32	15	19	2.3	1.4	e7.0
28	19	95	37	117	4060	1550	30	14	14	55	1.1	e5.0
29	14	47	33	85	---	304	27	13	11	e17	1.2	19
30	12	37	31	88	---	655	25	13	9.1	e13	66	62
31	9.7	---	28	81	---	679	---	12	---	e10	14	---
TOTAL	1660.0	4269	4407	11693	7414	12244	2721	912	1116.1	596.2	556.8	15313.3
MEAN	53.5	142	142	377	265	395	90.7	29.4	37.2	19.2	18.0	510
MAX	600	993	724	2150	4060	3640	460	231	212	120	160	3410
MIN	2.2	12	21	26	32	39	25	12	8.6	2.2	1.1	3.8
CFSM	.58	1.54	1.54	4.08	2.87	4.27	.98	.32	.40	.21	.19	5.52
IN.	.67	1.72	1.77	4.71	2.98	4.93	1.10	.37	.45	.24	.22	6.17

CAL YR 1986 TOTAL 28112.1 MEAN 77.0 MAX 1790 MIN .71 CFSM .83 IN. 11.3
WTR YR 1987 TOTAL 62902.2 MEAN 172 MAX 4060 MIN 1.1 CFSM 1.87 IN. 25.3

e Estimated

SANTEE RIVER BASIN

02146750 McALPINE CREEK BELOW McMULLEN CREEK NEAR PINEVILLE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/16	1415	WATER	0.1	1.43	14	160	6.60	15.0		7.6	1000
86/11/13	1420	WATER	0.1	2.25	72	116	6.50	12.0	140.0	8.0	
86/12/03	1230	WATER	0.1	3.39	325	134	6.70	11.0		9.0	
87/01/06	1200	WATER	0.1	1.94	42	261	6.50	3.0		11.4	
87/02/04	1400	WATER	0.1	2.16	60	156	6.50	9.0	24.0	11.5	
87/03/03	1210	WATER	0.1	.00	250	141	6.70	8.0		11.2	
87/04/01	1315	WATER	0.1	2.67	143	142	6.80	12.0		10.3	
87/05/06	1300	WATER	0.1	1.60	22	187	7.30	17.0	7.3	8.1	
87/06/03	1130	WATER	0.1	1.41	14	176	7.10	25.0		6.5	
87/07/07	1300	WATER	0.1	1.57	20	149	7.30	27.0		6.4	
87/08/05	1400	WATER	0.1	1.21	7	193	7.20	28.0	12.0	6.2	
87/09/03	1215	WATER	0.1	1.06	4	190	7.10	23.0		7.1	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/16	1415	WATER	0.1	51	19	130					
86/11/13	1420	WATER	0.1	45	66	230	.26	.060	.600	.190	.050
86/12/03	1230	WATER	0.1	44							
87/01/06	1200	WATER	0.1	68							
87/02/04	1400	WATER	0.1	54	6	150	.31	.030	.400	.060	.010
87/03/03	1210	WATER	0.1	45							
87/04/01	1315	WATER	0.1	52							
87/05/06	1300	WATER	0.1	79	1	130	.11	.600	.300	.040	.010
87/06/03	1130	WATER	0.1	81							
87/07/07	1300	WATER	0.1	59							
87/08/05	1400	WATER	0.1	77	5	140	.14	.070	.400	.050	.020
87/09/03	1215	WATER	0.1	75							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/13	1420	WATER	0.1	13	10K	25K	15	50K	.2K	50K	17
87/02/04	1400	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/06	1300	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/05	1400	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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

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

AVERAGE DISCHARGE.--27 years, 72.5 ft^3/s, 12.87 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,700 ft^3/s Apr. 1, 1973, gage height, 19.92 ft; no flow Oct. 6, 1968, Oct. 7-15, 1970, 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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 2	0300	1,930	12.81	Mar. 1	Unknown	*4,090	*16.22
Jan. 19	1430	1,590	11.79	Sept. 7	1930	1,790	12.40
Jan. 22	2100	1,730	12.23	Sept. 11	1130	2,330	13.68

Minimum discharge, 0.04 ft^3/s Aug. 21, 22, parts of Aug. 23, 24; minimum daily, 0.04 ft^3/s Aug. 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.75	1.9	43	805	50	e900	92	21	43	5.8	1.9	6.5
2	.75	1.9	279	895	51	e300	63	24	105	6.0	1.5	4.4
3	.75	3.0	194	111	73	e110	55	22	15	6.4	2.0	1.6
4	.66	4.8	59	62	52	e80	52	20	120	7.5	1.5	.82
5	.57	4.9	40	47	43	e60	46	19	87	11	1.2	2.2
6	.66	4.5	31	38	40	e50	43	18	21	7.8	.96	7.4
7	.57	4.6	27	35	59	e40	40	17	14	38	.97	493
8	.44	11	25	32	55	e180	39	17	11	31	7.3	689
9	.45	11	25	29	40	e120	37	16	8.9	10	50	148
10	4.6	7.7	48	29	33	e90	35	15	7.9	6.4	4.6	379
11	14	5.7	176	30	32	e70	33	14	7.1	4.9	2.3	1360
12	8.5	93	145	26	e40	e60	34	14	6.9	4.1	1.2	537
13	4.3	65	98	24	e40	e50	31	15	6.6	3.9	.79	924
14	3.4	22	47	23	e40	e40	26	16	6.6	5.3	.48	89
15	24	75	38	23	e50	e38	456	16	7.9	5.6	.30	37
16	9.1	61	33	23	e60	e36	433	18	10	4.0	.26	24
17	4.5	28	29	24	e70	e34	139	16	8.4	3.3	.42	19
18	2.9	27	28	327	e100	e80	143	13	7.1	2.8	.27	16
19	2.0	22	26	1260	e180	e200	56	12	15	2.6	.13	14
20	1.5	132	24	331	e90	e100	43	11	13	2.4	.06	12
21	1.4	164	22	102	e80	e70	36	11	9.1	2.3	.04	11
22	1.4	41	21	1120	e60	e50	32	11	7.6	2.1	.04	8.8
23	1.5	27	20	657	e180	e40	30	10	6.4	1.9	.05	7.3
24	1.2	22	234	179	e100	e30	32	9.6	5.7	1.7	.08	6.7
25	1.2	123	162	241	e90	37	45	8.9	173	1.6	.29	6.1
26	5.8	478	55	424	e70	42	31	9.3	48	1.3	.60	5.8
27	27	522	40	130	e600	117	26	12	18	1.2	.67	5.5
28	11	73	33	86	e2600	718	24	10	12	1.1	.64	5.3
29	6.4	44	29	67	---	116	22	8.4	8.3	1.0	.51	5.0
30	4.5	32	27	65	---	416	21	7.5	6.5	1.1	2.4	5.4
31	2.9	---	25	62	---	260	---	6.3	---	1.3	3.8	---
TOTAL	148.70	2112.0	2083	7307	4978	4534	2195	438.0	816.0	185.4	87.26	4830.82
MEAN	4.80	70.4	67.2	236	178	146	73.2	14.1	27.2	5.98	2.81	161
MAX	27	522	279	1260	2600	900	456	24	173	38	50	1360
MIN	.44	1.9	20	23	32	30	21	6.3	5.7	1.0	.04	.82
CFSM	.06	.92	.88	3.08	2.32	1.91	.96	.18	.36	.08	.04	2.10
IN.	.07	1.03	1.01	3.55	2.42	2.20	1.07	.21	.40	.09	.04	2.35

CAL YR 1986 TOTAL 12539.96 MEAN 34.4 MAX 1020 MIN .00 CFSM .45 IN. 6.10
WTR YR 1987 TOTAL 29715.01 MEAN 81.4 MAX 2600 MIN .04 CFSM 1.06 IN. 14.4

e Estimated

SANTEE RIVER BASIN

02146900 TWELVE MILE CREEK NEAR WAXHAW, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/16	1155	WATER	0.1	1.66	8	98	6.50	14.0		7.6	270
86/11/13	1130	WATER	0.1	2.34	49	98	6.40	12.0	100.0	8.5	
87/02/05	1420	WATER	0.1	2.34	42	95	6.20	8.0	20.0	12.4	
87/05/06	1520	WATER	0.1	1.95	18	108	6.90	16.0	9.0	9.3	
87/08/04	1415	WATER	0.1	1.27	1	127	7.00	25.0	12.0	5.5	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/16	1155	WATER	0.1	30	4	110					
86/11/13	1130	WATER	0.1	21	59	210					
87/02/05	1420	WATER	0.1	27	2	89					
87/05/06	1520	WATER	0.1	45	3	84					
87/08/04	1415	WATER	0.1	57	4	59					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/13	1130	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/05	1420	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/06	1520	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/04	1415	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

SANTEE RIVER BASIN

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.

WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Records good.

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

AVERAGE DISCHARGE.--37 years, 137 ft^3/s, 23.55 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,050 ft^3/s June 5, 1957, gage height, 18.53 ft; minimum, 21 ft^3/s Sept. 8, 9, 28, 30, Oct. 1-3, 5-7, 11-13, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1916 reached a stage of about 23 ft, from records of North Carolina State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	1500	1,900	8.05	Mar. 1	0200	*4,270	*13.83

Minimum discharge, 42 ft^3/s Oct. 8, gage height, 1.97 ft; minimum daily, 43 ft^3/s Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	89	194	164	188	1870	293	173	200	131	71	63
2	55	98	755	160	194	545	243	173	143	170	78	57
3	50	85	382	145	197	355	352	167	132	138	78	54
4	48	79	241	140	184	280	406	163	137	164	71	58
5	46	79	193	134	168	241	303	159	122	148	71	103
6	44	78	165	130	158	220	273	159	115	135	93	329
7	44	159	150	128	153	206	253	155	111	123	107	814
8	43	201	143	127	147	198	232	151	107	118	101	261
9	59	142	147	124	140	228	216	145	104	114	111	199
10	63	118	148	123	136	217	203	145	109	109	78	131
11	87	121	211	119	135	192	195	142	120	107	74	124
12	70	125	215	115	135	184	188	140	111	103	76	164
13	107	110	174	113	131	176	182	152	111	99	78	432
14	137	99	152	111	130	168	181	159	112	97	74	174
15	84	108	143	113	130	163	621	150	104	93	69	134
16	68	106	134	113	174	159	407	143	120	93	69	119
17	61	100	128	114	153	154	330	137	130	89	71	138
18	58	94	133	203	156	152	276	134	226	85	66	111
19	56	88	121	359	160	212	246	133	442	85	69	102
20	55	99	117	241	170	179	229	137	205	84	73	104
21	53	98	112	190	206	166	218	134	212	78	61	93
22	52	89	108	193	261	156	209	133	156	78	58	88
23	51	90	113	165	348	150	204	129	146	74	56	84
24	50	93	760	149	263	147	252	125	149	73	53	82
25	128	102	394	164	220	178	214	130	139	73	53	80
26	402	864	243	177	202	162	201	132	344	66	56	78
27	144	417	198	157	401	165	191	125	220	71	53	76
28	107	222	175	151	1510	171	187	125	153	69	53	79
29	92	171	159	146	---	160	179	151	137	64	92	80
30	85	146	150	158	---	247	177	126	128	95	61	107
31	77	---	142	200	---	535	---	150	---	74	60	---
TOTAL	2545	4470	6600	4826	6550	8336	7661	4477	4745	3100	2234	4518
MEAN	82.1	149	213	156	234	269	255	144	158	100	72.1	151
MAX	402	864	760	359	1510	1870	621	173	442	170	111	814
MIN	43	78	108	111	130	147	177	125	104	64	53	54
CFSM	1.04	1.89	2.69	1.97	2.96	3.40	3.23	1.83	2.00	1.27	.91	1.91
IN.	1.20	2.10	3.11	2.27	3.08	3.93	3.61	2.11	2.23	1.46	1.05	2.13

CAL YR 1986 TOTAL 39171 MEAN 107 MAX 1470 MIN 27 CFSM 1.36 IN. 18.4
WTR YR 1987 TOTAL 60062 MEAN 165 MAX 1870 MIN 43 CFSM 2.08 IN. 28.3

SANTEE RIVER BASIN

02149000 COVE CREEK NEAR LAKE LURE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/29	1300	WATER	0.1	2.27	91		7.00	11.0		10.6	170
86/11/21	1515	WATER	0.1			39	6.80	10.0	3.1	11.3	
87/02/26	0930	WATER	0.1			28		5.0	3.2	11.5	
87/05/21	0930	WATER	0.1	2.49	135	34		18.0	3.5	9.2	180
87/08/20	1620	WATER	0.1	2.15	69	45	7.30	24.0	19.0	8.3	500

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/29	1300	WATER	0.1	20	8	18					
86/11/21	1515	WATER	0.1	15	5	26					
87/02/26	0930	WATER	0.1		2	31	.14	.030	.200	.020	.010
87/05/21	0930	WATER	0.1		13	55	.15	.030	.100K	.030	.010K
87/08/20	1620	WATER	0.1	14	15	67	.13	.030	.200	.040	.010K

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/21	1515	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/26	0930	WATER	0.1	10K	10K	25K	10K	50K		50K	10K
87/05/21	0930	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/20	1620	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	17

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.

WATER-DISCHARGE RECORDS

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.

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

AVERAGE DISCHARGE.--62 years, 312 ft^3/s, 19.26 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft^3/s Aug. 14, 1940, gage height, 17.93 ft; minimum, 4 ft^3/s Sept. 27, 1935, Aug. 3, 1937, July 24, 1943; minimum daily, 6 ft^3/s June 9, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 1	1830	*10,400	*12.81	No other peaks greater than base discharge.			

Minimum discharge, 34 ft^3/s Oct. 20, 21, 22, 23, 24, 31, and Nov. 1, 2, 4, 5, 6; gage height, 0.90 ft; minimum daily, 92 ft^3/s Aug. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127	184	434	307	483	9400	760	326	270	263	164	132
2	190	191	979	395	484	5290	572	342	237	261	182	116
3	113	216	1080	348	569	1170	531	323	262	259	169	123
4	125	214	639	336	490	834	919	336	223	261	177	127
5	123	188	470	295	435	663	676	321	252	294	162	135
6	115	175	397	308	401	572	561	309	255	267	145	222
7	111	221	354	270	368	505	498	326	184	256	140	325
8	105	457	329	269	375	463	459	287	251	217	173	597
9	131	365	329	289	320	457	432	301	200	232	185	332
10	155	289	364	252	271	465	417	295	216	207	153	263
11	139	287	420	293	300	410	400	291	232	215	146	275
12	151	361	551	238	296	413	372	281	188	200	114	242
13	193	307	455	253	300	381	378	376	227	187	156	287
14	271	267	391	222	304	376	370	381	216	216	148	262
15	254	263	356	257	261	368	412	384	234	205	142	180
16	175	279	328	244	312	361	566	366	208	185	118	186
17	153	253	310	217	360	356	519	330	218	230	143	187
18	139	239	302	329	338	332	504	293	216	182	130	199
19	128	227	290	879	335	414	456	305	586	163	110	190
20	130	240	272	737	366	435	421	302	437	153	110	165
21	131	287	258	500	337	393	399	301	331	173	142	155
22	128	248	248	421	373	372	384	285	304	160	103	165
23	135	229	237	454	524	351	375	294	413	149	122	141
24	131	230	1080	376	531	347	444	286	382	175	103	151
25	149	225	1580	354	439	387	399	261	313	147	116	146
26	643	643	699	462	408	422	375	272	686	147	92	149
27	395	1490	601	431	660	381	354	325	610	143	126	139
28	268	661	316	413	3250	464	358	306	406	159	114	140
29	218	456	368	338	---	436	335	296	326	133	122	169
30	210	378	345	379	---	543	331	273	289	124	151	220
31	199	---	298	461	---	1110	---	264	---	233	140	---
TOTAL	5635	10070	15080	11327	13890	28871	13977	9638	9172	6196	4298	6120
MEAN	182	336	486	365	496	931	466	311	306	200	139	204
MAX	643	1490	1580	879	3250	9400	919	384	686	294	185	597
MIN	105	175	237	217	261	332	331	261	184	124	92	116
CFSM	.83	1.53	2.21	1.66	2.25	4.23	2.12	1.41	1.39	.91	.63	.93
IN.	.95	1.70	2.55	1.92	2.35	4.88	2.36	1.63	1.55	1.05	.73	1.03

CAL YR 1986 TOTAL 80855 MEAN 222 MAX 1580 MIN 28 CFSM 1.01 IN. 13.7
WTR YR 1987 TOTAL 134274 MEAN 368 MAX 9400 MIN 92 CFSM 1.67 IN. 22.7

SANTEE RIVER BASIN

02151000 SECOND BROAD RIVER AT CLIFFSIDE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/29	1120	WATER	0.1	1.55	212		7.20	12.0		9.7	260
86/11/21	1345	WATER	0.1			77	6.80	11.0	9.3	10.2	
86/12/31	1230	WATER	0.1			80	7.10	6.0		11.0	
87/01/30	1230	WATER	0.1			95	7.10	7.0		11.4	
87/02/26	1020	WATER	0.1			95		7.0	8.0	11.0	
87/03/31	1200	WATER	0.1			24		14.0		10.0	
87/04/08	1000	WATER	0.1	2.09	455	90		11.0		10.4	
87/05/21	1030	WATER	0.1	1.75	302	130		20.0	6.5	8.3	150
87/06/18	1300	WATER	0.1	1.74	298	145	7.00	23.0		7.4	
87/07/28	1110	WATER	0.1	1.62	244	125	7.00	26.0	13.0	6.7	
87/08/20	1430	WATER	0.1	.99	48	210	7.20	24.0	7.5	7.5	180
87/09/29	1210	WATER	0.1	1.57	221	140	6.80	18.0		8.1	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/29	1120	WATER	0.1	29	9	84					
86/11/21	1345	WATER	0.1	24	10	100					
86/12/31	1230	WATER	0.1	19							
87/02/26	1020	WATER	0.1		7	79	.33	.090	.200	.080	.040
87/05/21	1030	WATER	0.1		14	76	.42	.060	.200	.130	.070
87/06/18	1300	WATER	0.1	23	18	130					
87/07/28	1110	WATER	0.1	24	15	96					
87/08/20	1430	WATER	0.1	26	9	130	.46	.090	.400	.180	.120
87/09/29	1210	WATER	0.1	29							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/21	1345	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/26	1020	WATER	0.1	10K	10K	25K	10K	50K		50K	10K
87/05/21	1030	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/20	1430	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	18

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.

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 poor. Considerable diurnal fluctuation and some regulation caused by powerplants above station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--62 years, 1,659 ft^3/s, 23.37 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 73,300 ft^3/s Aug. 16, 1928, gage height, 24.3 ft, former site, present datum; minimum, 40 ft^3/s Oct. 17, 1954, gage height, 1.02 ft; minimum daily, 105 ft^3/s Oct. 10, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 27	0700	10,200	7.85	Mar. 1	1130	*27,600	*14.96

Minimum discharge, 294 ft^3/s Oct. 6, 7, gage height, 1.47 ft; minimum daily, 412 ft^3/s Aug. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	571	1020	2140	1890	1900	25500	3600	e1600	1190	1010	823	626
2	623	913	5000	2480	1910	12700	2770	e1600	1300	1090	772	438
3	576	1020	4790	2130	2450	4950	2420	e1550	1280	1390	781	433
4	565	955	3410	1720	2300	3910	3840	e1600	1350	1260	844	510
5	535	1100	2560	1880	1780	3330	3050	e1500	1140	1250	681	722
6	446	929	2240	1460	1740	2840	2230	e1500	1180	1220	664	937
7	491	1140	1660	1640	1670	2690	2560	e1500	878	1300	720	3080
8	519	2320	1570	1410	1630	2530	2220	e1400	891	1180	875	2970
9	576	1750	1960	1420	1760	2680	2360	e1400	1060	1140	744	1610
10	746	1210	2090	1330	1460	2650	2330	e1400	1080	1080	687	1010
11	913	1280	1960	1640	1250	2710	2100	e1300	1360	1100	805	e900
12	790	1600	3000	1290	1310	2200	1660	e1300	1060	863	782	e1200
13	689	1430	2020	1520	1280	1670	1710	e1400	1230	802	788	e1100
14	1680	1290	1810	1150	1140	2130	2170	e1700	994	971	706	e1000
15	1210	1230	1400	1270	1300	2150	2460	e1800	958	988	578	e900
16	837	1070	1670	1170	1410	1670	2860	e1700	1110	914	670	e880
17	946	983	1920	1310	1790	2110	2510	e1600	1070	838	600	e860
18	792	1240	1840	1570	1520	2070	2290	e1500	1140	797	629	e820
19	580	1160	1640	3610	1570	1920	2110	e1400	1850	787	593	e780
20	554	1230	1650	3580	1720	2330	1900	1450	1740	758	585	e750
21	602	1360	1190	2200	1920	2060	2000	1440	1190	732	574	e720
22	675	1250	1030	2220	1670	1670	1860	1400	1200	831	566	e700
23	673	890	1310	2090	2220	1810	1840	1410	1370	775	629	e700
24	660	1060	4720	1670	1820	1890	2210	1130	1430	680	516	e690
25	757	1080	5820	1700	1740	1970	2060	1130	1300	684	412	e690
26	3210	2760	3570	2280	1830	2600	1620	1320	1750	751	511	e680
27	2720	7060	3140	2050	2800	1720	1380	e1400	2050	642	565	e680
28	1690	3600	2190	1690	11100	2330	1760	e1450	1400	673	569	e740
29	1430	2790	1980	1720	---	1710	1740	1410	1090	753	575	e860
30	1360	1490	2110	1630	---	2300	1710	1500	1270	627	688	e1000
31	1130	---	2600	1900	---	4080	---	1290	---	789	560	---
TOTAL	29546	48210	75990	56620	57990	108880	67330	45080	37911	28675	20492	28986
MEAN	953	1607	2451	1826	2071	3512	2244	1454	1264	925	661	966
MAX	3210	7060	5820	3610	11100	25500	3840	1800	2050	1390	875	3080
MIN	446	890	1030	1150	1140	1670	1380	1130	878	627	412	433
CFSM	1.09	1.84	2.80	2.09	2.37	4.01	2.56	1.66	1.44	1.06	.76	1.10
IN.	1.26	2.05	3.23	2.41	2.47	4.63	2.86	1.92	1.61	1.22	.87	1.23

CAL YR 1986 TOTAL 391155 MEAN 1072 MAX 7920 MIN 139 CFSM 1.22 IN. 16.6
WTR YR 1987 TOTAL 605710 MEAN 1659 MAX 25500 MIN 412 CFSM 1.90 IN. 25.8

e Estimated

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.

WATER-DISCHARGE RECORDS

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 topgraphic map.

REMARKS.--No estimated daily discharges. Records good.

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

AVERAGE DISCHARGE.--28 years, 93.2 ft^3/s, 20.92 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,760 ft^3/s Oct. 17, 1975, gage height, 16.70 ft; minimum, 14 ft^3/s July 21, 22, 1986, gage height, 0.36 ft.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 1	0700	*5,600	*12.80	No other peaks greater than base discharge.			

Minimum discharge, 17 ft^3/s, Oct. 6, 7, 8; gage height, 0.42 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	35	78	77	131	2800	223	82	71	56	36	31
2	26	49	160	83	135	430	167	84	69	61	37	28
3	21	42	152	71	157	244	167	86	65	58	39	53
4	20	37	101	66	134	186	224	80	69	61	35	36
5	19	36	79	64	110	156	179	77	69	66	33	55
6	18	35	68	61	93	139	153	76	60	71	32	84
7	17	48	62	60	86	129	139	75	59	55	37	245
8	17	96	59	60	79	123	126	72	55	51	44	128
9	22	60	65	58	72	134	118	70	53	49	51	113
10	28	48	90	56	67	132	111	68	54	47	38	63
11	25	52	120	55	65	116	105	66	65	46	34	59
12	24	69	134	51	64	109	101	75	58	46	34	70
13	52	54	96	50	62	104	97	188	55	46	33	86
14	72	45	77	48	60	96	97	120	57	57	32	58
15	36	50	69	50	60	92	135	119	52	47	30	47
16	27	53	63	48	76	90	136	116	55	45	32	44
17	25	47	58	49	72	86	153	91	60	43	33	60
18	24	44	58	91	70	84	142	82	55	42	29	46
19	23	41	53	254	72	122	125	79	188	41	28	41
20	23	48	49	167	73	111	115	79	84	40	27	42
21	22	53	46	112	87	107	108	77	75	39	25	37
22	22	46	44	127	100	100	102	75	99.1	37	24	35
23	22	43	45	111	171	95	108	72	120	36	23	34
24	21	42	537	92	129	92	131	70	74	37	22	33
25	40	42	257	101	102	109	111	68	69	35	22	33
26	145	307	129	124	89	107	103	69	155	34	23	32
27	56	205	95	106	265	108	95	169	100	33	22	31
28	40	101	80	96	1650	143	91	106	73	33	30	33
29	35	75	71	89	---	123	87	90	63	31	71	39
30	32	67	65	101	---	206	86	89	58	31	31	54
31	30	---	60	152	---	421	---	75	---	48	29	---
TOTAL	1006	1970	3120	2730	4331	7094	3835	2745	2239.1	1422	1016	1750
MEAN	32.5	65.7	101	88.1	155	229	128	88.5	74.6	45.9	32.8	58.3
MAX	145	307	537	254	1650	2800	224	188	188	71	71	245
MIN	17	35	44	48	60	84	86	66	52	31	22	28
CFSM	.54	1.09	1.66	1.46	2.56	3.78	2.11	1.46	1.23	.76	.54	.96
IN.	.62	1.21	1.92	1.68	2.66	4.36	2.36	1.69	1.38	.87	.62	1.08

CAL YR 1986 TOTAL 18843.0 MEAN 51.6 MAX 537 MIN 14 CFSM .85 IN. 11.6
WTR YR 1987 TOTAL 33258.1 MEAN 91.1 MAX 2800 MIN 17 CFSM 1.51 IN. 20.4

SANTEE RIVER BASIN

02152100 FIRST BROAD RIVER NEAR CASAR, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/29	0900	WATER	0.1	.63	35		6.90	10.0		10.5	240
86/11/21	1100	WATER	0.1			40	6.70	9.0	4.5	11.2	
86/12/31	1130	WATER	0.1			34	7.00	5.0		11.6	
87/01/30	0940	WATER	0.1			28	6.80	5.0		12.2	
87/02/26	1310	WATER	0.1						2.6		
87/02/27	1310	WATER	0.1			28		5.0		11.8	
87/03/31	1015	WATER	0.1			19		11.0		10.2	
87/04/08	1300	WATER	0.1	1.33	126	25		13.0			
87/05/21	1310	WATER	0.1	1.00	77	34		19.0	4.3	9.3	410
87/06/29	1100	WATER	0.1	.92	65	43	7.10	19.0	9.3	8.9	
87/07/28	1430	WATER	0.1	.62	31	40	7.20	26.0	4.2	8.4	
87/08/20	1200	WATER	0.1	.57	27	30	7.00	21.0	4.1	8.1	130
87/09/15	1335	WATER	0.1	.77	47	50	6.90	21.0		8.9	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/29	0900	WATER	0.1	18	3	17					
86/11/21	1100	WATER	0.1	17	1K	26					
86/12/31	1130	WATER	0.1	12							
87/02/26	1310	WATER	0.1				.07	.020	.100K	.010K	.010K
87/02/27	1310	WATER	0.1		3	33					
87/05/21	1310	WATER	0.1		5	14	.10	.030	.100	.020	.010K
87/06/29	1100	WATER	0.1	13	9	61					
87/07/28	1430	WATER	0.1	14	7	36					
87/08/20	1200	WATER	0.1	16	3	43	.07	.030	.200	.010	.010K
87/09/15	1335	WATER	0.1	15							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/21	1100	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/26	1310	WATER	0.1	10K	10K	25K	10K	50K		50K	10K
87/05/21	1310	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	38
87/08/20	1200	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

SANTEE RIVER BASIN

02152610 SUGAR BRANCH NEAR BOILING SPRINGS, NC

LOCATION.--Lat 35°15'00", long 81°37'15", Cleveland County, Hydrologic Unit 03050105, on left downstream wingwall of culvert on State Highway 150, 0.5 mi upstream from mouth, and 2.8 mi east of Boiling Springs.

DRAINAGE AREA.--1.42 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Annual maximum, water years 1954-68, June 1968 to September 1987 (discontinued).

REVISED RECORDS.--WDR NC-70-1: 1968(M). WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 696.83 ft above National Geodetic Vertical Datum of 1929. June 10, 1953 to May 31, 1968, crest-stage gage on left bank 31 ft upstream from culvert entrance at datum 16.37 ft higher.

REMARKS.--No estimated daily discharges. Records fair.

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

AVERAGE DISCHARGE.--19 years, 2.07 ft^3/s, 19.80 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,110 ft^3/s Oct. 16, 1971, gage height, 6.58 ft, from rating curve extended above 120 ft^3/s on basis of computation of peak flow through culvert; no flow July 20-22, 1986 and parts of Aug. 28, 29, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept. 11	0500	*324	*4.16	No other peaks greater than base discharge.			

No flow for parts of Aug. 28, 29; minimum daily discharge 0.01 ft^3/s Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.32	.66	1.6	8.5	2.8	21	3.5	1.3	.83	.51	.19	.11
2	.30	.67	4.9	3.5	5.0	6.1	3.0	1.3	.72	.58	.19	.08
3	.29	.62	2.4	2.3	3.3	3.6	4.1	1.2	.65	.68	.20	.08
4	.27	.61	1.8	2.1	2.6	3.0	4.1	1.2	1.9	.70	.17	.07
5	.24	.61	1.5	2.1	2.3	2.7	3.0	1.2	.97	.62	.17	.34
6	.23	.60	1.4	1.9	2.2	2.5	2.8	1.1	.73	.57	.17	.27
7	.24	4.2	1.3	1.8	2.1	2.4	2.7	1.1	.68	.49	.23	8.7
8	.26	1.7	1.3	1.5	1.9	2.5	2.5	1.0	.64	.45	.22	1.7
9	.46	1.1	1.3	1.5	1.8	3.0	2.4	1.0	.61	.44	.21	.89
10	.39	.96	1.6	1.5	1.8	2.5	2.2	1.0	.99	.42	.16	.51
11	.39	1.6	6.0	1.4	1.8	2.2	2.2	.99	.81	.43	.16	25
12	.41	1.5	3.0	1.3	1.7	2.1	2.1	.97	.70	.58	.17	5.0
13	1.1	1.2	2.2	1.3	1.7	2.0	1.9	.99	.68	.44	.12	3.4
14	1.0	.99	1.9	1.3	1.7	2.0	1.9	1.1	.68	.42	.10	1.7
15	.50	1.2	1.8	1.3	1.7	1.9	2.0	1.0	.66	.37	.11	1.0
16	.45	1.1	1.7	1.3	2.0	1.8	2.1	.98	.68	.36	.13	.85
17	.43	1.0	1.6	1.3	1.9	1.8	2.0	.92	.66	.32	.11	.76
18	.42	.95	1.5	5.8	2.3	1.8	1.9	.88	.70	.31	.09	.68
19	.42	.89	1.4	14	2.1	3.2	1.8	.85	1.0	.30	.09	.64
20	.41	1.9	1.4	3.4	1.9	2.2	1.7	.86	.73	.28	.08	.62
21	.41	1.4	1.3	2.5	1.9	2.0	1.7	.85	.69	.27	.05	.53
22	.40	1.1	1.3	2.8	2.2	1.9	1.6	.87	.95	.26	.04	.51
23	.40	1.0	1.4	2.5	2.9	1.8	1.6	.85	.76	.25	.03	.50
24	.39	.99	17	2.3	2.1	1.7	1.7	.78	.64	.25	.02	.46
25	2.7	.99	4.0	5.5	2.0	3.3	1.6	.75	.64	.23	.04	.45
26	3.5	6.2	2.4	5.2	2.1	2.5	1.5	.74	.71	.23	.07	.43
27	1.1	2.6	2.0	3.0	19	2.2	1.4	.84	.65	.22	.03	.41
28	.81	1.9	1.8	2.6	46	2.1	1.4	.81	.54	.20	.01	.42
29	.74	1.5	1.7	2.6	---	1.9	1.3	.80	.52	.20	.06	.44
30	.69	1.4	1.6	6.1	---	8.0	1.3	.71	.49	.21	.03	1.0
31	.61	---	1.5	3.5	---	7.8	---	.84	---	.22	.05	---
TOTAL	20.28	42.14	77.6	97.7	122.8	105.5	65.0	29.78	22.61	11.81	3.31	57.62
MEAN	.65	1.40	2.50	3.15	4.39	3.40	2.17	.96	.75	.38	.11	1.92
MAX	3.5	6.2	17	14	46	21	4.1	1.3	1.9	.70	.23	25
MIN	.23	.60	1.3	1.3	1.7	1.7	1.3	.71	.49	.20	.01	.08
CFSM	.46	.99	1.76	2.22	3.09	2.40	1.53	.68	.53	.27	.08	1.35
IN.	.53	1.10	2.03	2.56	3.22	2.76	1.70	.78	.59	.31	.09	1.51

CAL YR 1986 TOTAL 359.05 MEAN .98 MAX 17 MIN .00 CFSM .69 IN. 9.41
WTR YR 1987 TOTAL 656.14 MEAN 1.80 MAX 46 MIN .01 CFSM 1.27 IN. 17.2

SANTEE RIVER BASIN

02152610 SUGAR BRANCH NEAR BOILING SPRINGS, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/29	1045	WATER	0.1	1.24	1		7.00	10.0		10.0	450
86/11/21	1300	WATER	0.1						13.0		
86/11/21	1310	WATER	0.1			77	6.50	11.0		10.3	
86/12/17	1100	WATER	0.1			59	6.90	10.0		10.2	
87/01/30	1145	WATER	0.1			27	6.70	8.0		11.0	
87/02/26	1115	WATER	0.1			56		6.0	4.4	11.3	
87/03/31	1130	WATER	0.1			51		11.0		10.2	
87/04/08	1040	WATER	0.1	1.52	3	50		12.0		10.4	
87/05/21	1130	WATER	0.1	1.28	1	63		18.0	2.4	8.7	260
87/06/29	1230	WATER	0.1	1.17	1	59	6.80	21.0	5.9	8.6	
87/07/28	1200	WATER	0.1	1.02	0	50	6.70	24.0	5.6	8.1	
87/08/20	1400	WATER	0.1	.88	0	70	6.90	25.0	4.6	8.8	70
87/09/15	1200	WATER	0.1	1.34	1	85	6.40	20.0		8.3	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/29	1045	WATER	0.1	16	3	32					
86/11/21	1310	WATER	0.1	13	6	60					
86/12/17	1100	WATER	0.1	12							
87/02/26	1115	WATER	0.1		2	50	1.40	.040	.100K	.010	.010K
87/05/21	1130	WATER	0.1		7	27	1.20	.030	.100	.020	.010K
87/06/29	1230	WATER	0.1	12	5	57					
87/07/28	1200	WATER	0.1	13	8	49					
87/08/20	1400	WATER	0.1	13	2	57	.93	.040	.200	.010	.010
87/09/15	1200	WATER	0.1	10							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/21	1300	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/26	1115	WATER	0.1	10K	10K	25K	10K	50K		50K	10K
87/05/21	1130	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/20	1400	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

SOUTH ATLANTIC SLOPE BASIN

Lakes and Reservoirs in South Atlantic Slope basin

02067800; 02067820 TALBOTT AND TOWNES RESERVOIRS 1/.--on Dan River. The two reservoirs are operated as a unit for storage of water for Pinnacles hydroelectric plant. Talbott Dam (drainage area, 20.2 mi^2), 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, 8,395 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, 1,700 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)

1/ Included in this report because they materially affect runoff at Dan River near Francisco.

SOUTH ATLANTIC SLOPE BASIN

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 beolw 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)

SOUTH ATLANTIC SLOPE BASIN

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 BASINS

Lakes and Reservoirs in South Atlantic Slope basin--Continued

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

Date	Elevation (feet)	Combined (million cubic feet)	Change in contents (million cubic feet)	Gage Height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Elevation (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Elevation (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)
	02067800 & 02067820 Talbott & Townes Reservoirs			02077280 Hyco Lake			02079964 Lake Gaston			02080100 Roanoke Rapids Lake		
Sept. 30.....		348	-	9.19	3,161	-	199.50	19,166	-	130.9	3,142	-
Oct. 31.....		271	-77	8.93	3,118	-43	199.60	19,254	+88	129.4	2,861	-281
Nov. 30.....		309	+38	9.23	3,184	+66	199.70	19,341	+87	130.9	3,142	+281
Dec. 31.....		320	+11	10.59	3,384	+200	199.94	19,549	+208	130.2	3,008	-134
CAL YR 1986		-	-2		-	+6		-	+69		-	+248
Jan. 31.....		312	-8	10.88	3,429	+45	199.62	19,271	-278	131.0	3,162	+154
Feb. 28.....		320	+8	11.77	3,589	+160	199.74	19,376	+105	129.6	2,898	-264
Mar. 31.....		364	+44	10.62	3,389	-200	199.40	19,079	-297	130.2	3,008	+110
Apr. 30.....		385	+21	10.62	3,389	0	201.82	21,223	+2,144	132.4	3,446	+438
May 31.....		329	-56	10.47	3,366	-23	200.00	19,602	-1,621	128.8	2,760	-686
June 30.....		319	-10	10.15	3,316	-50	199.21	18,914	-688	129.2	2,826	+66
July 31.....		284	-35	9.96	3,287	-29	199.18	18,888	-26	130.8	3,122	+296
Aug. 31.....		257	-27	9.31	3,181	-106	199.20	18,905	+17	128.1	2,646	-476
Sept. 30.....		311	+54	10.39	3,354	+173	199.77	19,402	+497	130.1	2,990	+344
WTR YR 1987		-	-37		-	+193		-	+236		-	-152

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)	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)
	02098197 B. Everett Jordan Lake			02111391 W. Kerr Scott Reservoir			02122400 High Rock Lake			02122699 Tuckertown Reservoir		
Sept. 30.....	211.6	6,958	-	1,025.62	1,547.77	-	648.3	7,212	-	595.21	1,771	-
Oct. 31.....	208.8	5,669	-1,289	1,024.95	1,512.49	-35.3	647.1	6,624	-588	595.25	1,775	+4
Nov. 30.....	208.3	5,460	-209	1,030.04	1,790.23	+277.7	646.6	6,389	-235	595.25	1,775	0
Dec. 31.....	214.8	8,668	+3,208	1,029.95	1,790.23	0	650.4	8,310	+1,921	594.97	1,746	-29
CAL YR 1986		-	-585		-	+34.6		-	+3,985		-	-13
Jan. 31.....	216.5	9,748	+1,080	1,030.20	1,807.17	+ 16.9	647.9	7,012	-1,298	595.01	1,750	+ 4
Feb. 28.....	219.6	11,747	+1,999	1,035.00	2,146.77	+339.6	652.3	9,396	+2,384	595.72	1,823	+73
Mar. 31.....	216.6	9,748	-1,999	1,031.75	1,929.35	-217.4	652.5	9,517	+ 121	595.62	1,813	-10
Apr. 30.....	216.6	9,748	0	1,030.06	1,798.70	-130.6	655.0	11,090	+1,573	595.70	1,821	+ 8
May 31.....	216.4	9,622	-126	1,030.02	1,790.23	- 8.5	653.0	9,819	-1,271	594.89	1,737	-84
June 30.....	215.4	9,017	-605	1,029.95	1,790.23	0	653.4	10,061	+ 242	595.02	1,751	+14
July 31.....	215.0	8,781	-236	1,029.23	1,755.52	- 34.7	651.6	8,981	-1,080	595.27	1,777	+26
Aug. 31.....	212.8	7,568	-1,213	1,026.13	1,577.18	-178.3	651.0	8,644	- 337	595.09	1,758	-19
Sept. 30.....	214.4	8,442	+874	1,027.46	1,659.55	+ 82.4	651.0	8,644	0	594.14	1,665	-93
WTR YR 1987		-	+1,484		-	+111.8		-	+1,432		-	-106

Lakes and Reservoirs in South Atlantic Slope basin--Continued

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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.....	536.7	9,485	-	238.3	5,664	-	137.9	1,734	-
Oct. 31.....	537.8	9,732	+247	239.0	5,815	+151	138.3	1,776	+ 42
Nov. 30.....	537.5	9,664	- 68	238.3	5,664	-151	135.6	1,500	-276
Dec. 31.....	538.2	9,822	+158	239.0	5,815	+151	137.1	1,650	+150
CAL YR 1986		-	+270		-	+21		-	+100
Jan. 31.....	539.6	10,147	+325	239.1	5,837	+ 22	136.8	1,620	- 30
Feb. 28.....	541.1	10,498	+351	239.5	5,925	+ 88	142.4	2,190	+570
Mar. 31.....	539.5	10,124	-374	239.3	5,881	- 44	139.8	1,930	-260
Apr. 30.....	541.1	10,498	+374	238.6	5,729	-152	137.4	1,682	-248
May 31.....	539.9	10,217	-281	239.0	5,815	+ 86	138.8	1,829	+147
June 30.....	539.4	10,101	-116	239.1	5,815	+ 22	138.2	1,766	- 63
July 31.....	539.4	10,101	0	238.3	5,664	-173	138.4	1,787	+ 21
Aug. 31.....	537.8	9,732	-369	238.3	5,664	0	137.5	1,692	- 95
Sept. 30.....	538.8	9,961	+229	238.9	5,794	+130	135.1	1,450	-242
WTR YR 1987		-	+476		-	+130		-	-284

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)
	02138519 Lake James			02141490 Rhodhiss Lake			02141961 Lake Hickory		
Sept. 30.....	95.7	11,408	-	96.8	1,257	-	96.2	1,625	-
Oct. 31.....	95.8	11,434	+ 26	95.8	1,124	-133	95.9	1,576	- 49
Nov. 30.....	97.8	11,971	+537	96.5	1,216	+ 92	97.0	1,758	+182
Dec. 31.....	96.9	11,727	-244	97.2	1,311	+ 95	99.0	2,101	+343
CAL YR 1986		-	+187		-	+ 13		-	+493
Jan. 31.....	95.1	11,251	-476	95.2	1,047	-264	96.6	1,691	-410
Feb. 28.....	95.2	11,277	+ 26	99.7	1,671	+624	100.0	2,278	+587
Mar. 31.....	97.6	11,916	+639	97.9	1,409	-262	98.4	1,996	-282
Apr. 30.....	99.9	12,554	+638	99.9	1,702	+293	99.6	2,206	+210
May 31.....	98.3	12,108	-446	97.0	1,284	-418	97.5	1,842	-364
June 30.....	98.4	12,135	+ 27	97.1	1,298	+ 14	98.8	2,066	+224
July 31.....	97.4	11,862	-273	96.2	1,176	-122	96.7	1,708	-358
Aug. 31.....	95.5	11,355	-507	96.7	1,243	+ 67	97.0	1,758	+ 50
Sept. 30.....	96.3	11,567	+212	96.3	1,190	- 53	96.8	1,724	- 34
WTR YR 1987		-	+159		-	- 67		-	+ 99

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)
	02142441 Lookout Shoals Lake			02142647 Lake Norman			02142676 Mountain Island Lake		
Sept. 30.....	97.8	113	-	95.6	41,650	-	96.0	330	-
Oct. 31.....	97.3	92	-21	96.0	42,160	+ 510	96.0	330	0
Nov. 30.....	97.0	80	-12	96.1	42,290	+ 130	96.3	366	+36
Dec. 31.....	97.9	117	+37	97.1	43,600	+1,310	96.0	330	-36
CAL YR 1986		-	+37		-	+ 520		-	-24
Jan. 31.....	97.0	80	-37	97.3	43,880	+ 280	96.0	330	0
Feb. 28.....	100.0	208	+128	95.6	41,650	-2,230	99.0	705	+375
Mar. 31.....	97.9	117	-91	98.7	45,780	+4,130	96.0	330	-375
Apr. 30.....	96.2	47	-70	98.7	45,780	0	99.1	719	+389
May 31.....	98.6	147	+100	96.9	43,340	-2,440	96.2	354	-365
June 30.....	97.6	105	-42	98.9	46,050	+2,710	96.2	354	0
July 31.....	96.9	76	-29	96.8	43,210	-2,840	96.6	402	+48
Aug. 31.....	98.2	130	+54	95.4	41,390	-1,820	96.0	330	-72
Sept. 30.....	97.7	109	-21	96.3	42,550	+1,160	96.5	390	+60
WTR YR 1987		-	- 4		-	+900		-	+60

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.

WATER-DISCHARGE RECORDS

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.

REMARKS.--Records good except those for periods with ice effect, Jan. 24, 26-29, which are fair. U.S. Army Corps of Engineers satellite gage-height telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

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

AVERAGE DISCHARGE.--63 years, 429 ft^3/s, 28.42 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,800 ft^3/s, Aug. 14, 1940, gage height, 22.50 ft, from rating curve extended above 5,100 ft^3/s on basis of slope-area measurement of peak flow; minimum, 52 ft^3/s, Dec. 24, 1943, result of freezeup; minimum daily, 65 ft^3/s, Sept. 9, 1925.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges equal to or greater than base discharge of 2,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	1900	3,600	6.15	Apr. 15	2230	3,560	6.12
Mar. 1	0630	*3,870	*6.35	Apr. 24	0400	3,160	5.81

Minimum discharge, 127 ft^3/s, Oct. 8, gage height, 1.70 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	147	167	311	511	477	3330	937	803	472	305	213	149
2	161	200	1040	504	445	1950	742	763	507	400	209	146
3	166	213	1150	460	529	1280	710	727	451	567	255	140
4	149	185	660	455	552	1100	721	709	421	967	216	138
5	139	181	488	450	506	916	668	697	411	781	204	193
6	133	201	404	427	463	833	683	662	387	532	196	469
7	131	251	356	355	442	816	731	640	369	424	206	516
8	131	533	332	367	428	835	776	616	358	383	226	486
9	136	352	354	344	409	996	895	587	345	365	218	291
10	149	265	416	328	416	1200	836	575	334	330	192	297
11	152	236	534	328	415	995	782	564	330	334	187	360
12	149	230	655	320	382	841	752	552	326	323	187	271
13	171	223	536	308	381	756	759	548	330	293	185	298
14	241	201	452	304	370	693	683	552	340	284	182	262
15	250	198	430	311	390	651	1880	540	329	276	181	219
16	175	207	434	332	402	647	2950	522	380	271	184	202
17	153	199	415	331	426	644	2650	507	438	262	210	201
18	145	190	424	475	386	597	1620	493	502	258	194	207
19	142	182	426	821	363	671	1230	519	645	251	178	196
20	140	189	386	729	357	690	1040	539	449	245	174	213
21	138	233	365	566	393	625	922	505	404	238	162	206
22	137	216	349	535	414	588	837	483	505	236	152	191
23	136	194	342	494	557	560	867	477	424	238	148	187
24	134	211	1850	e410	563	539	2310	741	350	243	144	185
25	170	226	1910	444	467	542	1670	640	380	244	146	188
26	504	534	960	e420	470	541	1480	754	446	224	150	189
27	352	951	753	e390	510	514	1160	645	498	216	149	190
28	218	475	656	e350	995	522	1020	588	379	210	145	213
29	186	361	589	e340	---	492	922	596	334	204	151	240
30	174	309	549	420	---	630	858	541	320	209	151	205
31	165	---	516	579	---	1280	---	497	---	236	146	---
TOTAL	5474	8313	19042	13408	12908	27274	34091	18582	12164	10349	5641	7248
MEAN	177	277	614	433	461	880	1136	599	405	334	182	242
MAX	504	951	1910	821	995	3330	2950	803	645	967	255	516
MIN	131	167	311	304	357	492	668	477	320	204	144	138
CFSM	.86	1.35	3.00	2.11	2.25	4.29	5.54	2.92	1.98	1.63	.89	1.18
IN.	.99	1.51	3.46	2.43	2.34	4.95	6.19	3.37	2.21	1.88	1.02	1.32

CAL YR 1986 TOTAL 102831 MEAN 282 MAX 1910 MIN 123 CFSM 1.37 IN. 18.66
WTR YR 1987 TOTAL 174494 MEAN 478 MAX 3330 MIN 131 CFSM 2.33 IN. 31.66

e Estimated

KANAWHA RIVER BASIN

03161000 SOUTH FORK NEW RIVER NEAR JEFFERSON, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/28	1400	WATER	0.1			48	7.60	15.0	3.6	9.8	100
86/12/04	1410	WATER	0.1			40	6.70	8.0	6.6	11.3	
87/01/15	1425	WATER	0.1			41	7.10	7.0	1.9	12.4	
87/04/02	1210	WATER	0.1			41	6.33	7.5	4.6	12.0	
87/07/21	1135	WATER	0.1			42	6.70	23.0	1.9	7.9	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/28	1400	WATER	0.1	14	4	65	.53	.020	.200	.010	.020
86/12/04	1410	WATER	0.1	12	28	69	.87	.030	.300	.080	.020
87/01/15	1425	WATER	0.1	10	1K	41	.68	.020	.100	.030	.010K
87/04/02	1210	WATER	0.1	14	13	47	.70	.020	.300	.040	.010K
87/07/21	1135	WATER	0.1	13	10	75	.29	.020	.300	.040	.010K

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/10/28	1400	WATER	0.1	10K	10K	25K	18	50K	.2K	50K	10K
87/01/15	1425	WATER	0.1	10K	10K	25K	10K	50K		50K	10K
87/04/02	1210	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/07/21	1135	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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.

REMARKS.--No estimated daily discharges. Records good. National Weather Service gage height telemeter at station.

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

AVERAGE DISCHARGE.--53 years (1908, 1936-87), 238 ft^3/s, 47.60 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,500 ft^3/s Oct. 4, 1964, gage height, 14.95 ft; minimum, 23 ft^3/s Jan. 3, 1940, gage height, 1.51 ft, result of freezeup; minimum daily, 37 ft^3/s Sept. 25-28, Oct. 5, 6, 25, 26, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of 13.9 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	1300	*6,020	*11.38	Apr. 15	0830	2,490	7.43
Feb. 28	2245	2,600	7.63				

Minimum discharge, 49 ft^3/s, Oct. 7, 8, 9, gage height, 1.63 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	159	537	295	257	1290	420	262	254	156	104	72
2	63	155	908	279	331	682	374	256	248	200	114	67
3	56	136	580	261	327	515	436	250	220	164	105	64
4	55	127	453	255	299	433	374	244	265	462	97	64
5	53	139	389	246	278	381	363	233	206	233	96	72
6	51	140	346	235	264	344	373	228	191	210	110	200
7	49	171	317	232	254	319	393	222	183	180	159	216
8	49	244	303	225	242	311	390	216	174	169	112	166
9	97	201	342	219	230	378	379	209	169	175	101	121
10	95	172	368	229	225	329	353	205	163	178	96	108
11	82	200	465	214	222	296	333	200	170	172	91	146
12	74	214	400	207	219	284	314	198	168	154	89	387
13	219	182	342	201	211	269	301	222	161	142	92	223
14	236	162	310	198	213	257	294	407	159	144	90	139
15	120	176	292	203	219	247	1020	291	160	133	86	114
16	94	162	276	197	294	240	578	284	159	129	88	107
17	82	150	263	198	248	232	483	242	157	124	88	162
18	76	142	268	419	233	233	427	225	224	122	84	115
19	72	134	245	619	225	414	392	256	211	121	94	106
20	69	203	234	386	223	286	367	318	228	117	88	122
21	66	181	225	322	229	260	348	264	195	114	78	102
22	66	158	217	320	260	244	333	241	177	112	76	95
23	66	153	318	277	302	233	322	245	182	108	74	91
24	67	180	1190	263	262	228	313	233	199	105	72	89
25	623	211	574	296	247	343	298	216	214	101	74	86
26	623	2380	447	286	246	268	287	209	218	98	76	84
27	267	846	388	254	421	261	278	215	192	108	73	82
28	197	527	352	246	1300	258	273	251	165	103	70	82
29	163	409	328	235	---	240	261	280	153	98	71	83
30	145	350	309	265	---	376	255	247	145	112	69	220
31	132	---	291	271	---	602	---	225	---	122	70	---
TOTAL	4168	8764	12277	8353	8281	11053	11332	7594	5710	4666	2787	3785
MEAN	134	292	396	269	296	357	378	245	190	151	89.9	126
MAX	623	2380	1190	619	1300	1290	1020	407	265	462	159	387
MIN	49	127	217	197	211	228	255	198	145	98	69	64
CFSM	1.98	4.30	5.83	3.97	4.36	5.25	5.56	3.61	2.80	2.22	1.32	1.86
IN.	2.28	4.80	6.73	4.58	4.54	6.06	6.21	4.16	3.13	2.56	1.53	2.07

CAL YR 1986 TOTAL 57118 MEAN 156 MAX 2380 MIN 49 CFSM 2.30 IN. 31.3
WTR YR 1987 TOTAL 88770 MEAN 243 MAX 2380 MIN 49 CFSM 3.58 IN. 48.6

TENNESSEE RIVER BASIN

03439000 FRENCH BROAD RIVER AT ROSMAN, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/20	1230	WATER	0.1	1.75	69		6.60	8.0		10.2	30
86/11/14	1100	WATER	0.1			21	6.80	5.0	1.1	11.6	10
86/12/09	1410	WATER	0.1			23	6.90	11.0	2.9	9.8	
87/01/21	1130	WATER				21	6.80	6.0	1.5	11.4	
87/02/18	1050	WATER	0.1			20		5.0	1.6	11.2	
87/03/16	1410	WATER	0.1			13		11.0	1.0K	10.6	
87/04/15	1110	WATER	0.1	5.11	1329	6	6.30	12.0	80.0	9.7	
87/05/27	1350	WATER	0.1	2.24	198	14	6.90	18.0	2.7	8.9	120
87/06/25	1240	WATER	0.1	2.20	187	29	6.60	18.0		9.1	
87/07/29	1030	WATER	0.1	1.84	95	22	6.60	20.0	3.8	8.5	
87/08/28	1140	WATER	0.1	1.72	71	30	6.50	20.0	3.0	8.7	
87/09/28	1120	WATER	0.1	1.78	82	29	6.40	16.0	2.2	9.8	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/20	1230	WATER	0.1	10	1K	63					
86/11/14	1100	WATER	0.1	9	1K	35					
86/12/09	1410	WATER	0.1	6	9	32					
87/01/21	1130	WATER		7	8	38					
87/02/18	1050	WATER	0.1		10	24	.63	.040	.100K	.010	.010K
87/03/16	1410	WATER	0.1		2	48					
87/04/15	1110	WATER	0.1	3	320	360					
87/05/27	1350	WATER	0.1	6	8	17	.23	.100	.200	.050	.010
87/06/25	1240	WATER	0.1	8	12	56					
87/07/29	1030	WATER	0.1	7	9	31					
87/08/28	1140	WATER	0.1	7	3	38	.31	.050	.300	.060	.020
87/09/28	1120	WATER	0.1	7	2	31					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/14	1100	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	17
87/02/18	1050	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/27	1350	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/28	1140	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1920 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1336: 1921, 1922(M), 1923, 1924-25(M), 1926, 1927(M), 1929-32(M).

GAGE.--Water-stage recorder. Datum of gage is 2,115.13 ft 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.--No estimated daily discharge. Records good.

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

AVERAGE DISCHARGE.--67 years, 129 ft^3/s, 43.36 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,400 ft^3/s Aug. 15, 1928, gage height, 11.8 ft; minimum, 13 ft^3/s Oct. 11, 1954, gage height, 0.31 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1869, 11.9 ft June 1876 (from studies by Tennessee Valley Authority).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	1130	*4,050	*7.62	Feb. 28	2245	1,860	4.78
Feb. 28	1245	1,070	3.49				

Minimum discharge, 18 ft^3/s Oct. 6, 7, 8, gage height, 0.35; minimum daily, 18 ft^3/s Oct. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	68	329	141	124	813	215	122	173	213	59	45
2	21	69	530	131	152	423	192	122	143	207	76	42
3	21	58	334	122	149	326	210	117	124	150	70	40
4	20	53	256	118	137	274	182	114	156	166	92	40
5	20	69	213	113	127	243	176	110	118	131	80	58
6	18	78	185	109	122	220	189	109	107	121	155	164
7	18	91	165	107	117	203	210	106	99	120	146	192
8	19	134	156	103	112	198	211	102	95	161	101	114
9	44	103	180	100	104	230	201	98	91	139	89	111
10	40	84	188	105	102	204	185	97	102	126	83	103
11	48	111	253	97	101	185	172	95	125	115	72	114
12	34	112	217	94	99	176	162	109	102	104	69	312
13	101	92	180	91	96	166	155	132	96	97	67	214
14	111	79	160	90	99	158	151	185	91	93	65	137
15	50	88	149	92	105	151	461	155	91	89	61	105
16	39	78	138	92	138	147	289	142	88	86	61	93
17	34	71	131	92	112	140	243	120	111	82	68	109
18	31	66	142	219	107	141	215	119	120	80	63	83
19	29	62	125	343	104	232	196	168	135	77	59	84
20	28	100	118	207	106	171	183	176	119	74	55	87
21	27	85	112	167	113	157	173	147	112	72	52	72
22	26	74	107	163	147	147	164	136	105	70	50	67
23	25	73	133	138	180	140	158	134	98	67	49	63
24	25	89	538	129	147	137	152	132	95	65	47	60
25	269	108	290	145	134	185	146	123	105	64	47	58
26	273	1320	223	139	136	154	139	115	109	62	49	55
27	113	437	192	123	280	160	135	139	99	63	45	52
28	80	274	172	119	811	158	131	140	85	63	45	51
29	66	210	158	114	---	148	126	129	80	58	53	51
30	58	179	148	131	---	205	124	117	77	73	45	98
31	52	---	138	132	---	305	---	122	---	65	44	---
TOTAL	1762	4515	6360	4066	4261	6697	5646	3932	3251	3153	2117	2874
MEAN	56.8	150	205	131	152	216	188	127	108	102	68.3	95.8
MAX	273	1320	538	343	811	813	461	185	173	213	155	312
MIN	18	53	107	90	96	137	124	95	77	58	44	40
CFSM	1.41	3.73	5.08	3.25	3.77	5.35	4.66	3.14	2.68	2.52	1.69	2.37
IN.	1.62	4.16	5.86	3.74	3.92	6.17	5.20	3.62	2.99	2.90	1.95	2.65

CAL YR 1986 TOTAL 28740 MEAN 78.7 MAX 1320 MIN 18 CFSM 1.95 IN. 26.5
WTR YR 1987 TOTAL 48634 MEAN 133 MAX 1320 MIN 18 CFSM 3.30 IN. 44.8

TENNESSEE RIVER BASIN

03441000 DAVIDSON RIVER NEAR BREVARD, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/20	1145	WATER	0.1	.45	28		6.60	8.0		10.4	20
86/11/14	1030	WATER	0.1			14	6.80	4.0	1.0K	11.9	10K
87/02/18	1020	WATER	0.1			18		4.0	1.0K	11.4	
87/05/27	1215	WATER	0.1	.92	108	17	6.90	17.0	1.0K	8.9	10K
87/08/28	1105	WATER	0.1			20	6.60	20.0	1.0K	8.7	
87/08/28	1115	WATER	0.1	.55	46						

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/20	1145	WATER	0.1	10	1K	59					
86/11/14	1030	WATER	0.1	7	1K	25					
87/02/18	1020	WATER	0.1		2	11	.02	.030	.100	.010	.010
87/05/27	1215	WATER	0.1	5	4	12	.05	.030	.100	.030	.010
87/08/28	1105	WATER	0.1	5	1	51	.09	.050	.200	.030	.010

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/14	1030	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	
87/02/18	1020	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/27	1215	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/28	1105	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	14

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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1962 to current year.

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.--No estimated daily discharges. Records good. E. I. du Pont de Nemours and Company plant 0.5 mi upstream of gage diverted about 1.2 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.

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

AVERAGE DISCHARGE.--25 years, 105 ft^3/s, 53.20 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,600 ft^3/s Oct. 4, 1964, gage height, 7.30 ft; minimum, 7.0 ft^3/s Sept. 24, 1981, gage height, 1.13 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Oct. 26	0430	884	3.32	Dec. 24	0930	700	3.06
Nov. 26	1915	1,310	3.89	Mar. 1	0745	*1,380	*3.98
Dec. 2	0815	789	3.19				

Minimum daily discharge, 10 ft^3/s Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	75	349	128	102	1030	149	81	55	40	33	20
2	16	88	679	118	138	414	132	90	53	149	34	20
3	14	69	365	110	143	280	163	88	51	84	43	18
4	14	62	258	103	131	227	144	77	62	136	33	17
5	15	60	208	97	122	193	133	72	54	179	33	38
6	14	57	179	94	112	174	141	71	47	116	33	135
7	12	77	159	92	106	160	153	69	45	92	48	114
8	10	113	149	91	100	154	145	68	43	94	39	86
9	30	92	160	88	90	176	135	63	41	106	40	103
10	37	81	175	99	85	157	123	62	49	85	38	118
11	57	95	213	97	84	141	116	62	86	75	37	137
12	46	107	196	93	84	134	107	67	52	70	33	109
13	88	87	162	85	80	126	110	74	48	63	31	139
14	119	74	144	82	78	122	117	83	48	58	31	157
15	66	80	138	81	78	114	243	84	48	54	28	98
16	48	77	128	81	110	113	181	79	66	50	27	77
17	40	68	121	85	94	107	155	67	57	48	29	117
18	34	64	119	133	85	105	133	63	62	46	32	85
19	31	59	108	254	87	161	122	78	57	45	27	68
20	29	90	102	190	82	127	116	88	67	42	25	63
21	27	88	98	147	85	117	110	81	71	40	23	54
22	25	72	95	140	101	109	106	72	54	38	22	49
23	25	70	117	126	132	102	100	67	49	37	21	45
24	24	77	562	110	117	98	95	63	48	34	20	41
25	221	85	298	117	107	174	88	61	62	34	20	39
26	597	790	216	130	107	144	84	62	71	32	24	36
27	184	509	179	108	154	141	81	56	59	32	22	35
28	115	246	156	101	476	143	78	52	47	32	24	34
29	84	183	141	99	---	128	81	57	42	31	40	33
30	69	151	131	104	---	144	83	66	39	33	26	73
31	58	---	124	107	---	196	---	58	---	40	21	---
TOTAL	2165	3846	6229	3490	3270	5711	3724	2181	1633	2015	937	2158
MEAN	69.8	128	201	113	117	184	124	70.4	54.4	65.0	30.2	71.9
MAX	597	790	679	254	476	1030	243	90	86	179	48	157
MIN	10	57	95	81	78	98	78	52	39	31	20	17
CFSM	2.61	4.78	7.50	4.20	4.36	6.87	4.63	2.63	2.03	2.43	1.13	2.68
IN.	3.01	5.34	8.65	4.84	4.54	7.93	5.17	3.03	2.27	2.80	1.30	3.00

CAL YR 1986 TOTAL 24855 MEAN 68.1 MAX 790 MIN 10 CFSM 2.54 IN. 34.5
WTR YR 1987 TOTAL 37359 MEAN 102 MAX 1030 MIN 10 CFSM 3.82 IN. 51.9

TENNESSEE RIVER BASIN

03441440 LITTLE RIVER ABOVE HIGH FALLS, NEAR CEDAR MOUNTAIN, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/20	1430	WATER	0.1	1.35	28		6.50	10.0		7.8	70
86/11/14	1245	WATER	0.1			28	6.60	5.0	2.0	9.5	20
87/02/18	1250	WATER	0.1			20		4.0	1.7	9.8	
87/05/27	1440	WATER	0.1	1.53	57	33	6.50	20.0	2.7	7.0	80
87/08/28	1340	WATER	0.1	1.21	18	60	6.40	22.0	3.4	6.7	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/20	1430	WATER	0.1	12	4	79					
86/11/14	1245	WATER	0.1	9	1K	37					
87/02/18	1250	WATER	0.1		7	19	.05	.090	.300	.010	.010K
87/05/27	1440	WATER	0.1	9	5	21	.03	.210	.500	.030	.010K
87/08/28	1340	WATER	0.1	11	6	65	.12	.550	.900	.090	.010

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/14	1245	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/18	1250	WATER	0.1	10K	10K	25K	10K	50K		50K	10K
87/05/27	1440	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/28	1340	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	14

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.

WATER-DISCHARGE RECORDS

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.

REMARKS.--No estimated daily discharges. Records good except those above 2,600 ft^3/s, which are fair. Considerable diurnal fluctuation at low flow caused by powerplant about 8 mi above station. The National Weather Service has telemetry at station.

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

AVERAGE DISCHARGE.--67 years, 991 ft^3/s, 45.46 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft^3/s Oct. 5, 1964, gage height, 25.50 ft, from floodmarks; minimum, 119 ft^3/s Oct. 1, 1954, gage height, 2.36 ft.

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).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 27	1930	6,430	18.53	Dec. 25	0115	4,300	16.34
Dec. 3	0015	4,750	16.89	Mar. 1	1700	*6,940	*18.89

Minimum discharge, 179 ft^3/s Oct. 6, gage height, 3.89 ft; minimum daily, 189 ft^3/s Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	226	622	2230	1210	1100	6530	1680	930	863	648	408	250
2	267	646	4350	1190	1230	5980	1450	944	935	936	414	242
3	220	657	4400	1100	1430	3850	1520	924	852	791	473	231
4	197	617	2710	1050	1290	2300	1590	912	1010	1230	435	222
5	189	627	1750	1020	1180	1860	1480	898	865	1320	491	247
6	192	602	1500	986	1130	1670	1520	875	733	972	915	622
7	203	584	1320	968	1080	1540	1590	849	686	838	976	1060
8	198	921	1220	951	1030	1470	1530	829	682	807	703	794
9	267	873	1280	922	970	1590	1460	741	669	778	592	734
10	410	746	1470	949	948	1600	1350	698	608	779	487	718
11	354	757	1800	936	928	1410	1270	718	695	814	455	827
12	348	930	1820	894	919	1320	1190	762	666	686	417	1090
13	630	810	1480	874	902	1260	1150	812	630	643	410	1440
14	1280	729	1280	842	883	1200	1190	1110	592	648	397	952
15	764	729	1180	867	908	1160	2460	1100	615	608	373	731
16	525	741	1110	865	1070	1130	2480	1010	621	527	344	620
17	433	688	1040	875	1140	1080	1840	843	656	500	376	826
18	402	616	1050	1380	1020	1050	1590	815	756	482	479	726
19	318	567	984	2680	1010	1670	1440	863	834	467	572	592
20	315	696	930	1840	974	1400	1340	1010	734	445	576	609
21	304	868	887	1440	1020	1230	1260	1000	847	442	502	538
22	295	728	862	1360	1090	1140	1200	887	802	431	398	488
23	291	643	888	1240	1400	1080	1150	836	740	426	303	455
24	283	702	3760	1120	1230	1050	1150	812	841	405	290	435
25	871	749	4150	1200	1130	1440	1080	797	914	386	273	424
26	3570	3500	2530	1360	1090	1390	1030	791	899	362	295	420
27	2160	6180	1640	1160	1800	1230	1000	799	953	364	270	405
28	995	4950	1500	1080	3460	1280	978	918	748	405	255	397
29	792	2150	1370	1040	---	1170	951	831	677	379	260	395
30	700	1410	1290	1060	---	1290	928	814	648	472	254	697
31	645	---	1220	1180	---	2190	---	751	---	599	244	---
TOTAL	18644	36038	55001	35639	33362	55560	41847	26879	22771	19590	13637	18187
MEAN	601	1201	1774	1150	1191	1792	1395	867	759	632	440	606
MAX	3570	6180	4400	2680	3460	6530	2480	1110	1010	1320	976	1440
MIN	189	567	862	842	883	1050	928	698	592	362	244	222
CFSM	2.03	4.06	5.99	3.88	4.03	6.05	4.71	2.93	2.56	2.13	1.49	2.05
IN.	2.34	4.53	6.91	4.48	4.19	6.98	5.26	3.38	2.86	2.46	1.71	2.29

CAL YR 1986 TOTAL 240110 MEAN 658 MAX 6180 MIN 188 CFSM 2.22 IN. 30.2
WTR YR 1987 TOTAL 377155 MEAN 1033 MAX 6530 MIN 189 CFSM 3.49 IN. 47.4

TENNESSEE RIVER BASIN

03443000 FRENCH BROAD RIVER AT BLANTYRE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/20	1515	WATER	0.1	4.86	319		7.00	12.0		8.4	1200
86/11/14	1330	WATER	0.1			54	6.80	8.0	2.1	9.8	100
86/12/09	1450	WATER	0.1			36	7.00	14.0	2.0	9.8	
87/01/21	1200	WATER	0.1			35	7.10	6.0	3.8	10.7	
87/02/18	1330	WATER	0.1			40		5.0	2.8	10.6	
87/03/16	1500	WATER	0.1			26		10.0	2.3	10.4	
87/04/15	1250	WATER	0.1	13.47	2785	27	6.80	13.0	55.0	9.0	
87/05/27	1515	WATER	0.1	7.11	768	45	7.00	19.0	3.3	8.2	200
87/06/25	1320	WATER	0.1	7.59	871	55	6.80	20.0		7.6	
87/07/29	1130	WATER	0.1	5.11	367	70	7.20	23.0	4.6	7.0	
87/08/28	1415	WATER	0.1	4.43	255	110	7.00	24.0	5.2	6.9	
87/09/28	1200	WATER	0.1	5.26	397	83	6.80	16.0	7.6	8.1	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/20	1515	WATER	0.1	28	7	98					
86/11/14	1330	WATER	0.1	19	3	68					
86/12/09	1450	WATER	0.1	11	10	44					
87/01/21	1200	WATER	0.1	12	9	48					
87/02/18	1330	WATER	0.1		7	27	.21	.060	.300	.030	.010K
87/03/16	1500	WATER	0.1		9	57					
87/04/15	1250	WATER	0.1	8	240	290					
87/05/27	1515	WATER	0.1	15	21	48	.17	.080	.300	.060	.010
87/06/25	1320	WATER	0.1		120	170					
87/07/29	1130	WATER	0.1	23	13	60					
87/08/28	1415	WATER	0.1	34	14	100	.30	.180	.500	.070	.010
87/09/28	1200	WATER	0.1	25	18	89					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/14	1330	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/18	1330	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/27	1515	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/28	1415	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Records good. City of Hendersonville diverted an average of about 7.4 ft^3/s from North Fork and Bradley Creek for municipal water supply.

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

AVERAGE DISCHARGE.--56 years, 168 ft^3/s, 34.20 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,400 ft^3/s Aug. 30, 1940, gage height, 13.62 ft, 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 Dec. 24, 1943; minimum gage height, 1.32 ft, Jan. 21, 1985, result of freezeup; minimum daily, 18 ft^3/s Sept. 30, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--The greatest flood since 1876 is probably that of Aug. 30, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	1400	*2,920	*7.41	Mar. 1	0130	2,230	6.03

Minimum discharge, 26 ft^3/s Oct.6, 7, 8, gage height, 1.43 ft; minimum daily, 26 ft^3/s Oct. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	84	299	180	158	1350	283	180	246	166	70	54
2	30	105	548	170	179	650	256	185	213	225	71	50
3	30	91	413	157	189	477	270	177	191	182	82	48
4	30	79	316	153	183	391	243	170	210	196	71	53
5	29	82	268	149	173	345	234	164	179	188	85	63
6	27	89	242	143	163	310	247	161	163	169	127	209
7	26	98	217	141	160	286	274	157	152	163	142	261
8	26	155	201	138	153	274	284	153	145	175	127	183
9	41	138	206	134	148	297	280	150	139	169	116	128
10	52	117	218	139	141	278	259	147	228	155	89	118
11	65	125	270	132	140	254	242	144	249	144	79	186
12	64	143	247	126	138	241	228	142	194	135	75	274
13	88	118	214	123	136	229	218	147	179	127	75	257
14	132	105	196	121	137	220	210	170	169	129	72	173
15	73	107	185	121	141	211	510	156	155	120	69	132
16	59	100	174	122	177	206	384	156	163	115	68	116
17	55	93	166	123	153	200	333	144	187	110	71	114
18	49	88	166	206	146	197	298	137	174	105	70	98
19	47	87	154	326	147	287	273	145	199	102	65	91
20	46	103	147	238	146	231	256	170	189	98	67	94
21	44	110	141	201	159	215	243	154	190	95	58	83
22	43	95	136	200	187	204	232	146	196	92	57	79
23	38	93	147	174	228	199	224	153	188	89	54	76
24	35	100	568	165	197	193	225	207	165	86	54	75
25	224	104	356	176	185	241	214	193	222	83	53	73
26	402	1370	273	173	188	217	203	177	275	80	61	70
27	170	586	238	153	292	212	195	235	213	77	55	68
28	119	344	217	153	800	217	191	329	179	77	53	67
29	99	262	202	146	---	204	184	229	162	74	57	67
30	87	223	190	157	---	238	181	196	151	74	53	94
31	82	---	178	165	---	365	---	193	---	80	52	---
TOTAL	2342	5394	7493	5005	5344	9439	7674	5367	5665	3880	2298	3454
MEAN	75.5	180	242	161	191	304	256	173	189	125	74.1	115
MAX	402	1370	568	326	800	1350	510	329	275	225	142	274
MIN	26	79	136	121	136	193	181	137	139	74	52	48
CFSM	1.13	2.70	3.62	2.42	2.86	4.56	3.84	2.60	2.83	1.88	1.11	1.73
IN.	1.31	3.01	4.18	2.79	2.98	5.26	4.28	2.99	3.16	2.16	1.28	1.93

CAL YR 1986 TOTAL 35699 MEAN 97.8 MAX 1370 MIN 25 CFSM 1.47 IN. 19.9
WTR YR 1987 TOTAL 63355 MEAN 174 MAX 1370 MIN 26 CFSM 2.60 IN. 35.3

TENNESSEE RIVER BASIN

03446000 MILLS RIVER NEAR MILLS RIVER, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/20	1100	WATER	0.1	1.61	44		6.90	7.0		10.3	150
86/11/14	0950	WATER	0.1			14	6.90	3.0	1.0K	11.7	70
87/02/18	1420	WATER	0.1			20		4.0	1.0K	11.3	
87/05/27	1145	WATER	0.1	2.21	163	23	6.90	17.0	1.0	9.2	120
87/08/28	1020	WATER	0.1	1.73	53	20	6.50	17.0		8.3	
87/08/28	1020	WATER							1.3		

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/20	1100	WATER	0.1	9	1K	56					
86/11/14	0950	WATER	0.1	8	1K	36					
87/02/18	1420	WATER	0.1		4	12	.16	.050	.100	.010	.010K
87/05/27	1145	WATER	0.1	5	4	8	.06	.020	.100	.010	.010K
87/08/28	1020	WATER	0.1	5	4	39					
87/08/28	1020	WATER					.06	.050	.300	.020	.010K

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/14	0950	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	19
87/02/18	1420	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/27	1145	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/28	1020	WATER		10K	10K	25K	10K	50K	.2K	50K	12

TENNESSEE RIVER BASIN

03448000 FRENCH BROAD RIVER AT BENT CREEK, NC

LOCATION.--Lat 35°30'07", long 82°35'33", Buncombe County, Hydrologic Unit 06010105, on left bank 50 ft downstream from Bent Creek, 6.2 mi upstream from Hominy Creek, 6.7 mi south of Asheville, and at mile 157.7.

DRAINAGE AREA.--676 mi^2.

PERIOD OF RECORD.--October 1933 to December 1986 (discontinued). Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,995.91 ft above National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority).

REMARKS.--No estimated daily discharges. Records good. Some diurnal fluctuation at low flow caused by powerplant about 34 mi above station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--53 years, 1,684 ft^3/s, 33.83 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,600 ft^3/s Oct. 5, 1964, gage height, 15.80 ft; minimum, 154 ft^3/s July 21-22, 1986; minimum gage height, 2.05 ft Oct. 4, 5, 10, 11, 12, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1791, 27.3 ft July 15, 1916 (from floodmarks and studies by Tennessee Valley Authority). Flood in August 1928 reached a stage of about 16.1 ft, from floodmarks.

EXTREMES FOR CURRENT PERIOD.--October to December 1986: Maximum discharge during the period, 7,230 ft^3/s Nov. 26, gage height, 6.81 ft; minimum, 279 ft^3/s, gage height, 2.28 ft Oct. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER 1986 TO DECEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	389	1050	2630	---	---	---	---	---	---	---	---	---
2	428	1110	5110	---	---	---	---	---	---	---	---	---
3	529	1080	5490	---	---	---	---	---	---	---	---	---
4	372	1020	5090	---	---	---	---	---	---	---	---	---
5	325	987	3410	---	---	---	---	---	---	---	---	---
6	294	1030	2480	---	---	---	---	---	---	---	---	---
7	302	1010	2200	---	---	---	---	---	---	---	---	---
8	316	1580	2030	---	---	---	---	---	---	---	---	---
9	394	1570	2030	---	---	---	---	---	---	---	---	---
10	743	1350	2280	---	---	---	---	---	---	---	---	---
11	717	1250	2760	---	---	---	---	---	---	---	---	---
12	777	1600	3100	---	---	---	---	---	---	---	---	---
13	865	1450	2510	---	---	---	---	---	---	---	---	---
14	2000	1260	2160	---	---	---	---	---	---	---	---	---
15	1600	1210	1990	---	---	---	---	---	---	---	---	---
16	1080	1260	1870	---	---	---	---	---	---	---	---	---
17	842	1170	1780	---	---	---	---	---	---	---	---	---
18	773	1100	1760	---	---	---	---	---	---	---	---	---
19	673	990	1700	---	---	---	---	---	---	---	---	---
20	602	1050	1590	---	---	---	---	---	---	---	---	---
21	594	1410	1520	---	---	---	---	---	---	---	---	---
22	559	1250	1460	---	---	---	---	---	---	---	---	---
23	547	1120	1440	---	---	---	---	---	---	---	---	---
24	528	1110	4680	---	---	---	---	---	---	---	---	---
25	783	1210	5690	---	---	---	---	---	---	---	---	---
26	4010	4630	5000	---	---	---	---	---	---	---	---	---
27	4010	6890	3190	---	---	---	---	---	---	---	---	---
28	2050	6900	2440	---	---	---	---	---	---	---	---	---
29	1420	5900	2210	---	---	---	---	---	---	---	---	---
30	1200	2880	2060	---	---	---	---	---	---	---	---	---
31	1090	---	1930	---	---	---	---	---	---	---	---	---
TOTAL	30812	57427	85590	---	---	---	---	---	---	---	---	---
MEAN	994	1914	2761	---	---	---	---	---	---	---	---	---
MAX	4010	6900	5690	---	---	---	---	---	---	---	---	---
MIN	294	987	1440	---	---	---	---	---	---	---	---	---
CFSM	1.47	2.83	4.08	---	---	---	---	---	---	---	---	---
IN.	1.70	3.16	4.71	---	---	---	---	---	---	---	---	---

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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1926 to September 1975, October 1979 to September 1981, 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 National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. Basin above station is 100 percent forested. Station is part of district's Natural Quality Network for determining the quality of streams relatively unaffected by man.

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

AVERAGE DISCHARGE.--51 years (water years 1927-75, 1980-81), 10.7 ft^3/s, 26.61 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,370 ft^3/s Aug. 13, 1940, gage height, 6.20 ft, from rating curve extended above 240 ft^3/s on basis of computation of peak flow over weir; minimum, 0.3 ft^3/s Sept. 29, 30, Oct. 1, 1954, gage height, 0.26 ft.

EXTREMES FOR CURRENT PERIOD.--May to September 1987: Maximum discharge, 211 ft^3/s June 18, gage height, 3.89 ft; minimum daily discharge, 1.2 ft^3/s Aug. 23-25, Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, MAY TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e16	12	7.5	e2.3	e1.4
2	---	---	---	---	---	---	---	15	10	9.0	e2.8	e1.3
3	---	---	---	---	---	---	---	14	9.0	7.7	e3.3	e1.2
4	---	---	---	---	---	---	---	13	8.9	7.5	e3.8	e1.3
5	---	---	---	---	---	---	---	12	7.6	8.4	e4.6	e5.0
6	---	---	---	---	---	---	---	11	6.5	7.9	e5.8	e16
7	---	---	---	---	---	---	---	10	5.9	15	e7.0	e43
8	---	---	---	---	---	---	---	9.5	5.5	13	e4.5	e25
9	---	---	---	---	---	---	---	8.9	4.9	10	e4.0	e19
10	---	---	---	---	---	---	---	8.4	4.5	8.7	e3.5	e15
11	---	---	---	---	---	---	---	7.9	4.3	8.8	e2.8	e13
12	---	---	---	---	---	---	---	7.9	4.1	7.9	e2.4	e10
13	---	---	---	---	---	---	---	7.3	4.1	6.9	e2.5	e11
14	---	---	---	---	---	---	---	7.0	5.9	e6.0	e2.4	e8.0
15	---	---	---	---	---	---	---	6.9	6.6	e5.6	e2.3	e6.0
16	---	---	---	---	---	---	---	6.3	9.3	e5.0	e2.4	e4.0
17	---	---	---	---	---	---	---	6.1	12	e4.6	e2.5	e4.1
18	---	---	---	---	---	---	---	6.3	36	e4.2	e1.8	e4.0
19	---	---	---	---	---	---	---	6.1	60	e3.8	1.7	e4.1
20	---	---	---	---	---	---	---	6.2	31	e3.5	1.4	e3.7
21	---	---	---	---	---	---	---	6.4	25	e3.1	1.3	e3.0
22	---	---	---	---	---	---	---	6.0	20	e2.8	1.3	e2.9
23	---	---	---	---	---	---	---	6.9	17	e2.5	1.2	e2.9
24	---	---	---	---	---	---	---	6.6	14	e2.3	1.2	e2.8
25	---	---	---	---	---	---	---	6.2	13	e2.4	1.2	e2.8
26	---	---	---	---	---	---	---	6.0	14	e2.4	e1.3	e2.9
27	---	---	---	---	---	---	---	10	12	e2.2	e1.4	e2.9
28	---	---	---	---	---	---	---	13	10	e2.0	e1.5	e2.8
29	---	---	---	---	---	---	---	16	9.2	e2.0	e1.6	e3.5
30	---	---	---	---	---	---	---	18	8.3	e1.9	e1.5	e4.5
31	---	---	---	---	---	---	---	14	---	e2.0	e1.5	---
TOTAL	---	---	---	---	---	---	---	294.9	390.6	176.6	78.8	227.1
MEAN	---	---	---	---	---	---	---	9.51	13.0	5.70	2.54	7.57
MAX	---	---	---	---	---	---	---	18	60	15	7.0	43
MIN	---	---	---	---	---	---	---	6.0	4.1	1.9	1.2	1.2
CFSM	---	---	---	---	---	---	---	1.74	2.38	1.04	.47	1.39
IN.	---	---	---	---	---	---	---	2.01	2.66	1.20	.54	1.55

e Estimated

TENNESSEE RIVER BASIN

03450000 BEETREE CREEK NEAR SWANNANOA, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974, 1976-78, 1980-81, October 1985 to September 1987.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1979 to September 1981.
WATER TEMPERATURES: October 1979 to September 1981.

INSTRUMENTATION.--Water-quality monitor from October 1979 to September 1981.

REMARKS.--Basin above station is 100 percent forested. Station is part of district's Natural Quality Network for determining the quality of streams relatively unaffected by man.

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, 24 microsiemens May 15, Aug. 2, 3, 1980; minimum, 13 microsiemens Jan. 31, 1981.
WATER TEMPERATURE: Maximum, 23.5°C July 27, 28, 1981; minimum, 0.0°C many days in water year 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
JUL				
22...	1522	0.94	1	0.00
SEP				
05...	1115	4.4	0	0.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS (MG/L AS CACO3)	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3
OCT												
22...	1120	1.2	--	--	--	--	--	--	--	--	--	--
JAN												
16...	0945	5.8	--	--	--	--	--	--	--	--	--	--
19...	0650	29	17	5.60	8.0	--	--	681	10.4	98	--	--
19...	0710	29	--	--	--	--	--	--	--	--	--	--
19...	1215	25	17	6.10	8.0	--	--	679	10.2	97	--	--
19...	1230	25	--	--	--	--	--	--	--	--	--	--
20...	1045	21	17	5.80	4.0	--	--	692	12.2	103	--	--
20...	1100	21	--	--	--	--	--	--	--	--	--	--
FEB												
28...	0705	35	82	5.80	5.5	2	1.0	693	11.1	97	4	1
28...	1020	74	82	5.80	5.5	5	3.8	692	11.2	98	4	1
28...	1200	125	82	5.60	6.0	6	6.3	691	11.2	99	6	3
28...	1515	105	115	6.10	6.0	3	1.0	688	11.2	100	4	1
MAY												
12...	1445	6.3	--	--	--	--	--	--	--	--	--	--
JUL												
14...	1200	6.0	--	--	--	--	--	--	--	--	--	--
AUG												
18...	1520	1.8	21	6.50	19.0	--	--	688	8.4	101	--	--
26...	1230	1.3	--	--	--	--	--	--	--	--	--	--
SEP												
06...	0945	21	30	6.10	16.5	5	4.6	694	9.1	102	5	0
06...	1145	25	18	6.40	17.0	--	--	694	8.8	100	--	--
06...	1500	14	27	6.55	17.0	6	2.6	693	8.2	93	5	0

TENNESSEE RIVER BASIN

03450000 BEETREE CREEK NEAR SWANNANOA, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	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)
OCT											
22...	--	--	--	--	--	--	--	--	--	--	--
JAN											
16...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
FEB											
28...	0.91	0.42	1.0	31	0.2	0.60	3.9	0.60	<0.10	6.1	12
28...	0.93	0.45	1.3	36	0.3	0.70	4.4	0.60	<0.10	5.7	--
28...	1.4	0.53	1.0	25	0.2	0.70	4.8	0.50	<0.10	5.3	15
28...	1.0	0.45	1.4	36	0.3	0.80	4.7	0.50	<0.10	5.3	16
MAY											
12...	--	--	--	--	--	--	--	--	--	--	--
JUL											
14...	--	--	--	--	--	--	--	--	--	--	--
AUG											
18...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
SEP											
06...	1.1	0.59	1.3	32	0.3	0.60	5.0	0.70	<0.10	7.9	19
06...	--	--	--	--	--	--	--	--	--	--	--
06...	1.1	0.52	1.3	34	0.3	0.50	4.4	0.70	<0.10	7.7	19

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	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)
OCT											
22...	--	--	--	--	--	--	--	--	--	--	--
JAN											
16...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
FEB											
28...	15	0.02	1.1	<0.190	<0.010	0.200	<0.010	--	0.30	0.50	2.2
28...	--	0.01	1.6	<0.190	<0.010	0.200	<0.010	--	0.90	1.1	4.9
28...	16	0.02	5.1	<0.190	<0.010	0.200	<0.010	--	1.4	1.6	7.1
28...	16	0.02	4.5	<0.290	<0.010	0.300	<0.010	--	<0.20	<0.50	<2.2
MAY											
12...	--	--	--	--	--	--	--	--	--	--	--
JUL											
14...	--	--	--	--	--	--	--	--	--	--	--
AUG											
18...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
SEP											
06...	20	0.03	1.1	--	<0.010	0.200	0.010	0.19	0.20	0.40	1.8
06...	--	--	--	--	<0.010	0.200	<0.010	--	0.90	1.1	4.9
06...	19	0.03	0.72	--	<0.010	0.200	0.040	--	<0.20	--	--

TENNESSEE RIVER BASIN

03450000 BEETREE CREEK NEAR SWANNANOA, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	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)
OCT											
22...	--	--	--	--	--	--	--	--	--	--	--
JAN											
16...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
FEB											
28...	<0.010	<0.010	800	<1	<1	<1	3	1	980	<5	40
28...	0.010	<0.010	--	--	--	--	--	--	--	--	--
28...	<0.010	<0.010	2700	<1	<1	10	1	6	3200	<5	160
28...	<0.010	<0.010	--	--	--	--	--	--	--	--	--
MAY											
12...	--	--	--	--	--	--	--	--	--	--	--
JUL											
14...	--	--	--	--	--	--	--	--	--	--	--
AUG											
18...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
SEP											
06...	0.040	<0.010	800	<1	--	2	--	--	740	--	20
06...	0.040	<0.010	830	<1	<1	3	2	2	800	<5	40
06...	0.020	<0.010	--	--	--	--	--	--	--	--	--

DATE	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT											
22...	--	--	--	--	--	--	--	--	--	--	--
JAN											
16...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
FEB											
28...	--	<0.10	4	<1	<10	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	<0.10	4	<1	10	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
MAY											
12...	--	--	--	--	--	--	--	--	--	--	--
JUL											
14...	--	--	--	--	--	--	--	--	--	--	--
AUG											
18...	--	--	--	--	--	<0.1	<1	<0.10	<1.0	<0.010	<0.1
26...	--	--	--	--	--	--	--	--	--	--	--
SEP											
06...	20	<0.10	--	<1	<10	<0.1	--	<0.10	--	<0.010	--
06...	--	<0.10	<1	<1	<10	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--

TENNESSEE RIVER BASIN

03450000 BEETREE CREEK NEAR SWANNANOA, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	CHLORDANE, TOTAL (UG/L)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL (UG/L)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN TOTAL (UG/L)
OCT											
22...	--	--	--	--	--	--	--	--	--	--	--
JAN											
16...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
FEB											
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
MAY											
12...	--	--	--	--	--	--	--	--	--	--	--
JUL											
14...	--	--	--	--	--	--	--	--	--	--	--
AUG											
18...	<0.1	<1.0	<0.010	<0.1	<0.010	<0.1	<0.010	<0.1	<0.01	<0.1	<0.010
26...	--	--	--	--	--	--	--	--	--	--	--
SEP											
06...	<0.1	--	<0.010	--	<0.010	--	<0.010	--	<0.01	--	<0.010
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--

DATE	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)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
OCT											
22...	--	--	--	--	--	--	--	--	--	--	--
JAN											
16...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
FEB											
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
MAY											
12...	--	--	--	--	--	--	--	--	--	--	--
JUL											
14...	--	--	--	--	--	--	--	--	--	--	--
AUG											
18...	<0.1	<0.010	<0.1	<0.010	<0.1	<0.01	<0.1	<0.010	<0.1	<0.010	<0.1
26...	--	--	--	--	--	--	--	--	--	--	--
SEP											
06...	--	<0.010	--	<0.010	--	<0.01	--	<0.010	--	<0.010	--
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--

TENNESSEE RIVER BASIN

03450000 BEETREE CREEK NEAR SWANNANOA, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOTAL (UG/L)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)
OCT											
22...	--	--	--	--	--	--	--	--	--	--	--
JAN											
16...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
FEB											
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
MAY											
12...	--	--	--	--	--	--	--	--	--	--	--
JUL											
14...	--	--	--	--	--	--	--	--	--	--	--
AUG											
18...	<0.010	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01
26...	--	--	--	--	--	--	--	--	--	--	--
SEP											
06...	<0.010	--	<0.01	--	<0.01	--	<0.01	--	<0.01	--	<0.01
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--

DATE	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE TOTAL (UG/L)	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)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT											
22...	--	--	--	--	--	--	--	--	--	0	0.0
JAN											
16...	--	--	--	--	--	--	--	--	--	0	0.0
19...	--	--	--	--	--	--	--	--	--	2	0.15
19...	--	--	--	--	--	--	--	--	--	2	0.16
19...	--	--	--	--	--	--	--	--	--	2	0.13
19...	--	--	--	--	--	--	--	--	--	2	0.13
20...	--	--	--	--	--	--	--	--	--	0	0.0
20...	--	--	--	--	--	--	--	--	--	0	0.0
FEB											
28...	--	--	--	--	--	--	--	--	--	36	3.4
28...	--	--	--	--	--	--	--	--	--	90	18
28...	--	--	--	--	--	--	--	--	--	110	37
28...	--	--	--	--	--	--	--	--	--	26	7.4
MAY											
12...	--	--	--	--	--	--	--	--	--	0	0.0
JUL											
14...	--	--	--	--	--	--	--	--	--	1	0.02
AUG											
18...	<0.1	<0.01	<0.1	<0.1	<1.00	<1	<10	<0.01	<0.1	0	0.0
26...	--	--	--	--	--	--	--	--	--	1	0.00
SEP											
06...	--	<0.01	--	<0.1	--	<1	--	<0.01	--	26	1.5
06...	--	--	--	--	--	--	--	--	--	27	1.8
06...	--	--	--	--	--	--	--	--	--	10	0.38

TENNESSEE RIVER BASIN

0345092550 ROSS CREEK AT BEAUCATCHER RD AT ASHEVILLE, N. C.

LOCATION:--Lat 35°35'15", long 82°31'49", Buncombe County, Hydrologic Unit 06010105, on right bank, 35 ft upstream from bridge on Beaucatcher Rd., and 1.6 mi SE of Federal Courthouse.

DRAINAGE AREA.--2.46 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,008 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Recording rain gage at station. Station operated to define urban flood-frequency and stormwater-quality characteristics in the Blue Ridge Province. Water-quality samples taken with pumping sediment sampler and were not depth or width intergrated.

COOPERATION.--Analysis of nutrient and biological data were performed by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR CURRENT PERIOD.--July to September 1986: Maximum discharge during period 88 ft^3/s July 25, gage height 2.96 ft; minimum 0.07 ft^3/s July 20, 21, 22, 23, gage height 1.32 ft.

Water year 1987: Maximum discharge, 689 ft^3/s June 25, gage height 4.68 ft; minimum discharge, 0.05 ft^3/s Oct. 4, gage height, 1.32 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, JULY TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	.80	.16	1.2
2	---	---	---	---	---	---	---	---	---	1.9	.17	2.3
3	---	---	---	---	---	---	---	---	---	.53	.16	1.4
4	---	---	---	---	---	---	---	---	---	.40	.71	.61
5	---	---	---	---	---	---	---	---	---	.40	.21	.41
6	---	---	---	---	---	---	---	---	---	.40	1.1	.32
7	---	---	---	---	---	---	---	---	---	.34	.69	.28
8	---	---	---	---	---	---	---	---	---	.32	.64	.33
9	---	---	---	---	---	---	---	---	---	.30	1.2	.27
10	---	---	---	---	---	---	---	---	---	1.0	.26	.27
11	---	---	---	---	---	---	---	---	---	.33	.35	.29
12	---	---	---	---	---	---	---	---	---	.25	.23	1.3
13	---	---	---	---	---	---	---	---	---	.26	.20	.31
14	---	---	---	---	---	---	---	---	---	.24	.21	.29
15	---	---	---	---	---	---	---	---	---	.20	.17	.31
16	---	---	---	---	---	---	---	---	---	.19	.17	.33
17	---	---	---	---	---	---	---	---	---	.18	6.9	.33
18	---	---	---	---	---	---	---	---	---	.18	2.0	.35
19	---	---	---	---	---	---	---	---	---	.14	.56	.39
20	---	---	---	---	---	---	---	---	---	.12	.44	1.2
21	---	---	---	---	---	---	---	---	---	.10	1.4	.51
22	---	---	---	---	---	---	---	---	---	.10	1.2	.23
23	---	---	---	---	---	---	---	---	---	1.3	.53	.75
24	---	---	---	---	---	---	---	---	---	.26	.30	.25
25	---	---	---	---	---	---	---	---	---	2.2	.22	.26
26	---	---	---	---	---	---	---	---	---	.37	.22	.27
27	---	---	---	---	---	---	---	---	---	1.3	.25	.26
28	---	---	---	---	---	---	---	---	---	.31	.23	.25
29	---	---	---	---	---	---	---	---	---	.22	.23	.25
30	---	---	---	---	---	---	---	---	---	.17	.23	.22
31	---	---	---	---	---	---	---	---	---	.15	.35	---
TOTAL	---	---	---	---	---	---	---	---	---	14.96	21.69	15.74
MEAN	---	---	---	---	---	---	---	---	---	.48	.70	.52
MAX	---	---	---	---	---	---	---	---	---	2.2	6.9	2.3
MIN	---	---	---	---	---	---	---	---	---	.10	.16	.22
CFSM	---	---	---	---	---	---	---	---	---	.20	.28	.21
IN.	---	---	---	---	---	---	---	---	---	.23	.33	.24

TENNESSEE RIVER BASIN

0345092550 ROSS CREEK AT BEAUCATCHER RD AT ASHEVILLE, N. C.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.23	2.9	.66	1.1	1.6	13	1.1	2.5	3.7	.94	.45	.35
2	.22	2.0	1.2	.50	2.6	4.4	1.1	2.1	1.4	1.8	.42	.30
3	.20	1.6	.41	.41	1.6	3.0	1.6	1.8	1.2	1.7	.43	.32
4	.09	1.7	.30	.39	1.4	2.3	2.6	1.8	2.6	1.0	.40	.82
5	.12	3.3	.28	.38	1.3	1.9	2.8	1.6	1.1	3.4	4.0	1.6
6	.12	3.0	.24	.38	1.2	1.6	e2.5	1.5	1.0	1.5	4.5	6.1
7	.14	9.8	.23	.40	1.1	1.4	e2.3	1.5	.93	1.2	1.0	4.9
8	.17	1.9	.39	.41	1.1	1.3	e2.5	1.4	.92	1.1	.58	.75
9	1.9	1.0	.91	.40	1.0	2.5	e3.5	1.4	.89	1.0	.48	.55
10	.30	.65	1.7	.42	1.0	1.3	3.3	1.3	.78	.93	.46	.52
11	.37	4.5	3.2	.45	1.0	1.0	2.6	1.3	.76	.89	.46	.79
12	.21	.70	.87	.36	1.0	1.0	2.2	1.7	.79	.85	.49	2.6
13	3.2	.40	.55	.35	1.0	.91	1.9	1.4	.94	.90	.51	.71
14	1.6	.57	.48	.35	1.1	.88	1.7	1.3	.77	1.3	.49	.46
15	.23	1.3	.44	.41	1.0	.87	12	2.8	1.8	.76	.45	.41
16	.18	.56	.36	.39	2.9	1.0	5.2	1.4	1.0	.71	.47	.41
17	.18	.51	.59	.35	2.8	.79	5.6	1.2	.75	.63	.47	.62
18	.18	.50	.52	5.1	1.7	1.4	4.1	1.3	3.3	.56	.48	.36
19	.18	.63	.34	4.3	1.5	2.4	3.3	1.2	1.4	.56	.47	.54
20	.14	2.5	.31	1.7	1.6	.93	2.7	1.8	5.4	.54	.44	.37
21	.13	1.0	.28	1.3	1.6	.85	2.3	1.1	2.3	.54	.44	.30
22	.15	1.1	.28	1.6	4.6	.80	2.1	1.0	2.0	.48	.44	.30
23	.16	1.8	2.2	1.2	3.1	.74	31	2.8	.96	.49	.42	.36
24	.16	.86	7.3	1.6	2.3	.70	12	1.2	.82	.53	.38	.40
25	4.8	1.6	1.6	3.9	1.9	.83	5.9	1.1	15	.52	.39	.35
26	.69	14	1.0	2.3	3.0	.66	4.0	2.2	4.2	.45	.42	.31
27	.32	1.1	.75	1.5	6.8	.69	3.4	1.8	1.5	.44	.42	.30
28	.41	.67	.61	1.3	43	.71	2.9	1.1	1.1	.44	.42	.33
29	.37	.49	.54	1.3	---	.54	3.4	2.6	.99	.45	.29	.51
30	.45	.62	.48	1.8	---	3.6	2.5	1.0	.85	.45	.29	1.4
31	.43	---	.44	1.8	---	1.6	---	.76	---	.46	.33	---
TOTAL	18.03	63.26	29.46	38.15	95.8	55.60	134.1	48.96	61.15	27.52	21.69	28.04
MEAN	.58	2.11	.95	1.23	3.42	1.79	4.47	1.58	2.04	.89	.70	.93
MAX	4.8	14	7.3	5.1	43	13	31	2.8	15	3.4	4.5	6.1
MIN	.09	.40	.23	.35	1.0	.54	1.1	.76	.75	.44	.29	.30
CFSM	.24	.86	.39	.50	1.39	.73	1.82	.64	.83	.36	.28	.38
IN.	.27	.96	.45	.58	1.45	.84	2.03	.74	.92	.42	.33	.42

WTR YR 1987 TOTAL 621.75 MEAN 1.70 MAX 43 MIN .09 CFSM .69 IN. 9.40

e Estimated

0345092550 ROSS CREEK AT BEAUCATCHER RD AT ASHEVILLE, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1986 to current year.

INSTRUMENTATION.-- Sediment pumping sampler since December 1986.

REMARKS.--Station operated to define urban flood-frequency and stormwater-quality characteristics in the Blue Ridge Province. Water-quality samples taken with pumping sediment sampler and were not depth or width intergrated.

COOPERATION.--Analysis of nutrient and biological data were performed by the North Carolina Department of Natural Resources and Community Development.

WATER QUALITY DATA, JULY 1986 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
AUG				
06...	1100	0.49	2	0.00
18...	1115	0.44	6	0.01
SEP				
08...	1215	0.34	0	0.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
OCT							
03...	1150	0.28	--	--	--	--	--
22...	1431	0.28	--	--	--	--	--
NOV							
12...	1622	0.50	--	--	--	--	--
26...	1105	24	--	--	--	--	--
26...	1115	21	--	--	--	--	--
DEC							
02...	1335	0.39	--	--	--	--	--
22...	1110	0.28	--	--	--	--	--
JAN							
14...	1120	0.39	--	--	--	--	--
FEB							
04...	1318	1.4	--	--	--	--	--
25...	1405	1.8	--	--	--	--	--
MAR							
18...	1255	0.73	--	--	--	--	--
APR							
09...	1228	4.5	--	--	--	--	--
MAY							
20...	1225	1.2	--	--	--	--	--
JUL							
01...	1411	0.88	--	--	--	--	--
22...	1331	0.49	--	--	--	--	--
AUG							
13...	1519	0.55	--	--	--	--	--
SEP							
01...	0935	0.49	--	--	--	--	--
06...	0820	19	108	5.93	0.340	0.350	2.3
06...	0830	42	102	5.99	0.330	0.360	3.7
06...	0845	32	86	6.16	0.280	0.310	3.4
06...	0915	27	83	6.21	0.380	0.050	2.0
06...	0945	21	85	6.27	0.370	0.050	0.55
17...	0350	11	--	--	--	--	--
23...	1005	0.49	--	--	--	--	--

TENNESSEE RIVER BASIN

0345092550 ROSS CREEK AT BEAUCATCHER RD AT ASHEVILLE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT						
03...	--	--	--	--	2	0.00
22...	--	--	--	--	2	0.00
NOV						
12...	--	--	--	--	1	0.00
26...	--	--	--	--	521	34
26...	--	--	--	--	458	26
DEC						
02...	--	--	--	--	4	0.00
22...	--	--	--	--	1	0.00
JAN						
14...	--	--	--	--	2	0.00
FEB						
04...	--	--	--	--	5	0.02
25...	--	--	--	--	6	0.03
MAR						
18...	--	--	--	--	2	0.00
APR						
09...	--	--	--	--	12	0.15
MAY						
20...	--	--	--	--	2	0.01
JUL						
01...	--	--	--	--	13	0.03
22...	--	--	--	--	2	0.00
AUG						
13...	--	--	--	--	4	0.01
SEP						
01...	--	--	--	--	2	0.00
06...	2.6	2.9	13	1.20	--	--
06...	4.1	4.4	20	1.20	--	--
06...	3.7	4.0	18	1.20	--	--
06...	2.1	2.5	11	0.200	--	--
06...	0.60	0.97	4.3	0.240	--	--
17...	--	--	--	--	427	13
23...	--	--	--	--	2	0.00

TENNESSEE RIVER BASIN

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.

WATER-DISCHARGE RECORDS

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.

REMARKS.--No estimated daily discharges. Records good. Considerable regulation by Lake Craig 3.6 mi above station from 1925 to 1950 (reservoir silted). City of Asheville diverted an average of 34.5 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 40.1 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. The National Weather Service has telemetry at station.

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

AVERAGE DISCHARGE.--60 years (1921-26, 1934-87), 159 ft^3/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft^3/s Aug. 13, 1940, gage height, 19.00 ft, 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, 1.1 ft^3/s Oct. 9, 14, 15, 1941; minimum daily, 1.2 ft^3/s Oct. 14, 1941.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,780 ft^3/s Mar. 1, gage height, 7.25 ft; minimum discharge, 2.8 ft^3/s Oct. 7, gage height, 1.00 ft; minimum daily, 11.0 ft^3/s Oct. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	36	106	98	125	2150	195	184	136	77	56	23
2	17	46	276	98	153	991	174	166	108	105	74	18
3	15	33	196	90	157	595	195	153	89	101	56	17
4	16	32	138	85	142	432	217	139	106	99	37	79
5	17	33	111	78	127	340	204	123	81	122	35	64
6	14	46	96	76	118	286	255	117	70	118	115	321
7	11	71	92	73	113	250	273	109	72	83	52	600
8	15	83	85	71	112	229	286	100	65	95	65	217
9	30	62	99	69	99	244	318	95	59	76	57	105
10	32	49	165	74	88	256	303	93	53	67	37	86
11	27	59	219	74	87	223	286	85	55	66	35	81
12	28	71	192	63	85	204	267	79	54	72	33	150
13	47	53	147	57	79	186	239	109	55	62	35	129
14	116	46	128	59	80	175	214	88	58	75	33	73
15	46	59	109	62	90	166	604	104	82	52	32	63
16	28	61	99	61	123	155	479	100	136	50	34	55
17	25	47	95	66	126	142	445	86	103	45	37	73
18	24	44	110	154	113	136	404	79	101	47	30	55
19	24	40	94	292	110	212	347	81	889	48	30	57
20	20	64	84	184	101	170	295	84	269	44	28	68
21	20	66	82	143	109	155	254	80	204	39	24	49
22	21	52	73	143	171	151	224	73	177	38	21	46
23	20	64	83	125	193	135	256	106	132	35	25	43
24	18	81	379	117	150	124	520	112	113	32	19	42
25	67	76	246	168	134	127	401	88	210	34	21	40
26	125	516	171	169	135	120	344	85	231	35	22	41
27	49	279	144	122	261	115	288	213	143	35	24	43
28	38	149	126	110	997	121	246	121	102	28	22	38
29	29	115	112	101	---	114	215	245	89	29	27	38
30	34	96	104	115	---	150	192	200	79	28	26	65
31	26	---	95	133	---	271	---	136	---	75	21	---
TOTAL	1016	2529	4256	3330	4378	9125	8940	3633	4121	1912	1163	2779
MEAN	32.8	84.3	137	107	156	294	298	117	137	61.7	37.5	92.6
MAX	125	516	379	292	997	2150	604	245	889	122	115	600
MIN	11	32	73	57	79	114	174	73	53	28	19	17

CAL YR 1986 TOTAL 22356 MEAN 61.2 MAX 516 MIN 8.1
WTR YR 1987 TOTAL 47182 MEAN 129 MAX 2150 MIN 11

TENNESSEE RIVER BASIN

03451000 SWANNANOA RIVER AT BILTMORE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/29	1430	WATER	0.1	1.26	21						
86/11/06	1400	WATER	0.1			72	6.90	15.0	3.7	8.1	
86/11/26	1430	WATER	0.1			76		13.0	220.0	8.2	
86/12/31	1600	WATER	0.1			30	7.20	5.0		11.6	
87/01/13	1345	WATER	0.1			55	7.20	6.0	2.2	12.4	
87/02/27	1610	WATER	0.1			29		4.0	20.0	11.4	
87/03/12	1415	WATER	0.1			35		5.0		11.7	
87/04/14	1500	WATER	0.1	2.05	206	25	7.00	13.0	2.4	9.6	
87/05/20	1130	WATER	0.1	1.52	63						
87/06/25	1440	WATER	0.1	1.67	94	64	7.20	23.0	1.0K	8.5	810
87/07/30	1345	WATER	0.1	1.22	18	40	7.40	26.0		7.5	
87/08/31	1615	WATER	0.1	1.16	12	70		20.0	4.1	8.4	760
87/09/30	1345	WATER	0.1	1.49	61	70	7.10	16.0		9.0	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/11/06	1400	WATER	0.1		5	71	.08	.060	.300	.100	.020
86/11/26	1430	WATER	0.1		640	720	.51	.220	3.100	1.100	.010
86/12/31	1600	WATER	0.1	13							
87/01/13	1345	WATER	0.1	16	2	62					
87/02/27	1610	WATER	0.1		67	130	.40	.060	.400	.140	.010K
87/04/14	1500	WATER	0.1	11	10	47					
87/06/25	1440	WATER	0.1	16	14	70	.32	.050	.200	.030	.010
87/07/30	1345	WATER	0.1	23							
87/08/31	1615	WATER	0.1		5	70	.26	.040	.300	.070	.020
87/09/30	1345	WATER	0.1	18							

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/06	1400	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	21
86/11/26	1430	WATER	0.1	10K	10K	45	55	70	.2K	50K	260
87/02/27	1610	WATER	0.1	10K	10K	25K	10K	50K		50K	54
87/06/25	1440	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	15
87/08/31	1615	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	12

TENNESSEE RIVER BASIN

0345112600 NASTY BRANCH AT ASHEVILLE, NC

LOCATION.--Lat 35°34'44", long 82°33'35", Buncombe County, Hydrologic Unit 06010105, on right bank, and 300 ft upstream of South French Broad Avenue, 0.5 mi above mouth, 1.1 mi south of Federal Courthouse Building in Asheville, N. C.

DRAINAGE AREA.--1.19 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,000 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Recording rain gage at station. Station operated to define urban flood-frequency and stormwater-quality characteristics in the Blue Ridge Province. Water-quality samples taken with pumping sediment sampler and were not depth or width intergrated.

COOPERATION.--Analysis of nutrient and biological data were performed by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR CURRENT PERIOD.--July to September 1986: Maximum discharge during period, 208 ft^3/s July 27, gage height, 3.66 ft; minimum discharge, 0.33 ft^3/s many days in July and September; minimum gage height, 1.16 ft Sept. 19, 27, 28.

Water year 1987: Maximum discharge, 702 ft^3/s April 23, gage height, 6.80 ft; minimum discharge, 0.33 ft^3/s many days in October, January, August and September; minimum gage height, 1.16 ft Oct. 11, 12, Jan. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, JULY TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	e2.1	.81	5.7
2	---	---	---	---	---	---	---	---	---	e5.0	.92	7.1
3	---	---	---	---	---	---	---	---	---	e1.0	.76	2.2
4	---	---	---	---	---	---	---	---	---	.76	4.3	1.8
5	---	---	---	---	---	---	---	---	---	.76	.62	.62
6	---	---	---	---	---	---	---	---	---	.76	2.6	.60
7	---	---	---	---	---	---	---	---	---	.71	2.8	.61
8	---	---	---	---	---	---	---	---	---	.64	1.0	.97
9	---	---	---	---	---	---	---	---	---	.58	4.1	.87
10	---	---	---	---	---	---	---	---	---	2.5	1.2	.77
11	---	---	---	---	---	---	---	---	---	.45	2.1	.78
12	---	---	---	---	---	---	---	---	---	.56	1.5	3.4
13	---	---	---	---	---	---	---	---	---	.58	1.4	1.3
14	---	---	---	---	---	---	---	---	---	.45	1.0	.52
15	---	---	---	---	---	---	---	---	---	.45	.80	.55
16	---	---	---	---	---	---	---	---	---	.57	.76	.52
17	---	---	---	---	---	---	---	---	---	.60	18	.53
18	---	---	---	---	---	---	---	---	---	.46	2.9	.52
19	---	---	---	---	---	---	---	---	---	.41	1.1	.94
20	---	---	---	---	---	---	---	---	---	.44	1.4	2.9
21	---	---	---	---	---	---	---	---	---	.52	2.4	1.1
22	---	---	---	---	---	---	---	---	---	.42	3.4	.84
23	---	---	---	---	---	---	---	---	---	2.2	.78	1.9
24	---	---	---	---	---	---	---	---	---	.78	.76	.56
25	---	---	---	---	---	---	---	---	---	3.0	.80	.57
26	---	---	---	---	---	---	---	---	---	.77	.85	.52
27	---	---	---	---	---	---	---	---	---	5.2	.88	.75
28	---	---	---	---	---	---	---	---	---	.79	.82	.65
29	---	---	---	---	---	---	---	---	---	.88	1.2	.84
30	---	---	---	---	---	---	---	---	---	1.1	1.0	.72
31	---	---	---	---	---	---	---	---	---	.91	1.9	---
TOTAL	---	---	---	---	---	---	---	---	---	36.35	64.86	41.65
MEAN	---	---	---	---	---	---	---	---	---	1.17	2.09	1.39
MAX	---	---	---	---	---	---	---	---	---	5.2	18	7.1
MIN	---	---	---	---	---	---	---	---	---	.41	.62	.52
CFSM	---	---	---	---	---	---	---	---	---	.99	1.76	1.17
IN.	---	---	---	---	---	---	---	---	---	1.14	2.03	1.30

e Estimated

TENNESSEE RIVER BASIN

0345112600 NASTY BRANCH AT ASHEVILLE, NC--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	2.8	3.6	4.6	1.4	5.8	1.0	3.2	7.6	2.8	1.2	1.2
2	.57	1.3	4.9	2.3	4.1	2.1	1.0	1.9	1.5	4.5	.78	.97
3	.68	1.2	2.0	1.7	1.4	1.6	2.7	1.3	1.5	4.4	.88	1.0
4	.84	1.7	1.3	.87	1.4	1.4	5.8	1.6	5.8	1.8	1.0	2.9
5	.72	3.0	1.1	.89	1.4	1.4	6.0	1.2	1.7	5.0	8.8	5.1
6	.75	2.9	.92	.91	1.4	1.4	9.2	1.2	1.5	1.6	4.0	15
7	.83	7.5	1.1	.83	1.4	1.4	3.6	1.3	1.5	1.3	.49	14
8	.76	2.2	2.1	.82	1.5	1.4	2.4	1.2	1.7	.86	.36	2.7
9	6.2	1.6	3.9	.95	1.6	5.4	1.6	1.2	1.7	.99	.40	1.5
10	.92	1.5	3.6	1.1	1.6	1.4	1.3	1.3	2.4	1.2	.44	1.8
11	.62	5.0	6.9	1.3	1.5	1.5	1.2	1.3	2.4	.93	.45	1.5
12	.96	1.2	1.2	1.0	1.5	1.9	1.1	3.1	2.4	.78	.50	6.8
13	9.2	1.2	1.2	.98	1.5	1.5	1.0	1.1	3.1	1.1	.51	.80
14	3.1	1.5	1.2	1.0	1.9	1.4	1.3	1.6	2.0	2.8	.54	.80
15	.90	4.2	1.5	1.2	1.5	1.6	17	3.5	3.2	.87	.52	.57
16	.93	3.4	.96	1.2	10	2.0	6.7	1.0	2.0	.92	.52	.56
17	.78	2.5	2.0	1.0	5.3	1.4	6.6	.94	2.1	.97	.61	.81
18	.76	2.4	1.4	14	2.1	4.0	2.3	1.3	3.8	.97	.67	.47
19	.87	2.7	.71	5.8	1.6	4.7	1.8	1.0	2.2	.93	.57	1.2
20	1.2	7.1	.98	1.4	2.4	1.5	1.7	4.7	8.9	.93	.57	.54
21	.90	2.9	1.9	1.4	1.7	1.5	1.8	1.0	4.7	.87	.54	.60
22	.88	3.1	1.7	3.4	8.8	1.5	1.8	1.1	2.8	.87	.53	.79
23	.76	8.9	8.0	2.0	2.2	1.6	18	15	2.4	.89	.54	1.0
24	.96	5.1	14	3.2	1.7	1.5	3.8	.88	2.6	.86	.63	.98
25	12	7.8	5.3	9.2	1.7	2.5	2.5	.72	5.5	.77	.61	1.0
26	2.1	21	4.6	2.5	6.2	1.5	1.7	1.4	6.6	.88	.70	1.0
27	1.9	2.6	2.8	2.5	13	1.9	1.5	7.3	1.6	.88	.63	1.4
28	1.1	2.6	1.5	1.3	30	1.7	1.4	.86	1.1	.86	.81	1.5
29	1.1	2.9	1.9	1.6	---	1.2	1.4	2.4	1.1	.88	.54	1.7
30	1.2	4.7	1.1	2.1	---	9.1	1.3	.99	1.0	.91	.54	4.3
31	1.3	---	1.0	1.5	---	1.6	---	1.0	---	.86	.86	---
TOTAL	56.39	118.5	86.37	74.55	111.8	70.4	110.5	67.59	88.4	45.18	30.74	74.49
MEAN	1.82	3.95	2.79	2.40	3.99	2.27	3.68	2.18	2.95	1.46	.99	2.48
MAX	12	21	14	14	30	9.1	18	15	8.9	5.0	8.8	15
MIN	.57	1.2	.71	.82	1.4	1.2	1.0	.72	1.0	.77	.36	.47
CFSM	1.53	3.32	2.34	2.02	3.36	1.91	3.10	1.83	2.48	1.22	.83	2.09
IN.	1.76	3.70	2.70	2.33	3.49	2.20	3.45	2.11	2.76	1.41	.96	2.33

WTR YR 1987 TOTAL 934.90 MEAN 2.56 MAX 30 MIN .36 CFSM 2.15 IN. 29.2

TENNESSEE RIVER BASIN

0345112600 NASTY BRANCH AT ASHEVILLE, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1986 to current year.

INSTRUMENTATION.-- Sediment pumping sampler since December 1986.

REMARKS.--Station operated to define urban flood-frequency and stormwater-quality characteristics in the Blue Ridge Province. Water-quality samples taken with pumping sediment sampler and were not depth or width intergrated.

COOPERATION.--Analysis of nutrient and biological data were performed by the North Carolina Department of Natural Resources and Community Development.

WATER QUALITY DATA, JULY 1986 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
AUG				
05...	1125	0.52	15	0.02
SEP				
08...	1345	0.76	0	0.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	COLOR (PLAT-INUM-COBALT UNITS)	HARD-NESS (MG/L AS CACO3)	NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT										
01...	1610	0.76	--	--	--	--	--	--	--	--
22...	1625	0.76	--	--	--	--	--	--	--	--
NOV										
12...	1610	1.4	--	--	--	--	--	--	--	--
26...	0920	87	--	--	--	--	--	--	--	--
26...	0940	165	--	--	--	--	--	--	--	--
26...	0952	68	--	--	--	--	--	--	--	--
26...	1003	51	--	--	--	--	--	--	--	--
26...	1010	44	--	--	--	--	--	--	--	--
26...	1020	41	--	--	--	--	--	--	--	--
26...	1034	36	--	--	--	--	--	--	--	--
DEC										
02...	1610	1.0	--	--	--	--	--	--	--	--
22...	0945	0.76	--	--	--	--	--	--	--	--
JAN										
14...	1500	1.4	--	--	--	--	--	--	--	--
18...	0125	16	200	6.90	50	38	0	11	2.6	19
18...	0220	23	102	6.90	45	17	4	5.3	0.80	11
18...	1250	0.52	--	--	--	--	--	--	--	--
18...	1900	17	113	6.71	43	24	8	7.1	1.5	10
18...	1940	21	75	6.78	42	15	4	4.7	0.80	6.2
18...	2000	14	108	6.73	68	23	8	6.9	1.5	8.4
FEB										
04...	1056	1.4	--	--	--	--	--	--	--	--
25...	1545	1.7	--	--	--	--	--	--	--	--
MAR										
18...	0952	1.4	--	--	--	--	--	--	--	--
MAY										
19...	1258	1.0	--	--	--	--	--	--	--	--
JUN										
01...	1552	310	--	--	--	--	--	--	--	--
01...	1600	110	--	--	--	--	--	--	--	--
01...	1605	66	--	--	--	--	--	--	--	--
01...	1622	30	--	--	--	--	--	--	--	--
01...	1630	22	--	--	--	--	--	--	--	--
01...	1638	18	--	--	--	--	--	--	--	--
JUL										
01...	1214	1.0	--	--	--	--	--	--	--	--
22...	1304	1.0	--	--	--	--	--	--	--	--
AUG										
13...	1102	0.52	--	--	--	--	--	--	--	--
SEP										
01...	0824	1.4	--	--	--	--	--	--	--	--
06...	0825	69	59	6.64	--	--	--	--	--	--
06...	0830	186	52	6.64	--	--	--	--	--	--
06...	0845	121	45	6.70	--	--	--	--	--	--
06...	0900	61	43	6.74	--	--	--	--	--	--
06...	0915	47	48	6.73	--	--	--	--	--	--
23...	1214	1.0	--	--	--	--	--	--	--	--

TENNESSEE RIVER BASIN

0345112600 NASTY BRANCH AT ASHEVILLE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
OCT										
01...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
NOV										
12...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
DEC										
02...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
JAN										
14...	--	--	--	--	--	--	--	--	--	--
18...	50	1	3.1	22	31	0.30	7.1	125	--	0.17
18...	55	1	2.1	10	11	0.10	2.1	52	50	0.07
18...	--	--	--	--	--	--	--	--	--	--
18...	45	0.9	1.8	12	14	0.20	4.2	65	60	0.09
18...	45	0.7	1.4	9.4	10	0.10	2.1	45	41	0.06
18...	41	0.8	1.9	13	11	0.20	3.8	63	56	0.09
FEB										
04...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
MAR										
18...	--	--	--	--	--	--	--	--	--	--
MAY										
19...	--	--	--	--	--	--	--	--	--	--
JUN										
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
JUL										
01...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
AUG										
13...	--	--	--	--	--	--	--	--	--	--
SEP										
01...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--

TENNESSEE RIVER BASIN

0345112600 NASTY BRANCH AT ASHEVILLE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,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)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT										
01...	--	--	--	--	--	--	--	--	4	0.01
22...	--	--	--	--	--	--	--	--	9	0.02
NOV										
12...	--	--	--	--	--	--	--	--	6	0.02
26...	--	--	--	--	--	--	--	--	1230	289
26...	--	--	--	--	--	--	--	--	3500	1560
26...	--	--	--	--	--	--	--	--	1440	264
26...	--	--	--	--	--	--	--	--	1150	158
26...	--	--	--	--	--	--	--	--	840	100
26...	--	--	--	--	--	--	--	--	594	65
26...	--	--	--	--	--	--	--	--	404	39
DEC										
02...	--	--	--	--	--	--	--	--	70	0.20
22...	--	--	--	--	--	--	--	--	5	0.01
JAN										
14...	--	--	--	--	--	--	--	--	4	0.02
18...	5.4	0.910	0.180	3.5	3.7	4.6	20	2.60	783	34
18...	3.2	0.440	0.090	0.51	0.60	1.0	4.6	0.380	260	16
18...	--	--	--	--	--	--	--	--	33	0.05
18...	3.0	0.440	0.040	0.26	0.30	0.74	3.3	0.200	110	5.0
18...	2.6	0.240	0.040	0.16	0.20	0.44	1.9	0.190	116	6.6
18...	2.4	0.440	0.070	0.33	0.40	0.84	3.7	0.190	121	4.6
FEB										
04...	--	--	--	--	--	--	--	--	2	0.01
25...	--	--	--	--	--	--	--	--	6	0.03
MAR										
18...	--	--	--	--	--	--	--	--	2	0.01
MAY										
19...	--	--	--	--	--	--	--	--	8	0.02
JUN										
01...	--	--	--	--	--	--	--	--	2350	1970
01...	--	--	--	--	--	--	--	--	1480	440
01...	--	--	--	--	--	--	--	--	1750	312
01...	--	--	--	--	--	--	--	--	1420	115
01...	--	--	--	--	--	--	--	--	1270	76
01...	--	--	--	--	--	--	--	--	1070	51
JUL										
01...	--	--	--	--	--	--	--	--	2	0.01
22...	--	--	--	--	--	--	--	--	6	0.02
AUG										
13...	--	--	--	--	--	--	--	--	2	0.00
SEP										
01...	--	--	--	--	--	--	--	--	2	0.01
06...	--	0.210	0.050	1.0	1.1	1.3	5.8	0.510	1400	261
06...	--	0.100	0.060	2.3	2.4	2.5	11	0.840	2170	1090
06...	--	0.120	0.030	0.97	1.0	1.1	5.0	0.420	922	301
06...	--	0.250	0.050	2.0	2.1	2.4	10	0.350	1400	231
06...	--	0.270	0.050	1.7	1.7	2.0	8.7	0.330	786	100
23...	--	--	--	--	--	--	--	--	4	0.01

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.

WATER-DISCHARGE RECORDS

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.

REMARKS.--No estimated daily discharges. Records good. Many small diversions from tributaries above station for water supply. Diversions by city of Asheville and others from upstream tributaries in the Swannanoa River basin totaled about 34.5 ft^3/s (station 03451000), of which 40.1 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. The National Weather Service has telemetry at station.

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

AVERAGE DISCHARGE.--92 years, 2,081 ft^3/s, 29.90 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 110,000 ft^3/s July 16, 1916, gage height, 23.1 ft, present site and datum, from floodmarks, from rating curve extended above 43,000 ft^3/s; minimum, 239 ft^3/s at times in August and September 1925, gage height, 0.16 ft.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 1	1100	*14,200	*7.53	No other peak greater than base discharge.			

Minimum discharge, 425 ft^3/s Oct. 6, 7, 8, gage height, 0.90 ft; minimum daily, 431 ft^3/s Oct. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	489	1180	2700	2120	2190	13800	3520	2000	1950	1340	1010	564
2	501	1220	5510	2160	2200	12200	2890	2240	2500	1740	856	568
3	549	1190	6090	2000	2600	9920	2860	2070	1850	1790	1070	548
4	512	1150	5630	1890	2450	6930	3120	1970	2450	1720	892	576
5	469	1070	3980	1830	2240	4240	3030	1890	2080	3190	851	586
6	438	1140	2830	1770	2090	3470	3380	1850	1650	3180	1180	1620
7	431	1150	2480	1720	2020	3140	3480	1790	1490	2060	1950	3340
8	436	1660	2260	1700	1930	2930	3290	1730	1400	1800	1440	2550
9	488	1730	2240	1650	1830	3000	3160	1650	1370	1660	1360	1560
10	734	1490	2590	1630	1720	3220	2950	1550	1310	1570	1130	1380
11	741	1360	3030	1670	1690	2870	2760	1480	1760	1580	1020	1780
12	777	1710	3480	1580	1670	2670	2600	1520	1500	1480	902	2190
13	810	1610	2880	1530	1640	2540	2470	1600	1440	1310	854	2940
14	1970	1390	2470	1490	1610	2430	2410	1740	1360	1320	831	2140
15	1780	1330	2250	1480	1630	2350	4820	2130	1310	1260	797	1560
16	1150	1390	2120	1490	1910	2290	5140	2000	1430	1150	779	1270
17	869	1300	2000	1520	2190	2210	4300	1780	1480	1050	759	1330
18	777	1230	1980	2020	2000	2130	3540	1620	1610	1020	936	1520
19	723	1110	1920	4400	2000	2750	3150	1600	2620	985	1140	1180
20	640	1140	1810	4110	1940	2950	2910	1730	1890	951	1000	1110
21	637	1500	1730	2920	1960	2490	2710	1900	1910	898	938	1010
22	620	1400	1640	2560	2120	2330	2550	1750	2140	886	820	905
23	604	1290	1630	2420	2680	2190	2580	1770	2040	862	712	842
24	592	1270	5040	2140	2520	2110	2920	1720	1650	846	607	799
25	764	1350	6430	2250	2240	2310	2630	1640	1960	823	596	778
26	3730	4940	5630	2770	2130	2710	2440	1650	2930	803	628	758
27	4190	7810	3770	2370	3210	2380	2290	1720	2300	770	672	744
28	2420	7540	2780	2120	7120	2530	2180	2030	1830	768	592	722
29	1550	6600	2500	2000	---	2350	2100	2080	1510	779	593	719
30	1310	3430	2320	2010	---	2380	2020	1900	1400	745	594	1010
31	1200	---	2180	2290	---	3780	---	1690	---	982	569	---
TOTAL	32901	63680	95900	65610	63530	115600	90200	55790	54120	41318	28078	38599
MEAN	1061	2123	3094	2116	2269	3729	3007	1800	1804	1333	906	1287
MAX	4190	7810	6430	4400	7120	13800	5140	2240	2930	3190	1950	3340
MIN	431	1070	1630	1480	1610	2110	2020	1480	1310	745	569	548
CFSM	1.12	2.25	3.27	2.24	2.40	3.95	3.18	1.90	1.91	1.41	.96	1.36
IN.	1.30	2.51	3.78	2.58	2.50	4.55	3.55	2.20	2.13	1.63	1.11	1.52

CAL YR 1986 TOTAL 463534 MEAN 1270 MAX 7810 MIN 385 CFSM 1.34 IN. 18.2
WTR YR 1987 TOTAL 745326 MEAN 2042 MAX 13800 MIN 431 CFSM 2.16 IN. 29.3

TENNESSEE RIVER BASIN

03451500 FRENCH BROAD RIVER AT ASHEVILLE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/15	1440	WATER	0.1	1.94	1654	71	6.90	16.0	8.3	8.0	1700
86/11/06	1400	WATER	0.1						2.5		
86/11/06	1430	WATER	0.1			72	7.10	15.0		8.7	
86/12/30	1350	WATER	0.1			40		6.0	2.5	11.0	
87/01/13	1320	WATER	0.1			42	7.30	5.0		11.8	
87/01/19	1320	WATER	0.1						2.4		
87/02/09	1330	WATER	0.1			43		4.0	4.4	12.0	
87/03/30	0930	WATER	0.1			38		12.0	2.5	9.8	
87/04/14	1140	WATER	0.1	2.43	2397	37	7.00	13.0	3.1	8.9	
87/05/20	1130	WATER	0.1	1.97	1697	55	7.20	20.0	3.6	8.0	730
87/06/26	1400	WATER	0.1	2.64	2733	55	6.80	20.0	50.0	7.2	
87/07/15	0915	WATER	0.1	1.66	1263	64	7.00	23.0	3.6	7.6	
87/08/14	1115	WATER	0.1	1.32	825	100	7.20	22.0	11.0	7.6	230
87/09/30	1010	WATER	0.1	1.41	837	70	7.00	17.0	11.0	7.8	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/15	1440	WATER	0.1	15	87	150	.68	.140	.500	.180	.040
86/11/06	1430	WATER	0.1		14	95					
86/12/30	1350	WATER	0.1		11	40					
87/01/13	1320	WATER	0.1	14	6	49					
87/02/09	1330	WATER	0.1		6	49	.42	.020	.200	.050	.010
87/03/30	0930	WATER	0.1		18	48					
87/04/14	1140	WATER	0.1	12	40	78					
87/05/20	1130	WATER	0.1	16	30	88	.36	.060	.300	.090	.020
87/06/26	1400	WATER	0.1	15	36	400					
87/07/15	0915	WATER	0.1	17	22	71					
87/08/14	1115	WATER	0.1	22	25	110	.53	.080	.300	.100	.040
87/09/30	1010	WATER	0.1	23	22	70					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/06	1400	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/09	1330	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/20	1130	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	66
87/08/14	1115	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

TENNESSEE RIVER BASIN

03451510 REED CREEK ABOVE BARNARD AVE. AT ASHEVILLE, NC

LOCATION.--Lat 35°36'52", long 82°33'41", Buncombe County, Hydrologic Unit 06010105, on left bank 100 ft upstream from Barnard Ave.

DRAINAGE AREA.--2.13 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1986 to current year.

GAGE.--Water stage recorder. Elevation of gage is 2,010 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Recording rain gage at station. Station operated to define urban flood-frequency and stormwater-quality characteristics in the Blue Ridge Province. Water-quality samples taken with pumping sediment sampler and were not depth or width intergrated.

COOPERATION.--Analysis of nutrient and biological data were performed by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR CURRENT PERIOD.--July to September 1986: Maximum discharge during period, 88 ft^3/s Aug. 17, gage height 3.89 ft; minimum discharge 0.09 ft^3/s Aug. 5; minimum gage height 1.34 ft Aug. 1, 2, 4.

Water year 1987: Maximum discharge 208 ft^3/s April 23, gage height, 5.50 ft; minimum discharge, 0.09 ft^3/s, Oct. 7, 8, 9; minimum gage height, 1.23 ft, June 29, 30, July 1.

DISCHARGE, IN CUBIC FEET PER SECOND, JULY TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	e1.2	.12	1.3
2	---	---	---	---	---	---	---	---	---	e2.3	.20	2.2
3	---	---	---	---	---	---	---	---	---	e1.1	.14	1.8
4	---	---	---	---	---	---	---	---	---	e.50	1.7	.64
5	---	---	---	---	---	---	---	---	---	e.45	.12	.60
6	---	---	---	---	---	---	---	---	---	e.40	.94	.41
7	---	---	---	---	---	---	---	---	---	e.38	1.3	.28
8	---	---	---	---	---	---	---	---	---	e.35	.64	.23
9	---	---	---	---	---	---	---	---	---	e.28	.34	.21
10	---	---	---	---	---	---	---	---	---	e1.2	.13	.21
11	---	---	---	---	---	---	---	---	---	e.60	1.0	.21
12	---	---	---	---	---	---	---	---	---	e.35	.47	2.0
13	---	---	---	---	---	---	---	---	---	e.25	.15	.41
14	---	---	---	---	---	---	---	---	---	e.20	.55	.25
15	---	---	---	---	---	---	---	---	---	e.20	.14	.19
16	---	---	---	---	---	---	---	---	---	e.20	.14	.16
17	---	---	---	---	---	---	---	---	---	e.24	9.2	.16
18	---	---	---	---	---	---	---	---	---	.22	.99	.14
19	---	---	---	---	---	---	---	---	---	.25	.44	.12
20	---	---	---	---	---	---	---	---	---	.21	.20	1.0
21	---	---	---	---	---	---	---	---	---	.24	1.1	1.3
22	---	---	---	---	---	---	---	---	---	.23	.38	.27
23	---	---	---	---	---	---	---	---	---	1.1	.23	.20
24	---	---	---	---	---	---	---	---	---	.17	.19	.18
25	---	---	---	---	---	---	---	---	---	1.5	.14	.14
26	---	---	---	---	---	---	---	---	---	.78	.13	.13
27	---	---	---	---	---	---	---	---	---	1.7	.15	.12
28	---	---	---	---	---	---	---	---	---	.24	.13	.32
29	---	---	---	---	---	---	---	---	---	.17	.12	.24
30	---	---	---	---	---	---	---	---	---	.19	.12	.16
31	---	---	---	---	---	---	---	---	---	.19	.13	---
TOTAL	---	---	---	---	---	---	---	---	---	17.39	21.73	15.58
MEAN	---	---	---	---	---	---	---	---	---	.56	.70	.52
MAX	---	---	---	---	---	---	---	---	---	2.3	9.2	2.2
MIN	---	---	---	---	---	---	---	---	---	.17	.12	.12
CFSM	---	---	---	---	---	---	---	---	---	.26	.33	.24
IN.	---	---	---	---	---	---	---	---	---	.30	.38	.27

e Estimated

TENNESSEE RIVER BASIN

03451510 REED CREEK ABOVE BARNARD AVE. AT ASHEVILLE, NC--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.86	.75	1.6	1.2	8.5	1.2	1.7	3.8	.45	.27	.20
2	.11	.70	1.6	.80	2.8	2.9	1.1	1.9	1.5	1.3	.28	.18
3	.11	.38	.57	.65	1.3	2.0	1.7	1.7	1.4	1.8	.30	.18
4	.11	.39	.44	.60	1.2	1.5	3.0	1.8	5.1	1.7	.29	.42
5	.11	.45	.40	.67	1.1	1.4	4.2	1.6	1.5	5.5	5.1	1.2
6	.10	.75	.39	.55	1.0	1.3	6.7	1.4	1.2	2.4	9.4	5.4
7	.09	3.8	.85	.61	1.0	1.1	4.5	1.0	1.1	1.7	1.1	4.3
8	.09	.70	.63	.58	.99	1.0	3.8	.97	1.1	.91	.43	.48
9	2.5	.41	1.5	.53	.86	3.2	2.7	1.0	1.1	.85	.36	.40
10	.56	.35	2.6	.60	.83	1.2	1.9	.99	.97	.78	.36	.42
11	.45	2.4	5.1	.60	.80	1.1	1.6	.97	.87	.72	.30	.42
12	.24	.67	1.1	.50	.85	1.1	1.4	2.7	.86	.67	.27	3.0
13	4.0	.47	.89	.48	.74	.99	1.5	1.1	1.2	.67	.27	.61
14	2.7	.39	.78	.52	.85	.97	1.3	.72	.91	.69	.24	.45
15	.36	1.2	.68	.60	.77	.90	11	1.3	2.8	.63	.26	.35
16	.27	.46	.63	.61	5.9	1.4	5.5	1.1	1.3	.64	.36	.29
17	.25	.39	.73	.55	2.5	.99	5.6	.75	.94	.64	.36	.32
18	.27	.36	.92	7.2	1.4	1.7	2.8	.77	1.4	.61	.26	.25
19	.27	.31	.56	4.9	1.3	3.1	2.0	.66	1.4	.61	.24	.39
20	.27	2.7	.52	1.3	1.5	1.1	1.7	1.6	3.7	.70	.22	.42
21	.25	.49	.48	1.1	1.4	1.0	1.5	.91	7.2	.53	.22	.34
22	.25	.39	.47	1.7	4.7	.97	1.3	.95	1.4	.53	.21	.28
23	.24	1.9	3.4	1.3	2.0	.79	11	3.2	.90	.39	.24	.24
24	.22	1.0	8.5	1.7	1.5	.73	4.3	.46	.38	.35	.21	.22
25	5.2	1.9	1.3	6.3	1.4	1.0	2.4	.35	5.8	.33	.21	.27
26	.99	11	1.1	2.2	3.3	.86	1.8	1.6	1.9	.35	.19	.25
27	.52	1.0	1.1	1.3	7.3	.97	1.5	.86	.55	.34	.19	.26
28	.43	.68	.93	1.2	21	1.1	1.2	.83	.39	.35	.33	.26
29	.38	.53	.82	1.2	---	.91	.81	1.9	.29	.34	.22	.28
30	.36	.78	.75	1.5	---	4.4	.92	1.3	.31	.30	.20	1.6
31	.52	---	.70	1.3	---	1.8	---	1.2	---	.29	.22	---
TOTAL	22.34	37.81	41.19	45.25	71.49	51.98	91.93	39.29	53.27	28.07	23.11	23.68
MEAN	.72	1.26	1.33	1.46	2.55	1.68	3.06	1.27	1.78	.91	.75	.79
MAX	5.2	11	8.5	7.2	21	8.5	11	3.2	7.2	5.5	9.4	5.4
MIN	.09	.31	.39	.48	.74	.73	.81	.35	.29	.29	.19	.18
CFSM	.34	.59	.62	.69	1.20	.79	1.44	.60	.83	.43	.35	.37
IN.	.39	.66	.72	.79	1.25	.91	1.61	.69	.93	.49	.40	.41

WTR YR 1987 TOTAL 529.40 MEAN 1.45 MAX 21 MIN .09 CFSM .68 IN. 9.25

TENNESSEE RIVER BASIN

03451510 REED CREEK ABOVE BARNARD AVE. AT ASHEVILLE, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1986 to current year.

INSTRUMENTATION.-- Sediment pumping sampler since December 1986.

REMARKS.--Station operated to define urban flood-frequency and stormwater-quality characteristics in the Blue Ridge Province. Water-quality samples taken with pumping sediment sampler and were not depth or width intergrated.

COOPERATION.--Analysis of nutrient and biological data were performed by the North Carolina Department of Natural Resources and Community Development.

WATER QUALITY DATA, JULY 1986 TO SEPTEMBER 1986

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
AUG				
05...	1330	0.12	4	0.00
18...	1317	12	528	18
18...	1322	10	523	15
18...	1330	6.2	283	4.7
18...	1413	1.1	93	0.28
18...	1539	3.5	188	1.8
SEP				
08...	1400	0.22	1	0.00

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	COLOR (PLAT-INUM-COBALT UNITS)	HARD-NESS (MG/L AS CACO3)	NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM
OCT											
01...	1220	0.12	--	--	--	--	--	--	--	--	--
14...	0915	0.90	--	--	--	--	--	--	--	--	--
23...	1407	0.22	--	--	--	--	--	--	--	--	--
NOV											
12...	1615	0.60	--	--	--	--	--	--	--	--	--
26...	0855	25	--	--	--	--	--	--	--	--	--
26...	0945	57	--	--	--	--	--	--	--	--	--
26...	1005	50	--	--	--	--	--	--	--	--	--
26...	1255	15	--	--	--	--	--	--	--	--	--
DEC											
02...	1050	1.0	--	--	--	--	--	--	--	--	--
22...	1303	0.47	--	--	--	--	--	--	--	--	--
JAN											
18...	0145	5.5	177	6.29	25	40	2	10	3.6	15	43
18...	0240	10	106	6.55	28	23	5	6.2	1.9	8.3	41
18...	1150	4.3	--	--	--	--	--	--	--	--	--
18...	1850	3.7	152	6.76	12	35	8	9.0	3.1	13	42
18...	1940	10	105	6.79	28	24	6	6.3	2.0	8.1	40
18...	2020	8.4	95	6.72	25	23	6	6.1	1.8	7.0	38
FEB											
05...	1156	1.1	--	--	--	--	--	--	--	--	--
25...	1020	1.5	--	--	--	--	--	--	--	--	--
MAR											
18...	1056	0.83	--	--	--	--	--	--	--	--	--
MAY											
19...	1431	0.55	--	--	--	--	--	--	--	--	--
JUN											
01...	1536	11	86	6.40	40	32	0	10	1.6	2.3	12
01...	1545	55	57	6.47	75	17	0	4.9	1.1	2.0	18
01...	1552	67	72	6.43	--	--	--	--	--	--	--
01...	1600	54	57	6.43	75	18	0	5.1	1.3	1.9	15
01...	1615	24	61	6.44	100	20	0	5.6	1.4	2.1	16
01...	1630	15	62	6.45	130	21	3	5.7	1.6	2.6	18
JUL											
02...	1415	0.55	--	--	--	--	--	--	--	--	--
22...	1211	0.43	--	--	--	--	--	--	--	--	--
AUG											
14...	1138	0.25	--	--	--	--	--	--	--	--	--

03451510 REED CREEK ABOVE BARNARD AVE. AT ASHEVILLE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)
OCT											
01...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
NOV											
12...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
DEC											
02...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
JAN											
18...	1	2.8	11	19	0.20	13	104	97	0.14	1.5	1.10
18...	0.8	2.2	11	12	0.10	6.1	67	59	0.09	1.8	0.980
18...	--	--	--	--	--	--	--	--	--	--	--
18...	1	2.8	11	22	0.20	12	91	89	0.12	0.91	1.10
18...	0.7	2.3	9.7	14	0.10	7.5	66	61	0.09	1.8	0.680
18...	0.7	2.0	9.2	11	<0.10	5.9	54	53	0.07	1.2	0.590
FEB											
05...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
MAR											
18...	--	--	--	--	--	--	--	--	--	--	--
MAY											
19...	--	--	--	--	--	--	--	--	--	--	--
JUN											
01...	0.2	3.2	5.0	2.3	<0.10	6.6	71	53	0.10	2.1	0.020
01...	0.2	2.8	6.0	2.3	<0.10	3.1	47	35	0.06	7.0	0.700
01...	--	--	--	--	--	--	--	--	--	--	0.730
01...	0.2	3.5	6.0	2.6	<0.10	2.6	59	36	0.08	8.6	0.760
01...	0.2	3.6	7.0	3.1	<0.10	3.2	69	38	0.09	4.5	0.710
01...	0.3	3.7	8.0	3.5	<0.10	3.7	55	40	0.08	2.2	0.660
JUL											
02...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
AUG											
14...	--	--	--	--	--	--	--	--	--	--	--

DATE	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT										
01...	--	--	--	--	--	--	--	--	2	0.00
14...	--	--	--	--	--	--	--	--	6	0.02
23...	--	--	--	--	--	--	--	--	3	0.00
NOV										
12...	--	--	--	--	--	--	--	--	1	0.00
26...	--	--	--	--	--	--	--	--	208	14
26...	--	--	--	--	--	--	--	--	2590	400
26...	--	--	--	--	--	--	--	--	1150	156
26...	--	--	--	--	--	--	--	--	255	10
DEC										
02...	--	--	--	--	--	--	--	--	11	0.03
22...	--	--	--	--	--	--	--	--	1	0.00
JAN										
18...	0.430	0.37	0.80	1.9	8.4	0.730	--	--	204	3.0
18...	0.160	0.34	0.50	1.5	6.6	0.370	--	--	148	4.0
18...	--	--	--	--	--	--	--	--	18	0.21
18...	0.260	0.34	0.60	1.7	7.5	0.180	--	--	51	0.51
18...	0.060	0.24	0.30	0.98	4.3	0.230	--	--	104	2.8
18...	0.110	0.19	0.30	0.89	3.9	0.170	--	--	61	1.4
FEB										
05...	--	--	--	--	--	--	--	--	6	0.02
25...	--	--	--	--	--	--	--	--	2	0.01
MAR										
18...	--	--	--	--	--	--	--	--	2	0.00
MAY										
19...	--	--	--	--	--	--	--	--	5	0.01
JUN										
01...	0.050	2.5	2.5	2.5	11	1.30	<1	100	--	--
01...	0.180	2.2	2.4	3.1	14	1.20	<1	100	1770	263
01...	0.090	4.0	4.1	4.8	21	1.80	--	--	--	--
01...	0.170	3.2	3.4	4.2	18	1.70	<1	100	1630	237
01...	0.050	3.4	3.4	4.1	18	1.40	<1	95	1150	75
01...	0.030	4.1	4.1	4.8	21	1.20	<1	87	1180	48
JUL										
02...	--	--	--	--	--	--	--	--	6	0.01
22...	--	--	--	--	--	--	--	--	2	0.00
AUG										
14...	--	--	--	--	--	--	--	--	2	0.00

TENNESSEE RIVER BASIN

03451510 REED CREEK ABOVE BARNARD AVE. AT ASHEVILLE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
SEP							
06...	0835	13	71	6.53	0.340	0.090	3.7
06...	0845	32	71	6.51	0.260	0.100	4.2
06...	0900	30	47	6.44	0.280	0.100	4.3
06...	0930	17	--	--	--	--	--
06...	0945	18	55	6.62	0.400	0.030	0.87
06...	1000	15	64	6.64	0.420	0.040	0.96
12...	1130	11	--	--	--	--	--
12...	1145	10	--	--	--	--	--
12...	1215	17	--	--	--	--	--
12...	1245	14	--	--	--	--	--
12...	1300	11	--	--	--	--	--
24...	1232	0.22	--	--	--	--	--

DATE	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)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
SEP						
06...	3.8	4.1	18	0.950	1550	54
06...	4.3	4.6	20	0.900	2280	197
06...	4.4	4.7	21	0.180	4150	336
06...	--	--	--	--	1720	77
06...	0.90	1.3	5.8	0.350	643	31
06...	1.0	1.4	6.3	0.410	487	20
12...	--	--	--	--	196	6.0
12...	--	--	--	--	184	5.1
12...	--	--	--	--	331	15
12...	--	--	--	--	240	9.2
12...	--	--	--	--	245	7.5
24...	--	--	--	--	2	0.00

TENNESSEE RIVER BASIN

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).

REMARKS.--No estimated daily discharges. Records good. Small diversions from tributaries for water supply. Slight diurnal fluctuation and occasional slight regulation at low flow caused by small reservoirs above station. Prior to July 1963, some regulation by 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.

AVERAGE DISCHARGE.--45 years, 2,442 ft^3/s, 24.90 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,000 ft^3/s Nov. 6, 1977, gage height, 13.64 ft; minimum, 193 ft^3/s Sept. 13, 14, 1954, gage height, 0.36 ft; minimum daily, 292 ft^3/s Sept. 27, 28, 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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 28	2330	*20,700	*7.94	No other peak greater than base discharge.			

Minimum discharge, 488 ft^3/s, Oct. 24, gage height, 0.69 ft; minimum daily, 548 ft^3/s, Oct. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	620	1230	2910	2560	3060	16700	4290	2480	2120	1490	1100	677
2	625	1380	5360	2600	2950	13100	3660	2680	3090	1750	1010	670
3	639	1350	6610	2480	3400	10700	3410	2510	2200	2010	1070	666
4	692	1250	6240	2310	3320	7940	3670	2390	2680	1840	1060	644
5	597	1240	4880	2230	2960	5410	3720	2260	2470	3240	927	671
6	565	1240	3320	2160	2700	4370	3920	2210	1920	3680	1310	1250
7	548	1350	2860	2100	2560	3870	4480	2130	1700	2440	1920	3620
8	549	1770	2620	2060	2450	3600	4680	2040	1590	2060	1690	3480
9	606	1960	2590	2020	2270	3580	4800	1950	1540	1870	1430	1900
10	730	1710	3250	1980	2140	3980	4590	1830	1500	1740	1280	1580
11	802	1550	3910	2030	2090	3550	4070	1760	1820	1710	1140	1760
12	835	1900	4570	1940	2060	3240	3620	1750	1690	1690	1030	2230
13	878	1870	3730	1900	2010	3070	3300	1840	1610	1500	988	3100
14	1870	1610	3070	1850	1940	2880	3080	1930	1540	1440	939	2470
15	2230	1500	2750	1830	1990	2780	3650	2340	1540	1400	907	1780
16	1430	1550	2560	1860	2540	2730	4340	2290	1650	1310	882	1500
17	1070	1490	2440	1870	3150	2610	4570	2030	1740	1200	971	1380
18	923	1380	2400	2430	2780	2520	4700	1880	2040	1160	913	1610
19	884	1280	2330	5700	2640	3030	4700	1820	3580	1130	1120	1510
20	794	1290	2160	5720	2550	3480	4400	1910	2260	1080	1220	1320
21	771	1610	2050	4080	2490	3030	3900	2190	2210	1040	1040	1240
22	725	1630	1950	3440	2700	2770	3350	2020	2780	995	959	1130
23	767	1460	1910	3200	3500	2610	3220	2000	2560	945	876	1050
24	690	1560	5080	2810	3410	2490	5080	2100	1940	998	764	994
25	856	1570	7490	2930	2980	2550	4080	1930	2110	909	694	963
26	3450	3580	6720	3850	2740	3130	3580	1850	3380	960	704	944
27	4820	8200	5100	3310	4880	2800	3230	2060	2740	875	763	920
28	3100	7860	3510	2870	9760	2870	2940	2320	2090	865	767	891
29	1840	7200	3100	2640	---	2730	2760	2400	1730	897	721	882
30	1490	4370	2830	2670	---	2670	2600	2410	1560	869	706	909
31	1340	---	2660	3120	---	3820	---	1960	---	961	696	---
TOTAL	37736	68940	112960	84550	84020	134610	116390	65270	63380	46054	31597	43741
MEAN	1217	2298	3644	2727	3001	4342	3880	2105	2113	1486	1019	1458
MAX	4820	8200	7490	5720	9760	16700	5080	2680	3580	3680	1920	3620
MIN	548	1230	1910	1830	1940	2490	2600	1750	1500	865	694	644
CFSM	.91	1.73	2.74	2.05	2.25	3.26	2.91	1.58	1.59	1.12	.77	1.09
IN.	1.05	1.93	3.15	2.36	2.35	3.76	3.25	1.82	1.77	1.29	.88	1.22

CAL YR 1986 TOTAL 556884 MEAN 1526 MAX 8200 MIN 484 CFSM 1.15 IN. 15.6
WTR YR 1987 TOTAL 889248 MEAN 2436 MAX 16700 MIN 548 CFSM 1.83 IN. 24.8

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.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 265 micromhos Oct. 18, 1981; minimum daily, 33 micromhos 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 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV											
17...	1530	1530	70	6.80	12.0	4.4	714	10.4	103	50	1600
MAR											
03...	1100	10800	38	6.20	7.5	0.20	725	12.1	106	490	16000
JUN											
08...	1400	1730	68	6.60	22.5	21	725	8.1	99	110	4000
SEP											
14...	1300	2480	52	6.80	21.5	--	722	8.4	101	1800	6100

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WHOLE IT-FLD (MG/L)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)
NOV											
17...	17	0	4.5	1.4	6.4	42	0.7	1.8	24	20	8.2
MAR											
03...	--	--	2.4	--	2.3	--	--	1.1	39	32	6.6
JUN											
08...	15	0	4.0	1.3	6.6	45	0.8	1.6	37	30	6.4
SEP											
14...	--	--	--	--	--	--	--	--	32	26	--

TENNESSEE RIVER BASIN

03453500 FRENCH BROAD RIVER AT MARSHALL, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NITRATE 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)
NOV											
17...	5.3	<0.10	10	46	50	0.06	190	0.590	0.630	0.110	0.100
MAR											
03...	2.2	<0.10	6.4	30	--	--	--	--	0.420	0.060	0.060
JUN											
08...	5.5	<0.10	11	62	55	0.08	290	0.600	0.640	0.090	0.110
SEP											
14...	--	--	--	--	--	--	--	--	--	--	--

DATE	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)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)
NOV										
17...	0.13	0.79	0.90	0.150	0.110	0.080	0.25	50	<1	14
MAR										
03...	0.08	1.5	1.6	0.210	0.020	0.020	0.06	120	<1	12
JUN										
08...	0.14	0.41	0.50	0.200	0.120	0.080	0.25	40	<1	12
SEP										
14...	--	--	--	--	--	--	--	--	--	--

TENNESSEE RIVER BASIN

03453500 FRENCH BROAD RIVER AT MARSHALL, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

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 17...	<0.5	<1	<1	<3	<1	170	<5	5	9	<0.1
MAR 03...	<0.5	<1	<1	<3	1	72	<5	<4	17	<0.1
JUN 08...	<0.5	<1	1	<3	1	110	<5	5	13	<0.1
SEP 14...	--	--	--	--	--	--	--	--	--	--

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. [2] FINER THAN .062 MM
NOV 17...	<10	1	<1	<1	24	<6	5	11	45	71
MAR 03...	<10	3	<1	<1	14	<6	8	101	2950	47
JUN 08...	<10	<1	<1	<1	25	<6	8	11	51	73
SEP 14...	--	--	--	--	--	--	--	105	703	69

TENNESSEE RIVER BASIN

03453500 FRENCH BROAD RIVER AT MARSHALL, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/15	1020	WATER	0.1	2.21	2321	84	6.90	15.0	32.0	8.7	11000
86/11/06	1015	WATER	0.1			110	7.10	14.0	4.6	9.1	
86/11/17	1530	WATER									50
86/12/30	1300	WATER	0.1			40	7.10	6.0	3.5	11.2	
87/01/13	1200	WATER	0.1			69	7.30	6.0	2.8	12.0	
87/02/09	1220	WATER	0.1			56		5.0	4.4	12.3	
87/03/03	1100	WATER									490
87/03/30	1020	WATER	0.1			50		13.0	2.6	10.0	
87/04/14	1030	WATER	0.1	2.61	3085	49	7.10	14.0	4.0	9.3	
87/05/20	1030	WATER	0.1	1.97	1914	74	7.40	22.0	2.9	8.2	580
87/06/08	1400	WATER	0.1								110
87/06/26	1300	WATER	0.1	2.91	3748	64	7.10	22.0	31.0	7.8	
87/07/15	1040	WATER	0.1	1.64	1436	83	7.20	24.0	4.6	8.2	
87/08/14	1010	WATER	0.1	1.25	963	130	7.20	22.0	7.2	7.8	1800
87/09/14	1300	WATER									1800
87/09/30	0800	WATER	0.1	1.23	882	90	7.00	18.0	8.1	7.9	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/15	1020	WATER	0.1	25	120	220	.77	.270	1.400	.360	.100
86/11/06	1015	WATER	0.1		16	110	.68	.140	.500	.210	.150
86/12/30	1300	WATER	0.1	15	7	52					
87/01/13	1200	WATER	0.1	21	2	67					
87/02/09	1220	WATER	0.1		10	58	.76	.140	.300	.100	.050
87/03/30	1020	WATER	0.1		11	52					
87/04/14	1030	WATER	0.1	16	15	80					
87/05/20	1030	WATER	0.1	22	17	69	.57	.100	.300	.170	.090
87/06/26	1300	WATER	0.1	16	180	270					
87/07/15	1040	WATER	0.1	20	17	87					
87/08/14	1010	WATER	0.1	24	12	130	.81	.100	.300	.260	.180
87/09/30	0800	WATER	0.1	23	15	93					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/06	1015	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/09	1220	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/20	1030	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	11
87/08/14	1010	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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).

REMARKS.--No estimated daily discharges. Records good.

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

AVERAGE DISCHARGE.--33 years, 102 ft^3/s, 50.19 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,740 ft^3/s Feb. 13, 1966, gage height, 9.5 ft, from flood-marks; minimum, 9.4 ft^3/s Sept. 29, 30, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	1030	*3,810	*6.13	Apr. 15	0615	3,160	5.67

Minimum discharge, 14 ft^3/s Oct. 6, 7-8, 9, gage height, 0.99 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	54	329	79	81	493	120	78	120	52	28	21
2	15	44	408	72	134	262	108	75	75	64	32	19
3	15	34	180	67	115	207	115	73	62	52	31	18
4	15	35	137	66	100	175	101	70	67	58	36	18
5	15	59	117	63	91	155	95	68	56	53	52	25
6	14	63	103	62	84	138	100	65	52	54	102	216
7	14	84	92	61	81	126	100	63	49	50	59	152
8	14	92	103	59	77	124	109	61	47	62	36	58
9	41	60	191	56	68	183	121	59	45	64	32	103
10	31	51	211	64	89	140	122	57	62	66	30	58
11	26	118	291	55	67	117	124	56	77	61	28	45
12	26	82	181	53	68	110	117	57	59	49	30	190
13	134	59	142	51	65	102	108	66	54	44	31	76
14	128	48	125	51	80	97	102	98	49	53	27	51
15	41	71	113	60	89	93	957	63	46	42	26	43
16	34	56	103	54	154	92	258	57	45	40	27	40
17	30	45	97	54	103	87	226	54	54	38	28	40
18	27	46	110	220	92	86	193	96	147	37	26	36
19	26	43	89	400	83	164	166	107	105	36	25	43
20	25	83	83	142	79	99	147	94	93	35	23	46
21	24	56	77	110	85	90	133	66	80	34	22	36
22	23	45	73	107	152	85	123	60	79	33	21	33
23	22	53	132	88	159	81	116	77	73	32	20	31
24	22	93	442	91	109	78	112	80	85	31	20	30
25	225	84	151	90	100	100	112	69	92	31	20	29
26	106	930	121	81	108	80	100	61	87	30	21	28
27	48	199	108	86	269	82	94	76	71	29	20	27
28	40	136	98	81	843	88	89	74	60	29	21	26
29	36	109	90	79	---	76	84	71	55	28	25	26
30	34	103	84	125	---	214	82	67	51	32	20	74
31	33	---	78	89	---	229	---	70	---	31	21	---
TOTAL	1300	3035	4659	2816	3625	4253	4534	2188	2097	1350	940	1638
MEAN	41.9	101	150	90.8	129	137	151	70.6	69.9	43.5	30.3	54.6
MAX	225	930	442	400	843	493	957	107	147	66	102	216
MIN	14	34	73	51	65	76	82	54	45	28	20	18
CFSM	1.52	3.67	5.45	3.29	4.69	4.97	5.48	2.56	2.53	1.58	1.10	1.98
IN.	1.75	4.09	6.28	3.80	4.89	5.73	6.11	2.95	2.83	1.82	1.27	2.21

CAL YR 1986 TOTAL 22376 MEAN 61.3 MAX 930 MIN 14 CFSM 2.22 IN. 30.2
WTR YR 1987 TOTAL 32435 MEAN 88.9 MAX 957 MIN 14 CFSM 3.22 IN. 43.7

TENNESSEE RIVER BASIN

03455500 WEST FORK PIGEON RIVER ABOVE LAKE LOGAN, NEAR HAZELWOOD, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/28	1030	WATER	0.1	1.27	40		6.40	8.0		10.6	10K
86/11/12	1120	WATER	0.1			14	6.50	12.0	1.0K	9.6	
87/02/24	1100	WATER	0.1			11		2.0	1.0K	11.8	
87/05/29	0815	WATER	0.1	1.41	64	22	6.60	14.0	1.0K	9.2	10K
87/08/19	1020	WATER	0.1	1.11	25	33	6.40	17.0	1.0K	8.5	20

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/28	1030	WATER	0.1	4	2	17					
86/11/12	1120	WATER	0.1	5	1K	10	.09	.030	.200	.010K	.010K
87/02/24	1100	WATER	0.1		5	19	.19	.030	.100	.010K	.010K
87/05/29	0815	WATER	0.1	3	1K	35	.12	.030	.100K	.020	.010K
87/08/19	1020	WATER	0.1	2	1	28	.18	.040	.200	.010	.010K

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/12	1120	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/24	1100	WATER	0.1	10K	10K	25K	10K	50K		50K	10K
87/05/29	0815	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/19	1020	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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).

REMARKS.--No estimated daily discharges. Records fair. Considerable regulation at times caused by Lake Logan (station 03455773). Tennessee Valley Authority has telemetry at station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--6 years, 141 ft^3/s, 32.79 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,300 ft^3/s Feb. 2, 1983, gage height, 10.96 ft; minimum daily, 9.2 ft^3/s Sept. 2, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,820 ft^3/s Nov. 26, gage height, 6.54 ft; minimum daily, 15 ft^3/s Oct. 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	74	405	131	150	978	212	155	165	73	40	49
2	46	73	620	120	200	523	176	147	118	90	39	48
3	45	58	310	110	193	406	201	142	100	75	44	49
4	49	52	231	108	171	331	178	137	129	80	42	54
5	48	74	190	103	157	287	182	131	97	77	46	53
6	48	104	166	99	147	256	177	126	88	79	138	73
7	47	106	151	98	142	232	183	121	82	69	96	88
8	46	146	156	95	135	220	190	116	78	76	54	58
9	50	98	241	93	121	287	221	111	75	94	51	93
10	28	82	292	100	118	248	219	107	79	83	46	101
11	34	138	390	89	117	206	216	105	129	82	43	62
12	34	140	290	84	116	193	209	104	101	68	42	206
13	41	95	226	83	112	180	185	111	88	62	41	114
14	34	81	194	81	119	171	189	155	81	72	41	69
15	23	103	176	91	149	164	1250	116	76	60	40	56
16	27	89	161	86	219	160	486	106	74	57	40	50
17	33	78	150	85	167	151	414	102	73	53	45	51
18	38	72	161	245	152	140	356	118	117	51	47	45
19	38	66	138	567	140	238	310	141	187	49	44	43
20	38	109	127	263	133	170	294	160	111	48	44	64
21	41	96	118	198	137	175	252	110	122	46	44	45
22	41	76	110	192	208	149	232	101	119	45	44	38
23	41	74	121	157	270	143	218	111	100	44	46	38
24	41	136	593	150	191	138	217	143	100	43	45	41
25	67	114	244	159	176	159	218	120	141	42	43	41
26	47	1080	195	151	177	138	195	107	121	41	42	40
27	20	324	173	139	387	134	183	122	104	40	41	40
28	15	209	160	136	1030	139	173	139	86	41	43	41
29	15	169	151	126	---	135	164	106	79	42	49	45
30	46	149	140	191	---	208	159	109	74	42	49	53
31	51	---	130	163	---	411	---	99	---	40	49	---
TOTAL	1219	4265	6910	4493	5534	7470	7859	3778	3094	1864	1518	1848
MEAN	39.3	142	223	145	198	241	262	122	103	60.1	49.0	61.6
MAX	67	1080	620	567	1030	978	1250	160	187	94	138	206
MIN	15	52	110	81	112	134	159	99	73	40	39	38
(†)	+436	+6	-3	-1	+37	-34	-4	+4	-7	-21	-225	+218
MEAN‡	53.4	142	223	145	199	240	262	122	103	59.4	41.7	68.9
CFSM‡	0.91	2.43	3.82	2.48	3.41	4.11	4.49	2.09	1.76	1.02	.71	1.18
IN.‡	1.05	2.72	4.40	2.86	3.55	4.74	5.00	2.41	1.97	1.17	.82	1.32

CAL YR 1986 TOTAL 33808 MEAN 92.6 MAX 1080 MIN 9.2 MEAN‡ 92.8 CFSM‡ 1.59 IN.‡ 21.58
WTR YR 1987 TOTAL 49852 MEAN 137 MAX 1250 MIN 15 MEAN‡ 138 CFSM‡ 2.36 IN.‡ 32.01

† Change in contents, in cfs-days, in Lake Logan.
‡ Adjusted for change in lake contents.

TENNESSEE RIVER BASIN

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).

REMARKS.--No estimated daily discharges. Records good. Tennessee Valley Authority has telemetry at station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--33 years, 142 ft^3/s, 37.44 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft^3/s May 28, 1973, gage height, 11.19 ft, from rating curve extended above 5,470 ft^3/s on basis of contracted-opening measurement of peak flow; minimum, 12 ft^3/s Jan. 9, 1956 and Dec. 11, 1981, result of freezeup; minimum gage height, 0.81 ft Dec. 15, 1958, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	1215	*4,080	*6.46	April 15	0915	1,960	4.52
Feb. 28	2200	2,990	5.57				

Minimum discharge, 18 ft^3/s Oct. 6, 7, 8, gage height, 0.97 ft; minimum daily, 19 ft^3/s Oct. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	88	405	144	143	1250	248	148	201	70	35	24
2	22	88	723	131	180	607	225	141	124	88	41	22
3	21	75	453	119	186	449	239	134	110	70	58	20
4	21	70	334	114	167	368	210	127	164	74	40	23
5	20	77	265	110	154	312	197	121	110	69	46	31
6	19	86	224	105	143	273	205	119	97	71	74	135
7	19	92	196	103	135	246	220	114	90	65	85	209
8	20	130	176	99	128	234	241	109	85	77	48	91
9	39	104	190	95	119	294	271	104	82	72	42	73
10	43	92	200	103	114	261	269	99	79	66	40	78
11	41	120	244	94	111	229	260	96	165	63	37	56
12	40	126	214	89	108	215	247	94	130	59	35	134
13	81	102	187	86	101	200	234	95	105	56	36	96
14	104	91	168	85	104	187	218	127	96	61	35	68
15	51	98	153	87	113	174	845	102	90	54	33	58
16	41	87	140	85	149	164	487	96	91	52	34	52
17	37	80	131	85	122	154	410	89	88	49	33	52
18	35	75	130	178	117	147	353	90	91	48	34	47
19	34	71	115	365	111	235	307	102	126	47	31	45
20	32	95	107	236	108	180	274	99	105	45	28	49
21	31	85	101	199	111	164	252	95	105	43	27	42
22	31	74	96	195	155	153	234	86	112	42	26	39
23	30	73	111	163	213	146	223	92	114	41	25	37
24	30	92	604	151	172	141	215	101	100	41	24	36
25	260	87	310	162	159	181	213	92	117	39	24	34
26	287	1220	247	151	164	151	194	94	98	38	25	33
27	129	469	216	132	265	146	180	163	91	37	24	32
28	94	298	194	129	1040	155	170	149	82	38	23	32
29	80	230	174	123	---	139	157	122	75	37	29	32
30	71	197	158	170	---	197	151	108	72	38	25	52
31	66	---	146	158	---	385	---	109	---	37	24	---
TOTAL	1851	4672	7112	4246	4892	8137	7949	3417	3195	1687	1121	1732
MEAN	59.7	156	229	137	175	262	265	110	106	54.4	36.2	57.7
MAX	287	1220	723	365	1040	1250	845	163	201	88	85	209
MIN	19	70	96	85	101	139	151	86	72	37	23	20
CFSM	1.16	3.02	4.45	2.66	3.39	5.10	5.14	2.14	2.07	1.06	.70	1.12
IN.	1.34	3.37	5.14	3.07	3.53	5.88	5.74	2.47	2.31	1.22	.81	1.25

CAL YR 1986 TOTAL 29754 MEAN 81.5 MAX 1220 MIN 18 CFSM 1.58 IN. 21.5
WTR YR 1987 TOTAL 50011 MEAN 137 MAX 1250 MIN 19 CFSM 2.66 IN. 36.1

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.

WATER-DISCHARGE RECORDS

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 0.4 mi downstream at different datum. Dec. 6, 1928 to Jan. 3, 1929, nonrecording gage at present site and datum. Prior to Oct. 1, 1983 water-stage recorder at site 0.8 mile downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Occasional diurnal fluctuation and considerable regulation at low flow caused by Lake Logan on West Fork Pigeon River 11.2 mi upstream (station 03455773). Champion International Corporation has telemetry at station.

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

AVERAGE DISCHARGE.--60 years (1908, 1929-87), 319 ft^3/s, 33.32 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,600 ft^3/s Aug. 30, 1940, gage height, 20.75 ft, at former site, from floodmarks in gage well; minimum 15 ft^3/s Jan. 8, 1956, gage height, 0.04 ft, at former site, result of freezeup; minimum daily, 27 ft^3/s Sept. 7, 1954 at former site.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	1330	*5,650	*8.21	Feb. 28	2345	4,200	7.26

Minimum discharge, 67 ft^3/s Oct. 10, gage height, 1.51 ft; minimum daily, 71 ft^3/s Oct. 8, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	157	801	314	327	2130	498	331	416	180	92	88
2	76	185	1320	293	410	1170	424	317	291	218	89	84
3	74	153	856	265	426	919	458	301	256	188	126	83
4	76	139	645	257	378	762	410	291	408	191	98	91
5	74	157	532	244	346	652	396	280	261	187	112	95
6	73	206	459	237	324	578	433	273	233	190	229	205
7	73	205	408	233	310	519	447	265	216	177	228	327
8	71	307	389	226	294	487	454	255	206	193	133	192
9	93	232	486	216	267	606	521	244	196	208	119	148
10	86	201	570	230	255	560	517	236	189	188	109	236
11	76	253	707	213	253	471	495	234	327	181	102	140
12	80	325	589	199	248	443	487	225	287	163	97	332
13	114	227	483	195	239	412	443	232	234	150	97	274
14	154	201	429	190	240	387	429	308	220	169	96	174
15	82	225	394	200	294	366	1820	258	206	145	92	144
16	74	210	362	195	394	352	1000	236	201	137	92	129
17	74	187	336	194	335	332	862	223	200	129	95	129
18	75	173	345	413	303	308	740	227	234	125	101	120
19	73	162	305	983	283	500	642	296	384	121	96	111
20	72	221	283	553	268	381	598	303	249	118	92	140
21	72	227	265	438	275	364	527	248	285	115	90	112
22	73	180	252	425	378	325	488	224	277	110	89	101
23	72	174	255	352	528	309	508	233	253	107	88	97
24	71	257	1170	330	400	296	493	304	260	106	86	99
25	263	241	639	358	365	351	468	257	326	102	82	97
26	411	1900	506	345	363	308	426	244	265	100	82	96
27	178	902	445	300	706	294	399	306	242	97	80	94
28	135	591	404	299	1730	313	383	349	210	97	80	94
29	116	470	370	279	---	285	349	266	195	106	91	98
30	126	401	341	389	---	392	334	262	186	104	89	129
31	129	---	315	364	---	829	---	253	---	96	87	---
TOTAL	3292	9469	15661	9729	10939	16401	16449	8281	7713	4498	3239	4259
MEAN	106	316	505	314	391	529	548	267	257	145	104	142
MAX	411	1900	1320	983	1730	2130	1820	349	416	218	229	332
MIN	71	139	252	190	239	285	334	223	186	96	80	83
(†)	+436	+6	-3	-1	+37	-34	-4	+4	-7	-21	-225	+218
MEAN‡	120	316	505	314	392	528	548	267	257	144	97.2	149
CFSM‡	0.92	2.43	3.88	2.42	3.02	4.06	4.22	2.05	1.98	1.11	0.75	1.15
IN.‡	1.07	2.71	4.48	2.78	3.14	4.68	4.70	2.37	2.20	1.28	0.86	1.28

CAL YR 1986 TOTAL 69342 MEAN 190 MAX 1900 MIN 48 MEAN‡ 188 CFSM‡ 1.45 IN.‡ 19.68
WTR YR 1987 TOTAL 109930 MEAN 301 MAX 2130 MIN 71 MEAN‡ 303 CFSM‡ 2.33 IN.‡ 31.55

† Change in contents, in cfs-days, in Lake Logan.
‡ Adjusted for change in lake contents.

TENNESSEE RIVER BASIN

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).

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). Tennessee Valley Authority has telemetry at station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--60 years, 669 ft^3/s, 25.96 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,700 ft^3/s Aug. 30, 1940, gage height, 15.82 ft, 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, 81 ft^3/s Sept. 30, 1941; minimum gage height, 0.81 ft Sept. 8, 1954.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	1800	7,210	7.66	Mar. 1	0300	*9,420	*8.70

Minimum discharge, 121 ft^3/s Oct. 7, 8, 9, gage height, 1.07 ft; minimum daily, 121 ft^3/s Oct. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	133	247	957	553	660	5680	950	705	702	334	201	166
2	141	312	1830	532	808	2670	826	747	571	393	213	154
3	136	274	1270	486	869	1950	902	829	490	375	247	146
4	124	274	940	470	755	1560	860	810	874	379	209	151
5	124	282	790	455	698	1330	823	772	542	364	267	174
6	123	357	694	440	654	1170	1040	743	466	389	495	464
7	121	407	629	433	625	1050	1130	624	425	362	513	918
8	121	551	597	425	597	985	1100	524	401	414	329	676
9	218	447	804	405	562	1110	1170	533	383	386	397	540
10	270	381	1150	427	525	1130	1090	521	372	348	273	602
11	173	475	1410	415	529	928	1020	510	640	350	233	487
12	160	700	1260	383	516	878	986	492	559	317	218	464
13	293	486	962	377	497	821	906	441	486	287	219	608
14	566	414	821	368	503	776	881	464	432	322	205	337
15	299	423	743	383	610	741	3010	444	400	289	195	278
16	217	430	682	384	701	743	1900	425	402	264	217	250
17	190	373	635	378	722	702	1680	378	491	250	279	241
18	179	346	652	685	632	664	1470	369	467	241	259	234
19	172	322	597	1890	600	964	1270	446	576	234	209	229
20	167	395	544	1160	568	804	1150	542	457	226	188	278
21	162	477	515	859	589	729	1030	503	483	216	174	232
22	160	366	487	818	750	701	973	459	520	210	171	205
23	156	354	479	706	1120	656	1050	501	453	203	162	191
24	154	570	1660	646	864	637	1490	599	423	205	161	188
25	441	539	1060	733	781	674	1090	500	657	198	161	187
26	936	2820	825	760	757	649	957	470	515	214	159	183
27	418	1750	731	622	1490	608	870	538	469	210	158	179
28	306	1050	669	608	3950	655	786	605	395	205	149	177
29	261	824	622	570	---	594	727	562	363	197	159	179
30	239	704	586	719	---	744	702	610	345	339	164	296
31	249	---	547	745	---	1470	---	550	---	209	163	---
TOTAL	7409	17350	26148	18835	22932	34773	33839	17216	14759	8930	7147	9414
MEAN	239	578	843	608	819	1122	1128	555	492	288	231	314
MAX	936	2820	1830	1890	3950	5680	3010	829	874	414	513	918
MIN	121	247	479	368	497	594	702	369	345	197	149	146

CAL YR 1986 TOTAL 138582 MEAN 380 MAX 2820 MIN 121
WTR YR 1987 TOTAL 218752 MEAN 599 MAX 5680 MIN 121

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.--No estimated daily discharge. Records good. Records for Class A evaporation station 2.4 mi upstream published in reports of National Climatic Center, NOAA, U.S. Department of Commerce.

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

AVERAGE DISCHARGE.--44 years, 108 ft^3/s, 29.81 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,080 ft^3/s Mar. 6, 1963, gage height, 8.08 ft; minimum, 9 ft^3/s Jan. 2, 1940, Dec. 17, 24, 1943, gage height, 1.87 ft, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 28	2200	*1,410	*5.14	No other peak greater than base discharge.			

Minimum discharge, 19 ft^3/s Oct. 6, 7-8, 9, Aug. 28, minimum gage height, 1.99 ft, Oct.6, 7-8, 9; minimum daily, 19 ft^3/s Oct. 6, 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	37	104	68	101	784	104	102	101	47	34	24
2	22	36	107	65	158	398	103	97	95	48	29	22
3	21	34	98	60	165	288	115	93	99	45	29	21
4	20	33	91	59	146	234	106	96	117	65	27	22
5	20	36	86	57	130	203	102	87	96	56	28	23
6	19	43	81	56	119	180	109	83	84	55	43	57
7	19	53	78	55	112	164	116	81	76	48	35	141
8	19	54	81	54	106	153	139	78	70	49	32	46
9	35	47	144	52	97	151	186	73	66	45	32	36
10	33	45	271	60	99	141	199	71	62	42	29	33
11	25	105	254	53	87	134	197	69	60	42	26	34
12	23	110	226	53	86	128	191	68	58	38	30	42
13	60	81	179	50	81	120	183	72	72	39	30	39
14	94	69	148	49	93	114	176	80	58	42	25	31
15	41	74	127	52	93	108	226	69	60	36	24	28
16	34	65	113	52	106	117	197	65	92	35	29	27
17	31	59	103	52	99	105	244	63	99	34	32	26
18	29	55	106	127	98	102	247	61	75	32	28	26
19	27	52	91	399	93	141	220	63	67	32	24	29
20	27	64	84	252	91	115	192	68	64	31	23	31
21	26	58	78	174	94	110	173	68	64	30	22	26
22	25	52	74	151	123	105	157	72	66	30	22	25
23	25	55	73	123	177	101	156	67	59	29	21	24
24	25	105	109	110	151	98	143	69	75	29	21	24
25	109	91	87	111	137	97	150	72	95	30	21	24
26	111	186	82	102	134	92	135	74	76	27	22	24
27	59	164	79	98	201	90	127	68	65	27	23	24
28	49	135	76	95	535	92	120	77	56	28	22	23
29	44	116	73	85	---	86	113	104	52	26	25	23
30	41	104	70	106	---	102	108	109	49	26	22	41
31	38	---	67	108	---	136	---	101	---	45	24	---
TOTAL	1172	2218	3440	2988	3712	4989	4734	2420	2228	1188	834	996
MEAN	37.8	73.9	111	96.4	133	161	158	78.1	74.3	38.3	26.9	33.2
MAX	111	186	271	399	535	784	247	109	117	65	43	141
MIN	19	33	67	49	81	86	102	61	49	26	21	21
CFSM	.77	1.50	2.26	1.96	2.69	3.27	3.21	1.59	1.51	.78	.55	.67
IN.	.89	1.68	2.60	2.26	2.81	3.77	3.58	1.83	1.68	.90	.63	.75

CAL YR 1986 TOTAL 21047 MEAN 57.7 MAX 271 MIN 19 CFSM 1.17 IN. 15.9
WTR YR 1987 TOTAL 30919 MEAN 84.7 MAX 784 MIN 19 CFSM 1.72 IN. 23.4

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.

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, 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 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV											
17...	1230	59	13	6.10	9.0	0.30	695	10.5	100	3	590
MAR											
10...	1200	138	14	5.90	5.5	1.2	697	12.6	109	11	1200
JUN											
08...	1030	72	14	6.15	13.0	0.60	705	9.9	102	8	210
SEP											
14...	0900	32	15	6.10	16.0	0.30	701	8.6	95	18	550

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WHOLE IT-FLD (MG/L)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L CACO3)
NOV										
17...	4	0	1.1	0.30	1.0	32	0.2	0.50	5	4
MAR										
10...	3	0	0.90	0.30	1.0	33	0.2	0.70	5	4
JUN										
08...	4	0	1.0	0.30	1.3	38	0.3	0.70	6	5
SEP										
14...	5	0	1.2	0.37	1.4	36	0.3	0.70	7	6

TENNESSEE RIVER BASIN

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, NC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
NOV 17...	3.2	0.60	<0.10	7.1	--	16	0.02	2.6	0.160	<0.010
MAR 10...	2.6	0.60	<0.10	7.2	16	16	0.02	6.0	0.190	0.020
JUN 08...	2.0	0.50	<0.10	8.2	16	17	0.02	3.1	0.150	0.020
SEP 14...	3.3	1.0	0.10	9.1	15	21	0.02	1.3	0.130	0.010

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,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)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)
NOV 17...	<0.010	--	--	0.50	<0.010	<0.010	<0.010	<10	<1	9
MAR 10...	0.040	0.05	0.28	0.30	0.010	0.040	<0.010	20	<1	9
JUN 08...	0.020	0.03	0.38	0.40	0.090	0.010	<0.010	10	<1	9
SEP 14...	0.020	0.03	--	<0.20	0.020	0.020	<0.010	20	<1	11

DATE	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)	MERCURY DIS-SOLVED (UG/L AS HG)
NOV 17...	<0.5	1	<1	<3	<1	10	<5	<4	<1	<0.1
MAR 10...	<0.5	<1	<1	<3	4	9	<5	<4	2	<0.1
JUN 08...	<0.5	<1	2	<3	<1	8	<5	4	2	11
SEP 14...	<0.5	<1	<1	<3	1	21	<5	<4	1	<0.1

DATE	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 [2] DIAM. FINER THAN .062 MM
NOV 17...	<10	4	<1	<1	8	<6	<3	0	0.0	--
MAR 10...	<10	2	<1	<1	7	<6	6	9	3.4	39
JUN 08...	<10	<1	<1	<1	10	<6	14	4	0.78	33
SEP 14...	<10	2	<1	<1	10	<6	4	2	0.17	30

TENNESSEE RIVER BASIN

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/17	1255	WATER	0.1	2.12	30		6.60	7.0		10.4	10K
86/11/12	1545	WATER	0.1			25	6.90	12.0	1.0K	9.7	
86/11/17	1230	WATER									3
87/02/13	1300	WATER	0.1			17		3.0	1.0K	12.1	10K
87/03/10	1200	WATER									11
87/05/26	1130	WATER	0.1	2.43	72	24	6.70	15.0	.1K	9.3	10
87/06/08	1030	WATER	0.1								8
87/08/31	1225	WATER	0.1	2.10	25	20	6.60	16.0	1.0K	9.0	32
87/09/14	0900	WATER									18

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/17	1255	WATER	0.1	8	1K	33	.14	.030	.100	.010	.010
86/11/12	1545	WATER	0.1	9	1K	15					
87/02/13	1300	WATER	0.1		3	31	.16	.020	.100	.010	.010K
87/05/26	1130	WATER	0.1		4	30	.15	.040	.100	.040	.010K
87/08/31	1225	WATER	0.1	6	1K	41	.16	.030	.200	.030	.010

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/12	1545	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/13	1300	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/26	1130	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/31	1225	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	20

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.

WATER-DISCHARGE RECORDS

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.

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

AVERAGE DISCHARGE.--30 years, 146 ft^3/s, 45.79 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,900 ft^3/s Nov. 6, 1977, 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, 11 ft^3/s July 22, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 28	2315	*3,850	*5.04	Sept. 7	0300	3,750	4.96
Sept. 6	1130	3,500	4.75				

Minimum discharge, 14 ft^3/s, Sept. 2, 3, gage height, 0.50 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	152	339	133	105	1300	189	127	73	60	28	19
2	18	174	862	120	151	574	172	120	69	87	27	16
3	18	111	439	110	158	431	179	113	62	66	29	17
4	17	92	293	105	136	356	160	111	67	67	26	87
5	16	88	232	100	125	304	152	106	61	68	24	203
6	16	90	196	97	116	275	161	101	54	62	39	968
7	16	122	171	97	110	262	175	95	50	56	60	1930
8	17	172	160	94	104	259	195	90	47	55	58	440
9	24	123	247	89	95	385	213	86	45	51	39	242
10	30	103	345	89	e88	368	209	82	43	49	31	198
11	57	103	347	85	88	274	204	77	47	48	29	205
12	53	110	270	80	88	241	202	75	42	48	30	184
13	91	90	212	78	84	217	204	76	44	46	30	183
14	186	79	184	77	85	199	193	84	43	48	29	136
15	69	89	165	86	96	187	567	78	47	43	27	115
16	49	83	150	84	105	185	313	73	60	40	26	107
17	41	76	139	82	90	177	306	77	85	38	26	142
18	37	70	151	206	85	172	245	83	197	37	29	109
19	34	64	131	347	82	281	208	71	381	36	37	103
20	32	102	121	196	81	215	184	69	149	34	26	111
21	29	95	112	152	84	187	167	70	117	32	22	90
22	28	80	105	144	118	170	152	67	155	31	20	79
23	27	77	114	123	175	158	194	66	106	30	18	73
24	26	117	681	e117	123	150	307	88	92	30	18	70
25	260	109	319	119	112	158	248	80	86	35	19	66
26	359	838	234	112	113	149	203	80	88	29	20	62
27	131	337	199	e105	147	143	178	109	83	27	18	58
28	95	220	175	97	1300	141	161	102	70	25	25	56
29	79	176	158	e96	---	133	147	90	64	30	31	56
30	69	150	145	118	---	175	136	91	61	59	21	64
31	62	---	133	115	---	346	---	75	---	32	20	---
TOTAL	2005	4292	7529	3653	4244	8572	6324	2712	2588	1399	882	6189
MEAN	64.7	143	243	118	152	277	211	87.5	86.3	45.1	28.5	206
MAX	359	838	862	347	1300	1300	567	127	381	87	60	1930
MIN	16	64	105	77	81	133	136	66	42	25	18	16
CFSM	1.49	3.30	5.61	2.72	3.50	6.39	4.87	2.02	1.99	1.04	.66	4.76
IN.	1.72	3.69	6.47	3.14	3.65	7.36	5.43	2.33	2.22	1.20	.76	5.32

CAL YR 1986 TOTAL 30975 MEAN 84.9 MAX 862 MIN 12 CFSM 1.96 IN. 26.6
WTR YR 1987 TOTAL 50389 MEAN 138 MAX 1930 MIN 16 CFSM 3.19 IN. 43.3

e Estimated

TENNESSEE RIVER BASIN

03463300 SOUTH TOE RIVER NEAR CELO, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/27	1030	WATER	0.1	1.08	130		6.30	9.0		10.2	10
86/11/20	1020	WATER	0.1			14	6.50	6.0	1.0	9.8	
86/12/30	1030	WATER	0.1			14	6.50	5.0	1.0K	10.3	5
87/01/28	1025	WATER	0.1			15	6.40	1.0	1.0K	12.5	
87/02/27	1000	WATER	0.1			5		1.0K	1.0K	12.8	5
87/03/30	1818	WATER	0.1					13.0	1.0K	9.8	
87/04/17	1030	WATER	0.1	1.52	310	14	6.40	6.0	1.0K	11.5	2
87/05/29	1040	WATER	0.1	.94	83	21	6.90	17.0	2.6	8.9	50
87/06/30	1530	WATER	0.1	.90	61	22	6.60	20.0	1.0K	8.5	6
87/07/15	1300	WATER	0.1	.71	43	24	6.70	16.0	1.0K	8.5	25
87/08/27	1320	WATER	0.1	.55	20	20	6.70	22.0	1.0K	8.6	20
87/09/25	1120	WATER	0.1	.88	68	25	6.60	12.0	1.0K	10.2	11

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/27	1030	WATER	0.1	5	1	22					
86/11/20	1020	WATER	0.1	5	7	30	.08	.050	.300	.010K	.010K
86/12/30	1030	WATER	0.1	4	1K	22					
87/01/28	1025	WATER	0.1	3							
87/02/27	1000	WATER	0.1		3	13	.12	.030	.100K	.010	.010K
87/03/30	1818	WATER	0.1		7	14					
87/04/17	1030	WATER	0.1	2	1	34					
87/05/29	1040	WATER	0.1	6	2	33	.08	.030	.100K	.010	.010K
87/06/30	1530	WATER	0.1	5	1	16					
87/07/15	1300	WATER	0.1	5	2	25					
87/08/27	1320	WATER	0.1	6	1K	40	.11	.050	.200	.020	.010K
87/09/25	1120	WATER	0.1	6	4	31					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/20	1020	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/27	1000	WATER	0.1	10K	10K	25K	10K	50K		50K	10K
87/05/29	1040	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/27	1320	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	12

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.

WATER-DISCHARGE RECORDS

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.

REMARKS.--No estimated daily discharges. Records good. Slight diurnal fluctuation at low flow caused by small mills above station. Tennessee Valley Authority has telemetry at station.

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

AVERAGE DISCHARGE.--48 years, 176 ft^3/s, 25.95 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,800 ft^3/s Aug. 13, 1940, gage height, 29.6 ft, 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, 6.5 ft^3/s Jan. 1, 1954, gage height, 1.13 ft, result of freezeup; minimum daily, 13 ft^3/s Sept. 19, 30, 1954.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	1515	2,040	6.25	Apr. 15	1115	*6,290	*10.78
Mar. 1	0300	3,570	8.15	Apr. 16	2130	3,860	8.46

Minimum discharge, 16 ft^3/s, Sept. 4, 5, gage height, 1.24 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	43	118	142	220	2450	449	273	131	102	30	23
2	32	57	615	132	219	1060	341	239	131	118	41	19
3	28	53	455	114	263	660	321	220	102	113	37	18
4	26	47	272	108	257	504	307	211	96	131	37	17
5	28	47	200	102	226	401	277	193	92	144	31	41
6	27	52	159	99	200	342	255	181	84	97	30	269
7	26	93	138	102	182	318	268	172	80	83	53	383
8	25	149	130	104	168	326	487	159	77	76	46	201
9	27	92	133	95	161	452	714	148	74	73	36	92
10	32	73	206	95	154	548	678	141	73	68	41	79
11	29	68	288	93	130	395	540	135	72	77	33	77
12	30	70	284	97	130	321	477	139	72	67	32	71
13	38	64	215	87	126	272	416	145	74	62	30	75
14	76	57	174	83	124	240	346	129	74	63	29	59
15	53	60	153	107	130	218	2620	123	69	58	27	51
16	39	60	140	106	133	221	3330	116	109	57	28	46
17	35	57	129	106	139	200	2040	110	144	52	32	53
18	33	54	132	258	126	185	960	110	127	50	36	44
19	31	51	117	442	121	245	648	115	159	48	52	42
20	30	60	109	363	127	221	492	111	109	46	30	47
21	30	71	101	261	147	205	401	105	106	43	26	41
22	29	60	96	236	175	189	344	100	142	42	23	37
23	29	59	95	202	258	174	330	112	97	43	23	35
24	28	68	1050	194	228	164	638	117	108	45	22	33
25	60	66	666	171	189	160	782	131	194	43	22	32
26	193	347	373	182	174	155	664	121	272	41	23	31
27	82	279	268	214	360	148	495	111	182	37	22	31
28	58	158	219	145	1050	146	403	149	120	35	23	30
29	50	123	186	137	---	136	338	166	98	33	27	31
30	46	104	166	229	---	193	296	125	87	32	22	32
31	43	---	145	287	---	824	---	106	---	32	21	---
TOTAL	1320	2642	7532	5093	5917	12073	20657	4513	3355	2011	965	2040
MEAN	42.6	88.1	243	164	211	389	689	146	112	64.9	31.1	68.0
MAX	193	347	1050	442	1050	2450	3330	273	272	144	53	383
MIN	25	43	95	83	121	136	255	100	69	32	21	17
CFSM	.46	.96	2.64	1.78	2.29	4.23	7.48	1.58	1.21	.70	.34	.74
IN.	.53	1.07	3.04	2.06	2.39	4.88	8.34	1.82	1.36	.81	.39	.82

CAL YR 1986 TOTAL 39388 MEAN 108 MAX 1050 MIN 21 CFSM 1.17 IN. 15.9
WTR YR 1987 TOTAL 68118 MEAN 187 MAX 3330 MIN 17 CFSM 2.03 IN. 27.5

TENNESSEE RIVER BASIN

03479000 WATAUGA RIVER NEAR SUGAR GROVE, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/30	1230	WATER	0.1	1.51	45		7.40	11.0		11.2	30
86/11/25	1420	WATER	0.1			72	7.30	10.0	1.0K	10.3	
87/02/05	1430	WATER	0.1			39	6.90	6.0	1.0K	11.6	
87/05/19	1320	WATER	0.1	1.86	112	66	8.60	20.0	1.3	10.0	130
87/08/13	1415	WATER	0.1	1.36	30	71	7.90	20.0	2.2	9.1	210

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/30	1230	WATER	0.1	33	4	66	.37	.020	.100	.020	.010
86/11/25	1420	WATER	0.1	30	2	65					
87/02/05	1430	WATER	0.1	10	5	59	.88	.050	.100	.010	.010
87/05/19	1320	WATER	0.1	20	2	56	.62	.040	.200	.030	.010K
87/08/13	1415	WATER	0.1	23	6	86	.24	.040	.200	.030	.010

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/25	1420	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/05	1430	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/19	1320	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	37
87/08/13	1415	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	22

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.

WATER-DISCHARGE RECORDS

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.

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

AVERAGE DISCHARGE.--44 years, 386 ft^3/s, 37.44 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft^3/s Oct. 4, 1964, gage height, 17.30 ft; minimum, 55 ft^3/s Oct. 7, 1986, gage height, 1.14 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1898 reached a stage of about 15 ft, from profiles by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	1645	2,030	5.95	Mar. 1	0300	*2,540	*6.93
Jan. 19	0745	1,670	4.75				

Minimum discharge, 55 ft^3/s Oct. 7, gage height, 1.14 ft; minimum daily, 56 ft^3/s Oct. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	130	604	341	428	2180	525	300	235	173	116	100
2	68	148	1080	330	598	1100	472	295	221	275	114	92
3	66	124	744	302	604	811	649	288	203	199	134	86
4	64	116	559	293	521	687	658	289	192	296	109	83
5	63	137	468	281	473	613	572	277	188	223	167	83
6	58	161	409	270	439	560	550	273	174	242	343	253
7	56	193	368	264	416	524	541	266	167	228	551	579
8	57	302	354	255	395	513	506	255	163	220	221	225
9	95	226	479	248	369	542	474	246	158	188	205	155
10	145	190	606	266	354	516	443	241	154	173	161	134
11	94	199	780	247	346	474	426	233	166	167	150	128
12	86	326	705	233	339	456	407	233	162	156	141	179
13	172	225	547	227	327	438	390	271	169	147	135	185
14	332	190	468	221	325	419	394	276	163	189	128	206
15	152	194	422	232	345	405	809	316	154	146	124	142
16	109	193	387	223	451	393	600	282	164	139	144	130
17	93	170	359	223	451	377	530	244	161	132	139	159
18	87	158	352	640	382	375	486	232	243	127	131	134
19	83	148	322	1470	357	508	449	226	192	125	122	124
20	79	239	302	789	338	434	426	262	273	122	121	160
21	77	297	287	576	337	401	406	255	269	118	113	126
22	76	211	272	533	352	378	391	232	226	116	109	115
23	75	196	282	469	393	360	379	238	192	116	108	110
24	76	277	1160	421	348	352	368	229	173	111	108	108
25	374	280	719	547	332	442	354	224	238	107	103	107
26	743	1450	542	672	329	399	344	272	639	117	107	107
27	272	1500	468	503	733	392	330	225	295	105	103	107
28	183	666	421	449	1500	424	324	267	220	113	100	106
29	149	495	386	416	---	379	311	256	189	103	100	110
30	130	414	363	448	---	448	304	259	174	117	99	277
31	119	---	339	470	---	711	---	267	---	120	98	---
TOTAL	4302	9555	15554	12859	12582	17011	13818	8029	6317	4910	4604	4610
MEAN	139	318	502	415	449	549	461	259	211	158	149	154
MAX	743	1500	1160	1470	1500	2180	809	316	639	296	551	579
MIN	56	116	272	221	325	352	304	224	154	103	98	83
CFSM	.99	2.27	3.58	2.96	3.21	3.92	3.29	1.85	1.50	1.13	1.06	1.10
IN.	1.14	2.54	4.13	3.42	3.34	4.52	3.67	2.13	1.68	1.30	1.22	1.22

CAL YR 1986 TOTAL 71847 MEAN 197 MAX 1500 MIN 56 CFSM 1.41 IN. 19.1
WTR YR 1987 TOTAL 114151 MEAN 313 MAX 2180 MIN 56 CFSM 2.23 IN. 30.3

TENNESSEE RIVER BASIN

03500000 LITTLE TENNESSEE RIVER NEAR PRENTISS, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/31	0915	WATER	0.1	1.57	121		6.70	10.0		9.7	40
86/11/26	1050	WATER	0.1			40		13.0	130.0	8.3	
87/02/19	1100	WATER	0.1			12		5.0	2.4	10.5	
87/05/28	1220	WATER	0.1	2.11	264	34	6.90	19.0	35.0	8.2	1800
87/08/25	1240	WATER	0.1	1.39	103	32	6.60	22.0	6.7	7.5	300

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/31	0915	WATER	0.1	11	16	40					
86/11/26	1050	WATER	0.1		460	480					
87/02/19	1100	WATER	0.1		9	34	.26	.030	.100	.070	.030
87/05/28	1220	WATER	0.1	9	70	110	.17	.040	.400	.190	.030
87/08/25	1240	WATER	0.1	9	10	40	.12	.030	.200	.090	.050

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/26	1050	WATER	0.1	16	10K	30	30	50K	.2K	50K	75
87/02/19	1100	WATER	0.1	10K	10K	40	45	180		50K	180
87/03/20	1430	WATER	0.1	10K	2K	5K	3	10K	.2K	10K	10K
87/05/28	1220	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	13
87/08/25	1240	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

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.

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

AVERAGE DISCHARGE.--26 years, 142 ft^3/s, 33.77 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,720 ft^3/s Oct. 4, 1964, gage height, 12.96 ft; minimum, 16 ft^3/s Oct. 7, 8, 1986, gage height, 1.03 ft.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	1345	1,430	7.77	Mar. 1	0045	*1,580	*8.40

Minimum discharge, 16 ft^3/s Oct. 7, 8, gage height, 1.03 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	57	280	116	166	1050	e150	e120	94	66	45	29
2	27	54	485	110	272	527	e160	e115	85	89	48	24
3	23	49	302	102	246	368	e190	e115	82	72	50	21
4	22	46	215	100	208	297	e190	e110	82	78	44	20
5	22	57	174	97	182	257	e180	e105	78	68	51	22
6	21	74	150	94	167	231	e190	e105	76	77	100	158
7	18	108	135	92	158	212	e210	e100	74	68	67	310
8	19	123	136	90	148	211	e230	e98	73	70	48	83
9	73	93	210	88	138	216	e230	e95	72	64	43	56
10	61	76	301	98	131	195	e220	e94	71	60	40	48
11	39	107	354	90	128	180	e210	e90	75	59	38	46
12	36	133	289	87	126	179	e200	95	75	55	36	50
13	92	97	223	84	121	169	e200	95	86	54	35	51
14	137	79	187	84	132	161	e220	103	75	91	35	44
15	65	85	165	90	148	156	e280	127	75	60	34	41
16	50	77	152	85	250	153	e260	123	75	56	35	39
17	43	67	142	85	222	147	e250	99	72	53	49	53
18	39	64	141	275	184	148	e230	98	74	52	41	46
19	35	60	126	665	164	192	e210	105	69	50	36	47
20	34	118	119	331	151	163	e200	104	78	48	34	55
21	32	104	113	227	150	152	e190	94	90	47	33	42
22	29	84	106	206	184	145	e170	93	108	47	32	39
23	28	94	129	171	212	139	e160	103	75	46	32	38
24	28	199	302	155	186	137	e160	93	68	45	31	36
25	254	192	196	195	172	142	e150	93	71	44	31	36
26	253	843	169	192	168	131	e145	92	114	43	30	36
27	96	394	153	160	561	131	e140	94	75	42	30	35
28	71	217	133	150	1040	136	e135	99	67	41	29	35
29	60	155	124	140	---	e120	e130	88	62	43	29	36
30	53	130	118	180	---	e140	e125	93	61	52	28	105
31	48	---	112	182	---	e150	---	98	---	46	28	---
TOTAL	1832	4036	5941	4821	6115	6735	5715	3136	2332	1786	1242	1681
MEAN	59.1	135	192	156	218	217	190	101	77.7	57.6	40.1	56.0
MAX	254	843	485	665	1040	1050	280	127	114	91	100	310
MIN	18	46	106	84	121	120	125	88	61	41	28	20
CFSM	1.03	2.36	3.36	2.72	3.82	3.80	3.34	1.77	1.36	1.01	.70	.98
IN.	1.19	2.63	3.87	3.14	3.98	4.39	3.72	2.04	1.52	1.16	.81	1.10

CAL YR 1986 TOTAL 29250 MEAN 80.1 MAX 843 MIN 18 CFSM 1.40 IN. 19.1
WTR YR 1987 TOTAL 45372 MEAN 124 MAX 1050 MIN 18 CFSM 2.18 IN. 29.6

e Estimated

TENNESSEE RIVER BASIN

03500240 CARTOOGECHAYE CREEK NEAR FRANKLIN, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/31	0900	WATER	0.1	1.44	50		6.80	9.0		10.0	320
86/11/26	1030	WATER	0.1			31	6.30	13.0	200.0	8.3	
86/12/10	1020	WATER	0.1						6.6		
87/01/27	1125	WATER	0.1			37	6.80	2.0		12.6	
87/02/19	1030	WATER	0.1			14		6.0	1.2	10.6	
87/03/26	1400	WATER	0.1			25		12.0		10.2	
87/04/09	1445	WATER	0.1	.00	230	19		12.0	1.2	9.8	
87/05/28	1200	WATER	0.1	1.77	95	23	7.10	18.0	3.3	8.9	700
87/06/04	1400	WATER	0.1	1.66	82		6.90	21.0		8.4	300
87/07/30	1150	WATER	0.1	1.32	49	40	6.80	22.0	3.0	8.0	
87/08/25	1220	WATER	0.1	1.22	31	42	6.80	22.0	4.9	8.3	230
87/09/24	1450	WATER	0.1	1.28	35	45	7.20	17.0	1.8	10.0	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/31	0900	WATER	0.1	15	7	36					
86/11/26	1030	WATER	0.1	9	650	670					
87/01/27	1125	WATER	0.1	13	4	57					
87/02/19	1030	WATER	0.1		7	43	.13	.040	.100K	.020	.010K
87/03/26	1400	WATER	0.1		13	67					
87/04/09	1445	WATER	0.1		4	54					
87/05/28	1200	WATER	0.1	12	20	60	.10	.030	.100	.040	.010K
87/06/04	1400	WATER	0.1	13	16	70					
87/07/30	1150	WATER	0.1	14	14	56					
87/08/25	1220	WATER	0.1	14	6	47	.10	.010	.400	.010	.010K
87/09/24	1450	WATER	0.1	15	8	44					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/26	1030	WATER	0.1	11	10K	60	66	50K	.2K	50K	
87/02/19	1030	WATER	0.1	10K	10K	25K	10K	50K		50K	10K
87/05/28	1200	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/25	1220	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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).

REMARKS.--No estimated daily discharge. Records good. Considerable diurnal fluctuation caused by Porters Bend powerplant at Lake Emory 20 mi upstream. Several measurements of water temperatures were made during the year.

AVERAGE DISCHARGE.--42 years (1944-81, 1984-87), 1,052 ft^3/s, 32.77 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,100 ft^3/s Oct. 5, 1964, gage height, 12.87 ft in gage well, 13.06 ft from outside gage; minimum, 52 ft^3/s Nov. 7, 8, 1954, gage height, 1.16 ft, minimum daily, 71 ft^3/s Nov. 7, 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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	2030	8,070	7.03	Feb. 28	2400	*10,700	*8.12

Minimum discharge, 109 ft^3/s Oct. 8, gage height, 1.44 ft; minimum daily, 121 ft^3/s Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	162	370	1270	815	1090	8430	1430	814	796	536	325	169
2	168	460	2630	807	1460	3480	1280	810	732	689	358	160
3	152	419	1990	733	1740	2450	1490	790	691	632	525	199
4	150	366	1410	709	1420	2230	1710	786	672	765	328	192
5	147	381	1150	684	1240	1930	1450	772	650	689	369	197
6	132	469	988	663	1130	1730	1470	756	609	709	589	638
7	126	528	888	644	1060	1590	1640	755	530	656	983	2090
8	121	845	844	629	989	1520	1580	747	596	617	599	891
9	277	674	1110	616	922	1590	1510	730	511	569	472	518
10	448	574	1750	646	873	1560	1390	713	542	531	316	452
11	296	608	2030	633	841	1390	1310	701	589	517	337	441
12	234	879	2010	591	824	1330	1230	688	619	485	385	436
13	366	682	1470	582	795	1270	1170	753	673	461	284	613
14	884	585	1200	572	806	1210	1170	750	598	564	321	523
15	559	557	1060	598	918	1170	2440	822	591	495	296	452
16	425	590	954	605	1260	1150	2010	824	588	455	304	395
17	177	535	892	568	1500	1100	1670	737	584	418	362	460
18	271	499	880	1150	1150	1090	1460	704	702	420	436	439
19	230	470	812	4200	1020	1520	1340	699	633	402	314	396
20	247	570	755	2440	940	1340	1260	708	657	387	280	449
21	227	857	718	1600	924	1210	1180	754	881	380	288	412
22	205	625	681	1390	1030	1130	1120	724	820	368	290	359
23	213	606	685	1190	1290	1080	1070	840	706	368	272	338
24	219	1030	2640	1030	1110	1050	1030	795	643	354	165	328
25	720	1030	1940	1170	1010	1170	970	736	637	337	233	320
26	2310	4410	1360	1560	963	1140	925	786	1060	393	189	314
27	842	4420	1160	1180	2430	1060	899	711	803	348	242	308
28	595	1860	1020	1050	5660	1180	889	928	649	377	244	307
29	488	1300	930	972	---	1060	823	946	605	380	259	300
30	456	1050	872	1060	---	1150	816	832	564	380	258	718
31	365	---	822	1220	---	1820	---	860	---	367	255	---
TOTAL	12212	28249	38921	32307	36395	52130	39732	23971	19931	15049	10878	13814
MEAN	394	942	1256	1042	1300	1682	1324	773	664	485	351	460
MAX	2310	4420	2640	4200	5660	8430	2440	946	1060	765	983	2090
MIN	121	366	681	568	795	1050	816	688	511	337	165	160
CFSM	.90	2.16	2.88	2.39	2.98	3.86	3.04	1.77	1.52	1.11	.80	1.06
IN.	1.04	2.41	3.32	2.76	3.11	4.45	3.39	2.05	1.70	1.28	.93	1.18

CAL YR 1986 TOTAL 202972 MEAN 556 MAX 4420 MIN 82 CFSM 1.28 IN. 17.3
WTR YR 1987 TOTAL 323589 MEAN 887 MAX 8430 MIN 121 CFSM 2.03 IN. 27.6

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.

WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Records good. Occasional slight diurnal fluctuation at low flow caused by small ponds on tributaries above station.

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

AVERAGE DISCHARGE.--47 years, 203 ft^3/s, 53.12 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,300 ft^3/s June 16, 1949, gage height, 9.70 ft from rating curve extended above 3,000 ft^3/s on basis of slope-area measurement of peak flow; minimum, 30 ft^3/s Oct. 4, 6, 7-8, 9, 1986; minimum gage height, 0.56 ft Oct. 6, 7-8, 9, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	1115	*2,170	*4.90	Feb. 28	2100	1,560	3.99

Minimum discharge, 30 ft^3/s Oct. 4, 6, 7-8, 9; minimum gage height, 0.56 ft Oct. 6, 7-8, 9; minimum daily, 30 ft^3/s Oct. 6-8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	89	471	201	243	913	220	162	125	91	56	37
2	33	80	539	188	397	605	209	156	111	162	56	34
3	31	75	416	178	356	483	257	153	100	103	59	33
4	32	72	355	175	313	416	220	149	124	116	62	34
5	32	123	313	170	289	375	209	146	97	110	85	35
6	30	128	281	165	270	343	219	143	91	135	78	304
7	30	183	254	161	258	317	226	138	88	110	84	206
8	30	185	310	157	243	311	229	135	87	99	60	83
9	96	156	504	152	232	320	226	130	87	91	55	61
10	67	136	518	170	220	287	215	128	88	87	54	56
11	46	218	552	153	212	267	208	126	95	85	54	51
12	45	206	460	146	207	259	198	133	87	79	51	73
13	180	169	395	142	197	244	191	133	99	80	50	71
14	186	148	352	140	219	236	218	150	84	132	48	59
15	84	168	321	160	214	227	487	180	83	84	47	50
16	65	145	296	143	294	221	326	156	86	79	50	49
17	58	134	277	142	252	212	292	128	104	75	49	65
18	54	125	278	477	230	216	263	129	111	73	48	53
19	51	117	245	767	216	258	245	124	92	72	45	75
20	49	222	232	407	206	214	233	123	134	69	43	87
21	48	176	218	325	210	203	221	123	157	67	41	57
22	46	155	207	305	249	195	212	130	162	66	40	51
23	45	179	242	267	263	189	204	134	125	65	39	49
24	45	281	397	245	232	186	196	116	102	63	38	47
25	329	263	289	269	220	202	189	114	108	62	39	46
26	256	1060	259	241	223	182	182	111	121	61	39	44
27	151	583	242	222	508	192	178	134	94	59	38	44
28	135	400	230	211	1010	194	174	122	85	57	37	43
29	123	325	218	204	---	178	167	113	81	56	36	52
30	86	287	209	300	---	239	164	109	78	72	35	186
31	79	---	199	267	---	273	---	127	---	71	36	---
TOTAL	2576	6588	10079	7250	7983	8957	6778	4155	3086	2631	1552	2135
MEAN	83.1	220	325	234	285	289	226	134	103	84.9	50.1	71.2
MAX	329	1060	552	767	1010	913	487	180	162	162	85	304
MIN	30	72	199	140	197	178	164	109	78	56	35	33
CFSM	1.60	4.23	6.26	4.51	5.49	5.57	4.35	2.58	1.98	1.64	.96	1.37
IN.	1.85	4.72	7.22	5.20	5.72	6.42	4.86	2.98	2.21	1.89	1.11	1.53

CAL YR 1986 TOTAL 46215 MEAN 127 MAX 1060 MIN 30 CFSM 2.44 IN. 33.1
WTR YR 1987 TOTAL 63770 MEAN 175 MAX 1060 MIN 30 CFSM 3.37 IN. 45.7

TENNESSEE RIVER BASIN

03504000 NANTAHALA RIVER NEAR RAINBOW SPRINGS, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/31	1100	WATER	0.1				6.70	8.0		10.5	10
86/11/26	1120	WATER	0.1			15		11.0	12.0	9.0	
86/12/10	1120	WATER	0.1						1.0K		
87/01/27	1230	WATER	0.1			15	7.10	.0	1.0K	12.4	1
87/02/19	1210	WATER	0.1			7		5.0	1.0K	10.7	
87/03/26	1320	WATER	0.1			10		10.0	.4	10.0	1K
87/04/09	1410	WATER	0.1	1.43	222	12		10.0	1.0K	10.4	1K
87/05/28	1310	WATER	0.1	1.09	117	23	6.90	17.0	1.6	8.9	10
87/06/04	1140	WATER	0.1	1.08	117	11	6.80	16.0		8.8	30
87/07/30	1045	WATER	0.1	.84	68	20	6.60	18.0	1.1	8.5	260
87/08/25	1340	WATER	0.1	.66	41	20	6.70	20.0	1.1	8.4	20
87/09/24	1430	WATER	0.1	.70	48	25	6.80	13.0	1.0K	10.0	8

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/31	1100	WATER	0.1	8	1	24					
86/11/26	1120	WATER	0.1		91	110					
87/01/27	1230	WATER	0.1	6	1	29					
87/02/19	1210	WATER	0.1		3	34	.02	.030	.100K	.010	.010K
87/03/26	1320	WATER	0.1		1	47					
87/04/09	1410	WATER	0.1		1	41					
87/05/28	1310	WATER	0.1	7	9	40	.03	.020	.100	.010	.010K
87/06/04	1140	WATER	0.1	7	9	31					
87/07/30	1045	WATER	0.1	5	6	41					
87/08/25	1340	WATER	0.1	6	3	27	.04	.030	.300	.010	.010K
87/09/24	1430	WATER	0.1	8	1	25					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/26	1120	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/19	1210	WATER	0.1	10K	10K	25K	10K	50K		50K	10K
87/05/28	1310	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/25	1340	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1945 to September 1946, July 1948 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,843.30 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1946, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Tennessee Valley Authority has telemetry at station.

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

AVERAGE DISCHARGE.--40 years, 512 ft^3/s, 37.79 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,900 ft^3/s Dec. 30, 1969, gage height, 12.46 ft, from floodmarks; minimum, 80 ft^3/s Oct. 19, 1954, gage height, 0.66 ft.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	1145	5,590	6.26	Feb. 28	2300	*7,410	*7.43

Minimum discharge, 92 ft^3/s, Oct. 6, 7-8, 9; minimum gage height, 0.82 ft Sept. 3, 4; minimum daily, 92 ft^3/s, Oct. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	231	535	344	443	3760	537	457	449	283	e240	e120
2	131	219	538	332	625	1980	511	439	470	334	e220	e110
3	119	201	493	305	695	1360	559	422	373	313	e210	100
4	115	192	434	301	626	1070	507	419	437	613	e190	98
5	107	222	394	291	581	902	479	393	340	457	e200	100
6	98	295	366	284	540	787	520	375	314	513	e230	233
7	92	367	347	279	515	702	570	365	296	423	e210	396
8	92	469	368	269	487	658	604	345	284	422	e200	242
9	151	393	863	261	450	674	737	345	277	388	e210	160
10	179	363	1790	292	424	719	790	337	267	402	e190	147
11	122	602	1390	267	413	590	854	314	306	358	e180	157
12	112	727	1200	248	404	557	947	314	301	330	e170	288
13	445	520	932	249	393	512	982	344	406	308	e170	299
14	791	431	770	244	416	489	999	345	302	345	e160	174
15	346	423	668	271	517	467	1900	323	284	301	e170	150
16	252	384	589	265	700	502	1230	303	356	283	e160	140
17	211	347	535	276	672	484	2000	339	559	270	e150	137
18	190	320	610	674	572	470	1610	323	388	255	e160	130
19	174	298	507	2280	515	833	1160	321	400	247	e150	154
20	164	434	467	1130	481	631	980	300	398	232	e140	168
21	159	413	432	805	480	567	862	418	464	227	e130	134
22	148	352	407	705	603	532	766	417	467	217	e125	124
23	140	382	396	588	1080	492	685	356	405	200	e120	115
24	132	820	567	525	753	468	642	395	365	199	e120	114
25	743	712	501	566	668	464	738	338	410	224	e115	112
26	842	2340	448	539	635	445	620	319	506	242	e115	108
27	424	1390	422	448	1480	436	566	321	450	218	e110	103
28	332	913	399	446	2830	451	534	331	364	230	e125	103
29	286	713	378	409	---	396	498	381	320	211	e115	104
30	254	593	362	476	---	438	477	448	296	e190	e110	217
31	229	---	343	476	---	820	---	374	---	e200	e110	---
TOTAL	7704	16066	18451	14845	18998	23656	24864	11221	11254	9435	5005	4737
MEAN	249	536	595	479	678	763	829	362	375	304	161	158
MAX	842	2340	1790	2280	2830	3760	2000	457	559	613	240	396
MIN	92	192	343	244	393	396	477	300	267	190	110	98
CFSM	1.35	2.91	3.23	2.60	3.69	4.15	4.50	1.97	2.04	1.65	.88	.86
IN.	1.56	3.25	3.73	3.00	3.84	4.78	5.03	2.27	2.28	1.91	1.01	.96

CAL YR 1986 TOTAL 115438 MEAN 316 MAX 2340 MIN 92 CFSM 1.72 IN. 23.3
WTR YR 1987 TOTAL 166236 MEAN 455 MAX 3760 MIN 92 CFSM 2.48 IN. 33.6

e Estimated

TENNESSEE RIVER BASIN

03512000 OCONALUFTEE RIVER AT BIRDTOWN, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/23	1520	WATER	0.1	1.06	142		6.70	13.0		10.6	10
86/11/19	1500	WATER	0.1			25	6.60	10.0	1.0K	10.7	10
86/12/10	1430	WATER	0.1						1.9		
87/01/27	1530	WATER	0.1			22	6.50	2.0	1.0K	12.8	
87/02/20	1120	WATER	0.1					5.0	1.2	11.8	18
87/03/26	1035	WATER	0.1			13		9.0	1.2	10.6	
87/04/09	1000	WATER	0.1	2.22	716			7.0	1.0	11.1	
87/05/07	0920	WATER	0.1	1.63	366	24	6.60	14.0	1.0K	9.6	100
87/06/09	1415	WATER	0.1	1.45	282	25	6.80	20.0		9.6	
87/07/24	1000	WATER	0.1	1.16	199	22	6.90	20.0	1.4	8.8	110
87/08/11	1340	WATER	0.1	.00	180	31	6.80	23.0	1.7	8.4	30
87/09/24	0930	WATER	0.1	.93	114	37	6.20	13.0	1.8	9.9	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/23	1520	WATER	0.1	9	1	14	.22	.040	.200	.050	.030
86/11/19	1500	WATER	0.1	8	1	40					
87/01/27	1530	WATER	0.1	5	9	60					
87/02/20	1120	WATER	0.1		4	29	1.30	.040	.100K	.010	.010K
87/03/26	1035	WATER	0.1		10	39					
87/04/09	1000	WATER	0.1		4	31					
87/05/07	0920	WATER	0.1	5	5	40	.19	.040	.200	.020	.010
87/06/09	1415	WATER	0.1	5	6	31					
87/07/24	1000	WATER	0.1		8	57					
87/08/11	1340	WATER	0.1	7	16	45	.22	.180	.500	.080	.030
87/09/24	0930	WATER	0.1	6	6	45					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/19	1500	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/20	1120	WATER	0.1	10K	10K	25K	10K	50K		50K	10K
87/05/07	0920	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/08/11	1340	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	45

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.

WATER DISCHARGE RECORD

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.

REMARKS.--Records good. Considerable diurnal fluctuation caused by powerplants above station. Flow regulated by Thorpe Reservoir, Cedar Cliff Lake, Bear Creek Lake, Tennessee Creek project lakes (see pp. 490-492), and two small reservoirs with combined capacity of 250 ft^3/s-day.

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

AVERAGE DISCHARGE.--88 years (water years 1898-1981, 1984-87), 1,580 ft^3/s, 32.76 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,600 ft^3/s Aug. 30, 1940, gage height, 15.96 ft datum then in use, from rating curve extended above 28,000 ft^3/s on basis of slope-area measurement of peak flow; minimum, 27 ft^3/s Sept. 10, 1925, minimum gage height, 0.47 ft Oct. 26, 1952, datum then in use; 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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Mar. 1	0015	*15,500	*9.14	No other peak greater than base discharge.			

Minimum discharge, 275 ft^3/s, Oct. 6, gage height, 1.36 ft; minimum daily, 295 ft^3/s, Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	595	611	1440	1240	1230	9450	1910	1370	1380	923	923	802
2	498	505	1360	1150	1850	5200	1630	1360	1580	1080	686	838
3	454	482	1250	1180	1740	3920	2010	1620	1440	1050	711	812
4	333	491	1220	1170	1650	3220	2020	1160	1740	1560	911	770
5	349	573	1180	1090	1490	2850	1950	1510	1280	1130	991	703
6	295	709	1130	1020	1550	2610	1980	1360	1060	1230	1110	997
7	504	834	1000	867	1260	2230	2190	1470	926	1060	1100	1710
8	356	1160	1110	783	1160	1910	2170	1420	869	1210	965	1080
9	531	906	1810	1100	1340	2340	2350	1110	1020	1110	766	721
10	687	778	3230	1100	1550	2290	1970	1180	978	1390	677	800
11	501	1110	2910	770	1570	2130	2280	1100	1310	1270	985	946
12	540	1480	2650	826	1470	2050	2240	1230	1220	1180	905	918
13	889	1100	2170	835	1230	1630	2000	1140	1400	839	833	1020
14	1880	1000	1840	823	1010	1510	1880	1150	933	1440	850	793
15	911	978	1610	934	1540	1470	2860	1110	875	1010	820	755
16	722	883	1420	962	1550	1470	3050	1050	1510	1070	574	856
17	687	795	1290	790	2130	1460	3700	1030	1750	1050	597	674
18	600	690	1410	1460	1900	1720	3330	1020	1390	868	901	803
19	551	635	1220	4840	1560	2390	3010	1320	1330	767	890	684
20	464	954	1130	3090	1270	1980	2510	1370	1360	732	869	662
21	554	1020	1200	2330	1260	1510	2290	1610	1440	998	818	531
22	523	836	1070	2110	1410	1470	1980	1580	1290	1120	806	621
23	509	840	1040	1890	2380	1550	1860	1160	1320	921	608	617
24	482	1840	1660	1780	2150	1220	2150	1170	1430	889	517	638
25	1340	1610	1420	1460	1920	1440	1920	1010	1630	963	794	588
26	1940	4630	1220	1430	1830	1350	1790	1280	1470	814	817	619
27	933	3330	1130	1360	3790	1480	1490	1320	1230	994	790	551
28	787	2140	1110	1540	6770	1300	1510	1530	988	948	869	524
29	715	1820	1510	1270	---	1250	1420	1390	891	948	791	522
30	708	1500	1480	1290	---	1670	1360	1440	936	1030	538	1040
31	619	---	1370	1280	---	2470	---	1370	---	947	506	---
TOTAL	21457	36240	46590	43770	51560	70540	64810	39940	37976	32541	24918	23595
MEAN	692	1208	1503	1412	1841	2275	2160	1288	1266	1050	804	786
MAX	1940	4630	3230	4840	6770	9450	3700	1620	1750	1560	1110	1710
MIN	295	482	1000	770	1010	1220	1360	1010	869	732	506	522

CAL YR 1986 TOTAL 337638 MEAN 925 MAX 4630 MIN 295
WTR YR 1987 TOTAL 493937 MEAN 1353 MAX 9450 MIN 295

TENNESSEE RIVER BASIN

03513000 TUCKASEGEE RIVER AT BRYSON CITY, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/22	1030	WATER	0.1				6.80	10.0		9.9	120
86/11/19	1420	WATER	0.1			25	6.70	10.0	1.0K	10.9	80
86/12/10	1400	WATER	0.1						7.2		
87/01/27	1500	WATER	0.1			29	7.80	3.0	2.3	12.8	
87/02/20	0940	WATER	0.1					5.0	1.2	11.6	
87/03/26	1055	WATER	0.1			13		11.0	1.3	10.2	
87/04/09	1030	WATER	0.1			13		9.0	1.4	11.0	
87/05/07	1000	WATER	0.1			24	6.60	15.0	2.1	9.3	270
87/06/09	1330	WATER	0.1			25	6.90	20.0		9.6	
87/07/24	1030	WATER	0.1			32	6.80	22.0	2.9	8.7	
87/08/11	1310	WATER	0.1			42	6.60	22.0	3.8	8.5	380
87/09/24	0950	WATER	0.1			35	6.70	16.0	4.5	9.4	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/22	1030	WATER	0.1	13	5	14					
86/11/19	1420	WATER	0.1	9	2	38					
87/01/27	1500	WATER	0.1	10	4	45					
87/02/20	0940	WATER	0.1		5	38	.23	.060	.300	.010	.010K
87/03/26	1055	WATER	0.1		10	41					
87/04/09	1030	WATER	0.1		7	38					
87/05/07	1000	WATER	0.1	7	8	44	.12	.020	.100	.020	.010K
87/06/09	1330	WATER	0.1	8	13	43					
87/07/24	1030	WATER	0.1		12	53					
87/08/11	1310	WATER	0.1	6	18	45	.19	.030	.200	.040	.010K
87/09/24	0950	WATER	0.1	9	11	40					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/19	1420	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	1K
87/02/20	0940	WATER	0.1	10K	10K	25K	10K	50K		50K	10K
87/05/07	1000	WATER	0.1	10K	10K	130	35	50K	.2K	230	10K
87/08/11	1310	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	16

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.

WATER-DISCHARGE RECORDS

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).

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

AVERAGE DISCHARGE.--90 years (1898-1987), 911 ft^3/s, 30.47 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 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, 10 ft^3/s Dec. 3, 1924, result of freezeup and filling of Andrews Lake; minimum daily during normal regulation, 62 ft^3/s Oct. 19, 1952.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed is that of Mar. 19, 1899.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,920 ft^3/s Feb. 28, gage height, 8.38 ft; minimum, 57 ft^3/s Oct. 9, gage height, 1.87 ft; minimum daily, 78 ft^3/s Oct. 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	238	202	458	984	926	3660	1210	346	384	728	629	329
2	237	173	739	944	1240	1980	871	333	482	302	651	229
3	236	163	705	920	1520	1770	744	282	483	532	795	216
4	226	326	666	911	1270	1540	1030	279	511	563	789	297
5	90	354	884	599	1170	1410	562	316	289	307	603	335
6	86	382	757	907	1070	1340	620	308	255	548	431	100
7	82	496	618	1050	916	1260	858	250	237	903	516	304
8	78	673	560	1070	799	898	1130	244	220	651	575	502
9	78	379	1150	1080	941	951	952	284	513	823	161	460
10	142	326	2090	945	1090	1220	604	227	503	822	184	364
11	107	528	1950	554	1060	1170	423	227	352	727	552	369
12	93	796	1390	641	1050	1140	393	274	601	227	537	177
13	329	907	1120	937	1030	1170	528	316	570	468	545	145
14	688	832	806	968	1000	1110	436	309	268	877	530	171
15	389	689	916	777	862	421	1360	300	225	661	462	636
16	414	488	1120	632	886	736	944	342	394	937	108	765
17	415	460	1090	691	1110	720	776	232	402	842	104	689
18	171	446	1030	1260	1090	718	634	221	493	554	422	749
19	143	416	1120	3560	1070	859	560	289	411	164	422	470
20	279	520	1010	1950	1040	774	503	375	360	615	396	138
21	282	575	1000	1710	1050	423	623	433	536	809	390	161
22	282	484	1180	1320	611	394	615	449	613	765	385	459
23	270	469	1350	1270	893	697	539	725	1050	880	96	579
24	279	1310	1480	798	1190	535	437	381	950	816	103	576
25	671	1350	1130	750	1130	530	368	306	378	596	386	461
26	748	2520	719	1670	782	502	346	334	735	386	405	240
27	554	1630	1010	1510	1660	662	335	496	574	372	390	98
28	450	805	985	1300	3350	386	373	496	271	751	303	94
29	399	606	964	1240	---	331	310	620	478	738	96	396
30	376	508	958	1300	---	362	354	537	801	731	92	967
31	350	---	933	995	---	1070	---	358	---	737	89	---
TOTAL	9182	19813	31888	35243	31806	30739	19438	10889	14339	19832	12147	11476
MEAN	296	660	1029	1137	1136	992	648	351	478	640	392	383
MAX	748	2520	2090	3560	3350	3660	1360	725	1050	937	795	967
MIN	78	163	458	554	611	331	310	221	220	164	89	94
CFSM	.73	1.63	2.53	2.80	2.80	2.44	1.60	.87	1.18	1.58	.97	.94
IN.	.84	1.82	2.92	3.23	2.91	2.82	1.78	.99	1.31	1.82	1.11	1.05

CAL YR 1986 TOTAL 159955 MEAN 438 MAX 2520 MIN 78 MEAN‡ 446 CFSM‡ 1.10 IN.‡ 14.93
WTR YR 1987 TOTAL 246792 MEAN 676 MAX 3660 MIN 78 MEAN‡ 699 CFSM‡ 1.72 IN.‡ 23.38

‡ Adjusted for change in contents in Chatuge Lake.

TENNESSEE RIVER BASIN

03548500 HIWASSEE RIVER ABOVE MURPHY, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/23	1100	WATER	0.1	2.08	112		6.60	12.0		10.7	20
86/11/19	1200	WATER	0.1			25	6.70	12.0	3.0	10.4	40
87/02/10	1230	WATER	0.1			28		5.0	2.0	12.8	
87/05/07	1220	WATER	0.1	2.46	233	28	7.00	19.0	1.8	9.6	65
87/08/11	1115	WATER	0.1	2.45	229	29	6.50	17.0	1.9	9.8	180

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/23	1100	WATER	0.1	12	3	23					
86/11/19	1200	WATER	0.1	9	3	41					
87/02/10	1230	WATER	0.1		5	23	.19	.020	.100K	.020	.010K
87/05/07	1220	WATER	0.1	10	4	38	.17	.020	.100	.020	.010K
87/08/11	1115	WATER	0.1	7	5	30	.15	.020	.200	.010	.010K

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/19	1200	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/10	1230	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/07	1220	WATER	0.1	10K	10K	100	10	50K	.2K	50K	10K
87/08/11	1115	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	22

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 64, 0.2 mi upstream from Roger Creek, 4.7 mi northeast of Murphy, and at mile 6.6.

DRAINAGE AREA.--104 mi^2.

WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Records good.

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

AVERAGE DISCHARGE.--75 years (1905-8, 1915-16, 1919-87), 253 ft^3/s, 33.04 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft^3/s Nov. 19, 1906, gage height, 20.5 ft, from flood profile by Tennessee Valley Authority, from rating curve extended above 5,800 ft^3/s on basis of slope-conveyance study; minimum, 12 ft^3/s several times in August and September 1925, gage height, 0.52 ft.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	1100	1,970	7.06	Feb. 28	2230	*2,480	*8.45

Minimum discharge, 24 ft^3/s Oct. 6, gage height, 1.53 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	86	257	177	370	1770	233	174	262	208	73	44
2	34	81	238	165	625	935	223	166	235	322	71	39
3	30	76	215	153	579	646	250	160	197	289	71	35
4	29	72	191	148	469	518	235	154	266	336	68	34
5	28	95	174	144	402	446	232	146	198	299	67	34
6	26	155	161	140	357	399	261	141	172	447	81	64
7	25	206	151	136	325	364	305	128	155	324	75	94
8	27	278	256	133	298	348	311	129	143	258	66	69
9	91	200	646	130	269	348	320	117	136	220	68	59
10	76	160	1330	150	248	314	295	121	132	196	64	54
11	47	283	866	136	237	288	273	117	128	181	60	64
12	42	391	653	128	229	284	251	127	125	162	57	65
13	225	264	491	127	217	268	237	136	184	151	56	64
14	349	207	402	122	281	256	282	143	136	177	54	60
15	137	195	343	151	321	246	648	124	130	142	57	50
16	94	171	300	140	337	239	504	124	161	131	54	46
17	77	154	271	147	337	228	465	114	202	123	52	47
18	67	141	291	452	311	234	420	116	212	116	54	50
19	61	128	249	1380	283	374	373	167	236	111	50	52
20	56	297	229	699	263	297	331	127	291	105	46	59
21	53	288	210	465	261	271	299	287	351	101	43	47
22	51	232	196	406	349	251	274	300	438	98	42	43
23	48	307	200	338	435	236	256	308	413	96	41	42
24	47	853	271	298	381	229	243	394	424	92	40	41
25	470	675	253	468	337	225	227	260	376	89	39	41
26	401	1300	233	564	317	209	212	210	390	89	40	39
27	203	834	216	420	1020	203	200	180	305	82	42	38
28	143	485	202	363	1550	208	192	215	246	79	43	38
29	114	363	190	321	---	192	181	406	209	76	44	42
30	99	295	180	399	---	234	175	370	184	74	40	164
31	88	---	170	411	---	279	---	281	---	73	39	---
TOTAL	3270	9272	10035	9411	11408	11339	8708	5942	7037	5247	1697	1618
MEAN	105	309	324	304	407	366	290	192	235	169	54.7	53.9
MAX	470	1300	1330	1380	1550	1770	648	406	438	447	81	164
MIN	25	72	151	122	217	192	175	114	125	73	39	34
CFSM	1.01	2.97	3.11	2.92	3.92	3.52	2.79	1.84	2.26	1.63	.53	.52
IN.	1.17	3.32	3.59	3.37	4.08	4.06	3.11	2.13	2.52	1.88	.61	.58

CAL YR 1986 TOTAL 54867 MEAN 150 MAX 1330 MIN 23 CFSM 1.45 IN. 19.6
WTR YR 1987 TOTAL 84984 MEAN 233 MAX 1770 MIN 25 CFSM 2.24 IN. 30.4

TENNESSEE RIVER BASIN

03550000 VALLEY RIVER AT TOMOTLA, NC--Continued

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	STREAM STAGE FEET	STREAM FLOW, INST-CFS	CNDUCTVY FIELD MICROMHO	PH SU	WATER TEMP CENT	TURB TRBIDMTR HACH FTU	DO MG/L	FEC COLI MFM-FCBR /100ML
86/10/23	1310	WATER	0.1	1.74	48		7.10	13.0		9.2	220
86/11/19	1130	WATER	0.1			51	6.80	11.0	1.3	10.4	1300
87/01/27	1400	WATER				40	7.10	3.0		12.5	
87/02/10	1145	WATER	0.1			28		4.0	1.0K	13.2	
87/03/26	1200	WATER	0.1			38		11.0		10.4	
87/04/09	1145	WATER	0.1	2.80	322	26		9.0		11.0	
87/05/07	1145	WATER	0.1	2.25	139	35	7.10	16.0	1.1	9.2	270
87/06/09	1030	WATER	0.1	2.21	139	45	7.10	22.0		9.2	
87/07/24	1145	WATER	0.1	2.06	95	54	7.10	21.0	2.0	8.7	
87/08/11	1040	WATER	0.1	1.80	61	53	6.90	22.0	1.8	7.7	860
87/09/24	1100	WATER	0.1	1.71	40	66	7.10	15.0		9.6	

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	T ALK FIELD MG/L	RESIDUE TOT NFLT MG/L	RESIDUE TOTAL MG/L	NO2&NO3 N-TOTAL MG/L	NH3+NH4- N TOTAL MG/L	TOT KJEL N MG/L	PHOS-TOT MG/L P	PHOS-T ORTHO MG/L P
86/10/23	1310	WATER	0.1	30	6	44					
86/11/19	1130	WATER	0.1	21	3	50					
87/01/27	1400	WATER		15	3	49					
87/02/10	1145	WATER	0.1		3	39	.34	.020	.100	.020	.010K
87/03/26	1200	WATER	0.1		6	61					
87/04/09	1145	WATER	0.1		4	49					
87/05/07	1145	WATER	0.1	15	5	42	.20	.030	.100K	.020	.010K
87/06/09	1030	WATER	0.1	14	8	50					
87/07/24	1145	WATER	0.1		8	50					
87/08/11	1040	WATER	0.1	19	2	45	.17	.030	.200	.030	.010K
87/09/24	1100	WATER	0.1	25	8	68					

DATE FROM TO	TIME OF DAY	MEDIUM	OR DEPTH (M)	ARSENIC AS,TOT UG/L	CADMIUM CD,TOT UG/L	CHROMIUM CR,TOT UG/L	COPPER CU,TOT UG/L	LEAD PB,TOT UG/L	MERCURY HG,TOTAL UG/L	NICKEL NI,TOTAL UG/L	ZINC ZN,TOT UG/L
86/11/19	1130	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/02/10	1145	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K
87/05/07	1145	WATER	0.1	10K	10K	40	13	50K	.2K	50	10K
87/08/11	1040	WATER	0.1	10K	10K	25K	10K	50K	.2K	50K	10K

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.

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. 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 Mar. 1, 2, 3, elevation 2,258.6 ft; minimum observed, 8,680 ft^3/s-day May 24, elevation, 2,231.80 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.

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. Gage-height record furnished by Aluminum Co. of America; 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, 65,700 ft^3/s-day May 1, elevation, 2,885.55 ft; minimum, 12,700 ft^3/s-day Oct. 1, elevation, 2,785.91 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.

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. Gage-height record furnished by Aluminum Co. of America; level storage records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 35,700 ft^3/s-day Mar. 13, 1950, elevation, 3,100.01 ft; 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, 32,600 ft^3/s-day June 1, elevation, 3095.95 ft. minimum, 6,600 ft^3/s-day Oct. 23, elevation, 3,045.55 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.

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. 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, 613,700 ft^3/s-day July 6, elevation, 1,687.42 ft; minimum, 374,600 ft^3/s-day Jan. 17, elevation, 1,626.02 ft.

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 monthend 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.

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. 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, 75,800 ft^3/s-day June 1, elevation, 1,814.88 ft; minimum, 37,600 ft^3/s-day Oct. 8, elevation, 1,780.69 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.
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. 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, 106,300 ft^3/s-day June 22, elevation, 1,923.59 ft; minimum, 75,900 ft^3/s-day Oct. 3, elevation, 1,912.66 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.
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. 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, 184,200 ft^3/s-day July 6, elevation, 1,515.09 ft; minimum, 95,600 ft^3/s-day Feb. 24, elevation, 1,473.67 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.
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. 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, 28,800 ft^3/s-day June 3, elevation 1,279.48 ft; minimum, 15,400 ft^3/s-day Nov. 21, elevation, 1,251.19 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 1986 TO SEPTEMBER 1987

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)	Elevation (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)
	03460242 Waterville Lake			03504500 Nantahala Lake			03507500 Thorpe Reservoir			03524500 Fontana Lake		
Sept. 30.....	2,248.80	11,270	-	2,785.91	12,700	-	3,046.81	7,000	-	1,631.68	392,800	-
Oct. 31.....	2,249.70	11,410	+140	2,799.58	17,300	+4,600	3,046.74	7,000	0	1,628.58	382,800	-10,000
Nov. 30.....	2,247.10	11,010	-400	2,816.59	24,200	+6,900	3,053.58	9,400	+2,400	1,636.16	407,800	+25,000
Dec. 31.....	2,247.50	11,070	+60	2,842.50	37,000	+12,800	3,065.90	14,800	+5,400	1,637.48	412,300	+4,500
CAL YR 1986		-	-200		-	+1,700		-	-2,000		-	+83,30
Jan. 31.....	2,248.30	11,190	+120	2,855.21	44,700	+7,700	3,073.36	18,600	+3,800	1,636.44	408,700	-3,600
Feb. 28.....	2,256.60	12,520	+1,330	2,864.10	50,400	+5,700	3,080.08	22,300	+3,700	1,648.00	449,600	+40,900
Mar. 31.....	2,252.50	11,860	-660	2,877.11	59,400	+9,000	3,088.81	27,700	+5,400	1,654.04	472,400	+22,800
Apr. 30.....	2,247.40	11,050	-810	2,885.50	65,700	+6,300	3,095.30	32,200	+4,500	1,673.74	552,400	+80,000
May 31.....	2,245.20	10,710	-340	2,881.87	62,900	-2,800	3,095.82	32,600	+400	1,682.49	591,000	+38,600
June 30.....	2,244.50	10,600	-110	2,875.34	58,100	-4,800	3,093.06	30,600	-2,000	1,686.59	609,800	+18,800
July 31.....	2,234.60	9,090	-1,510	2,862.35	49,300	-8,800	3,087.16	26,700	-3,900	1,678.59	573,500	-36,300
Aug. 31.....	2,237.90	9,590	+500	2,847.10	39,700	-9,600	3,079.39	21,900	-4,800	1,666.39	521,400	-52,100
Sept. 30.....	2,244.30	10,570	+980	2,832.10	31,500	-8,200	3,073.22	18,500	-3,400	1,659.30	492,800	-28,600
WTR YR 1987		-	-700		-	+18,800		-	+11,500		-	+100,00

Date	Gage height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Elevation (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Elevation (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Elevation (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)
	03516500 Santeetlah Lake			03546500 Chatuge Lake			03554500 Hiwassee Lake			03555500 Appalachia Lake		
Sept. 30.....	1,782.17	38,800	-	1,912.80	76,300	-	1,482.40	110,600	-	1,276.89	27,400	-
Oct. 31.....	1,785.40	41,800	+3,000	1,913.30	77,500	+1,200	1,486.73	118,300	+7,700	1,255.27	17,000	-10,400
Nov. 30.....	1,797.61	54,200	+12,400	1,915.70	83,500	+6,000	1,487.06	118,900	+600	1,276.84	27,400	+10,400
Dec. 31.....	1,798.12	54,800	+600	1,915.67	83,400	-100	1,481.43	108,900	-10,000	1,275.46	26,600	-800
CAL YR 1986		-	+9,900		-	+3,000		-	+1,700		-	-80
Jan. 31.....	1,796.85	53,400	-1,400	1,915.11	82,000	-1,400	1,479.58	105,600	-3,300	1,276.85	27,400	+800
Feb. 28.....	1,804.70	62,500	+9,100	1,916.22	84,900	+2,900	1,478.50	103,800	-1,800	1,276.70	27,300	-100
Mar. 31.....	1,810.61	70,000	+7,500	1,918.50	91,100	+6,200	1,486.02	117,000	+13,200	1,276.80	27,400	+100
Apr. 30.....	1,813.38	73,700	+3,700	1,921.29	99,200	+8,100	1,501.43	149,600	+32,600	1,276.64	27,300	-100
May 31.....	1,814.80	75,700	+2,000	1,923.10	04,700	+5,500	1,510.14	171,300	+21,700	1,276.91	27,400	+100
June 30.....	1,812.78	72,900	-2,800	1,923.28	05,300	+600	1,514.00	181,300	+10,000	1,276.85	27,400	0
July 31.....	1,805.30	63,200	-9,700	1,920.09	95,600	-9,700	1,509.77	170,300	-11,000	1,276.53	27,200	-200
Aug. 31.....	1,792.78	49,000	-14,200	1,917.71	88,900	-6,700	1,503.50	154,600	-15,700	1,276.66	27,300	+100
Sept. 30.....	1,789.69	45,900	-3,100	1,916.17	84,800	-4,100	1,500.47	147,300	-7,300	1,277.74	27,900	+600
WTR YR 1987		-	+7,100		-	+8,500		-	+36,700		-	+50

DISCHARGE AT PARTIAL-RECORD STATIONS AND 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.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1987

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
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, 1985-86	12- 5-86 3-12-87	290 575
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, 1980-86	10- 7-86 5- 9-87 9-11-87	4.66 34.6 8.0
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	1981-86	11-25-86 3-25-87 8- 3-87	10.0 46.0 1.92
0207920940 Gills Creek	Roanoke River	Lat 36°26'10", long 78°32'37", Granville County, Hydrologic Unit 03010102, at bridge on Secondary Road 1430, 0.3 mi downstream from Howlett Creek, and 1.7 mi southeast of Stovall.	13.8	1974-76, 1978-86	11-25-86 3-25-87 8- 3-87	1.04 8.40 0.071
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, 1978-86	11-25-86 3-25-87 8- 3-87	3.72 8.01 3.61
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, 1979-86	11-25-86 3-25-87 8- 3-87	18.0 51.7 3.80
02081022 Roanoke River	Atlantic Ocean	Lat 36°00'50", long 77°12'55", Martin County, at bridge on State Highway 11, 5.2 mi northeast of Oak City.	8813	1968-69, 1971-72, 1975, 1978, 1980, 1983, 1986	7-15-87	2620
PAMLICO RIVER BASIN						
02084148 Chicod Creek	Tar River	Lat 35°31'57", long 77°11'13", Pitt County, Hydrologic Unit 03020103, at bridge on Secondary Road 1565, 2 mi upstream from Cow Swamp, and 2.2 mi south of Grimesland.	19	1975-86	10-20-86 12-16-86 1- 2-87 1-14-87	0 1.35 91.3 5.88
02084158 Cow Swamp	Tar River	Lat 35°31'57", long 77°11'13", Pitt County, Hydrologic Unit 03020103, at bridge on Secondary Road 1756, 1 mi upstream from mouth, and 3 mi southwest of Grimesland.	17	1975-79, 1981-86	10-20-86 12-16-86 1- 2-87 1-14-87	0.58 2.97 103 11.3
02084164 Juniper Branch	Tar River	Lat 35°33'55", long 77°14'43", Pitt County, Hydrologic Unit 03020103, at culvert on Secondary Road 1766, 0.8 mi upstream from mouth, and 1.8 mi southwest of Simpson.	7.5	1976-86†	10-21-86 12-16-86 1- 2-87 1-14-87	0.66 2.56 29.2 5.83

† Operated as a continuous-record gaging station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1987

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		NEUSE RIVER BASIN				
0208481111 East Fork Eno River	Eno River	Lat 36°08'45", long 79°08'57", Orange County, Hydrologic Unit 03020201, at dam, and 1.8 mi southeast of Cedar Grove.	9.1	1986	10-24-86	2.32
0208480325 West Fork Eno River	Eno River	Lat 36°08'21", long 79°10'13", Orange County, Hydrologic Unit 03020201, at bridge on Secondary Road 1004, and 2.0 mi south of Cedar Grove.	11.0	1986	10-24-86	.06
0208489600 Eno River	Neuse River	Lat 36°06'07", long 79°08'35", Orange County, Hydrologic Unit 03020201, at bridge on Secondary Road 1306, and 4.5 mi southeast of Cedar Grove.	33.4	1954-55, 1958, 1960-61, 1968, 1986	10-24-86	3.87
0208489800 McGowan Creek	Neuse River	Lat 36°05'14", long 79°10'04", Orange County, Hydrologic Unit 03020201, at bridge on Secondary Road 1324, and 0.5 mi north of Efland.	4.54	1964, 1966, 1968, 1986	10-24-86	0
0208490900 Sevenmile Creek	Eno River	Lat 36°03'56", long 79°08'39", Orange County, Hydrologic Unit 03020201, at Interstate 85, and 1.5 mi southeast of Efland.	14.1	1963, 1968, 1981-82†, 1986	10-24-86	0.02
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	1983-86	11-26-86 3-26-87 7-31-87	0.39 11.1 5.54
02087323 Crabtree Creek	Neuse River	Lat 35°48'47", long 78°37'40", Wake County, Hydrologic Unit 03020201, at 0.1 mi below Southern Coastline Railroad Bridge, and 0.7 mi above U.S. Highway 401.	120	1984-86	11-26-86 3-25-87 8- 4-87 8-13-87	22.0 55.4 27.0 7.85
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	1984-86	11-26-86 3-26-87 7-21-87	0.58 1.24 0.69
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		7-16-87	0.02
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	1984-86	10-31-86 3-24-87 6- 5-87 9-24-87	21.9 48.8 14.6 8.39

† Operated as a continuous-record gaging station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1987

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		NEUSE RIVER BASIN (Continued)				
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, 1985-86	9-24-87	1510
		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	12-23-86 3-17-87 4-13-87	6.39 14.3 17.4
02095091 South Buffalo Creek	Buffalo Creek	Lat 36°06'45", long 79°40'19", Guilford County, Hydrologic Unit 03030002, at bridge on Secondary Road 2821, 0.8 mi northwest of McLeansville, and 1.4 mi upstream from mouth.	43.5	1969-70, 1973, 1976-81, 1983-86	4-13-87	63.5
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, 1976-86	12- 9-86 3-12-87	127 481
02096788 Big Alamance Creek	Haw River	Lat 36°01'01", long 79°24'50", Alamance County, Hydrologic Unit 03030002, at bridge on Secondary Road 2309, 0.5 mi downstream from Stinking Quarter Creek, and 1.8 mi east of Bellemont.	242	1974-77, 1979-84, 1986	12-22-86 2-10-87	41.8 177
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	12- 9-86 2-10-87	316 855
02097299 Third Fork Creek	New Hope River	Lat 35°54'38", long 78°57'39", Durham County, Hydrologic Unit 03030002, at bridge on State Highway 751, 0.9 mi upstream from mouth, and 1.6 mi north of Blands.	16.5	1970-71, 1974, 1976, 1978, 1980-86	11-26-86 3-26-87	1.18 5.19
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	1973, 1974-76, 1978, 1980-86	11-26-86 3-26-87 7-31-87	1.31 5.62 0.77
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, 1980-86	2-13-87 3-26-87 7-31-87	16.8 22.3 9.42
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, 1978-86	12-22-86 4-13-87	22.4 27.1
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, 1985-86	11-24-86	15.1
02101800 Tick Creek	Rocky River	Lat 35°39'37", long 79°24'08", Chatham County, Hydrologic Unit 03030003, at bridge on U.S. Highway 421, 1 mi downstream of Atlantic and Yadkin Railway, and 1.5 mi east of Mount Vernon Springs.	15.5	1958-82†, 1985-86	10-31-86 3-24-87 9-25-87	0 7.04 0

† Operated as a continuous-record gaging station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1987

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		CAPE FEAR RIVER BASIN (Continued)				
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, 1985-86	10-29-86 3-23-87 9-25-87	2.59 379 6.76
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, 1980-86	10-29-86 3-23-87 6- 4-87 9-25-87	171 655 129 68.0
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, 1980-86	10-30-86 3-17-87 9-28-87	103 222 88.4
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, 1979-86	10-30-86 3-17-87 6- 4-87 9-28-87	16.2 39.4 27.0 16.2
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, 1979-86	10-30-86 3-17-87 6- 5-87 9-28-87	149 525 169 135
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	1985-86	3-18-87 9-30-87	97.6 9.25
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	1985-86	3-18-87	177
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†, 1981-86	3-19-87	82.8

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DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1987

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		PEE DEE RIVER BASIN				
02115860 Muddy Creek	Yadkin River	Lat 36°00'01", long 80°20'25", Forsyth County, Hydrologic Unit 03040101, 100 ft upstream from bridge on Secondary Road 2995, 0.2 mi downstream from Salem Creek, and 1.8 mi east of Muddy Creek.	186	1964-86	6- 9-87	108
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	12-23-86 4-14-87 4-22-87 6-29-87 9-28-87	58.6 90.0 118 83.7 35.8
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	12-22-86 4-14-87 6-29-87	11.4 14.7 1.26
02121500 Abbotts Creek	Yadkin River	Lat 35°48'23", long 80°14'05", Davidson County, Hydrologic Unit 03040103, upstream from bridge on Secondary Road 1243, 1.5 mi southeast of Lexington, and 4.9 mi downstream from Rich Fork.	176	1940-57†, 1970-86	12-23-86 4-14-87 6-29-87	42.1 93.8 19.2
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†, 1981-86	8-24-87 9- 3-87	14.2 13.8
02123881 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	1970-86	10-28-86 12- 4-86 1- 8-87 4- 2-87 5-28-87 9-17-87	8.18 12.1 15.7 23.1 13.9 10.7
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	5-20-87 8-24-87	14.3 3.61
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.	392	1970-71, 1973-86	6-10-87 8-24-87	96.8 79.1
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	5-20-87 8-24-87	20.2 0.59

† Operated as a continuous-record gaging station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1987

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, 1973-86	5-28-87 8-24-87	30.0 8.93
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	5-19-87 8-24-87	12.0 6.81
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	1985-86	6-19-87 8-24-87	2.04 0.08
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	11-25-86 5-19-87 8-25-87	18.1 18.3 49.6
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	1985-86	4-30-87 5-19-87 8-25-87	56.1 27.2 30.1
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	5-19-87 8-25-87	13.2 8.96
02133691 Lumber River	Little Pee Dee River	Lat 34°38'30", long 79°10'49", Robeson County, Hydrologic Unit 03040203, at bridge on Secondary Road 1003, 2.2 mi southwest of Moss Neck, and 6.2 mi downstream from Gum Swamp.	432	1974-75, 1980-81, 1983-86	10-27-86	210
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, 1984-86.	10-21-86 9-30-87	423 381

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1987

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		SANTEE RIVER BASIN				
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, 1984-86	5-18-87 9- 2-87	85.6 30.6
02140304 Wilson Creek	Johns River	Lat 37°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, 1983-86	5-19-87 9-25-87	0.24 0.13
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, 1964-69, 1972-73, 1975-84, 1986	5-18-87 9- 3-87	110 42.1
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	10- 2-86 6-10-87 8-25-87	20.2 73.5 30.0
02143069 South Fork Catawba River	Catawba River	Lat 35°37'58", long 81°18'20", Catawba County, Hydrologic Unit 03050102, at bridge on State Highway 10, 1 mi downstream from Henry Fork, and 2.2 mi west of Startown.	210	1974-77, 1979-86	9- 3-87	96.8
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, 1978-86	10- 2-86 1-27-87 5-15-87 8-25-87	34.0 136 89.8 31.8
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, 1979-86	10- 2-86 5-18-87 8-25-87	13.2 51.3 8.79
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, 1979-86	10-21-86 12- 3-86 1-25-87 4- 7-87 5-14-87 6-29-87	21.0 85.4 54.3 50.4 52.1 22.1
02146538 Little Sugar Creek	Sugar Creek	Lat 35°04'40", long 80°53'10", Mecklenburg County, Hydrologic Unit 03050103, at bridge on U.S. Highway 521, 0.5 mi southeast of Pineville, and 3.5 mi upstream from mouth.	49.5	1969-84, 1986	10-21-86 12- 3-86 2-25-87 5-14-87 6-29-87	20.2 68.8 39.3 40.3 27.0
0214678226 Walker Branch Tributary	Sugar Creek	Lat 35°05'52", long 80°59'38", Mecklenburg County, Hydrologic Unit 03050103, 0.2 mi downstream from State Highway 49, and 1.5 mi southeast of Pine Harbor.	0.79		10- 7-86	0.12
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†, 1982-86	11-10-86 12-16-86 3-13-87 5- 7-87 6-15-87 8-24-87	114 225 332 173 114 80.4
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.	a37	1957, 1961-62, 1974-77, 1981-86	10-23-86 5- 7-87 8-24-87	1.62 9.61 0.40
0215027770 Broad River	Santee River	Lat 35°12'57", long 81°47'20", Rutherford County, Hydrologic Unit 03050105, at bridge on U.S. Highway 221A, 1.2 mi upstream from confluence of Second Broad River, and 1.5 mi southwest of Cliffside.	627	1974-76, 1979-84, 1985	5-18-87	653

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DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1987

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		SANTEE RIVER BASIN (Continued)				
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, 1980-86	10- 3-86 5-28-87 8-25-87	108 395 75.8
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, 1979-86	10- 3-86 5-28-87 8-25-87	34.4 133 23.2
		SAVANNAH RIVER BASIN				
02184242 Horsepasture River	Toxaway River	Lat 35°05'33", long 82°58'34", Transylvania County, Hydrologic Unit 03060101, at bridge on State Highway 281 (REVISED), and 4 mi southwest of Lake Toxaway.	24.1	1985-86	6-12-87 7- 9-87 8-25-87	37.1 39.9 14.0
		DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1987, IN OHIO RIVER BASIN				
		KANAWHA 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, 1974-86	5-19-87 9-25-87	64.3 27.7
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	9-28-87	263
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, 1981-86	9-24-87	109
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	9-25-87	579
03162951 Little River	New River	Lat 36°32'35", long 81°01'17", Alleghany County, Hydrologic Unit 05050001, at bridge on State Highway 18, 1 mi downstream from Brush Creek, and 0.5 mi west of Blevins Crossroads.	99.2	1974-75, 1978-84, 1986	9-24-87	102
		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, 1980-86	10- 6-86 6-12-87 9- 3-87	80.4 341 89.4
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 Lake Junaluska Dam, and at mile 55.5.	168	1964-65, 1968-84, 1986	10- 6-86 6-11-87 9- 3-87	60.9 330 65.2
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	1981-86	10- 3-86 6-15-87 9- 3-87	16.8 59.8 22.1

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DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1987

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		TENNESSEE RIVER BASIN (Continued)				
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	10- 3-86 6-15-87 9- 3-87	22.0 76.2 22.6
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	10- 6-86 6-11-87 9- 3-87	106 506 112
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.	25.3	1964-66, 1968, 1976, 1978, 1981-84, 1986	10- 6-86 6-12-87 7-13-87 9- 4-87	3.68 11.2 8.38 4.96
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	10- 6-86 6-12-87 9- 4-87	108 519 121
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, 1980-86	10- 7-86 6-11-87 8- 4-87	19.3 85.7 1400
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, 1976-86	5-22-87 9-25-87	127 55.4
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, 1982-86	5-22-87 9-25-87	235 94.0
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	1985-86	5-18-87 9-25-87	4.02 2.88
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, 1980-86	8- 5-87 9-25-87	56.7 67.9
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, 1980-86	8- 5-87 9-25-87	242 322
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	5-19-87 9-25-87	45.7 16.6
03502000 Little Tennessee River	Tennessee River	Lat 35°13'59", long 83°23'32", 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, 1982-86	6-10-87 7-22-87 9- 1-87	391 222 168
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, 1973-86	6-10-87 7- 1-87 8-28-87	65.2 58.3 14.5

† Operated as a continuous-record gaging station.

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.

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	HARD-NESS (MG/L AS CACO3)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)
0346316250 LOWER CR AT CAMP ALICE (MT. MITCHELL), NC (LAT 35 45 34N LONG 082 16 03W)												
SEP 1986												
29...	1600	--	15	6.23	10.0	5	--	1.3	0.40	1.3	0.46	--
0346316300 LOWER CR NR CAMP ALICE (MT. MITCHELL), NC (LAT 35 45 28N LONG 082 16 05W)												
SEP 1986												
29...	1500	0.19	14	6.24	12.5	3	--	0.90	0.30	0.70	0.35	--
OCT												
13...	1230	0.22	13	6.26	10.5	--	--	--	--	--	--	--
13...	1500	0.22	13	6.33	10.5	--	--	--	--	--	--	--
NOV												
20...	1220	0.73	13	6.06	6.0	3	1.1	0.90	0.30	0.70	0.33	1.3
20...	0920	0.78	13	6.66	5.5	3	1.2	0.90	0.30	0.70	0.34	1.4
20...	1020	1.0	13	6.07	6.0	3	1.4	0.90	0.30	0.60	0.38	1.2
20...	1120	0.78	13	6.07	6.0	3	1.3	0.90	0.30	0.70	0.35	1.3
0346316350 LOWER CR BELOW CAMP ALICE (MT MITCHELL), NC (LAT 35 45 19N LONG 082 16 05W)												
SEP 1986												
29...	1445	0.23	13	5.86	15.0	3	--	0.80	0.30	0.70	0.31	--
0346316390 LOWER CR AT MOUTH NR BUSICK, NC (LAT 35 44 03N LONG 082 14 04W)												
SEP 1986												
30...	1500	0.76	14	6.21	17.0	2	--	0.50	0.20	0.60	0.30	--
0346378750 BEECH NURSERY CR AT MOUTH NR ESKOTA, NC (LAT 35 45 54N LONG 082 18 34W)												
SEP 1986												
30...	1435	0.91	14	6.12	15.5	3	--	0.80	0.30	0.80	0.41	--
0346378755 BLUE SEA CR AT MOUTH NR ESKOTA, NC (LAT 35 45 54N LONG 082 18 36W)												
SEP 1986												
30...	1450	2.0	11	6.34	16.0	2	--	0.50	0.20	0.60	0.34	--
0346378765 BIG POPLAR CREEK HEADWATERS AT MT MITCHELL, NC (LAT 35 45 58N LONG 082 16 18W)												
SEP 1986												
29...	1245	0.04	17	6.77	10.0	5	--	1.2	0.50	1.3	0.48	--
OCT												
13...	1200	0.04	13	6.27	9.0	--	--	--	--	--	--	--
13...	1400	0.04	13	6.43	9.0	--	--	--	--	--	--	--
NOV												
20...	0915	0.10	17	6.42	7.0	5	1.4	1.1	0.50	0.90	0.46	1.5
20...	1000	0.19	17	6.69	7.0	5	1.7	1.1	0.50	0.90	0.50	1.5
20...	1030	0.19	17	6.84	7.0	5	1.6	1.2	0.50	0.80	0.47	1.4
20...	1130	0.14	17	6.62	7.0	5	1.2	1.2	0.50	0.90	0.44	1.5
20...	1300	0.11	17	6.64	7.0	5	1.5	1.2	0.50	0.90	0.44	1.5
0346378768 BIG POPLAR CR AT FALLS NR ESKOTA, NC (LAT 35 46 17N LONG 082 17 14W)												
SEP 1986												
30...	1245	0.11	14	5.70	14.5	3	--	0.70	0.30	0.60	0.37	--
0346378770 BIG POPLAR CR AT MOUTH NR ESKOTA, NC (LAT 35 47 07N LONG 082 18 17W)												
SEP 1986												
30...	1130	0.21	15	6.20	16.0	4	--	0.90	0.40	0.80	0.48	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	ALKALINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITROGEN, NITRATE DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	ALUMINUM, DIS-SOLVED (UG/L AS AL)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
0346316250 LOWER CR AT CAMP ALICE (MT. MITCHELL), NC (LAT 35 45 34N LONG 082 16 03W)												
SEP 1986												
29...	2.8	0.8	0.57	0.02	5.2	0.560	0.008	<0.001	20	10	2	0.3
0346316300 LOWER CR NR CAMP ALICE (MT. MITCHELL), NC (LAT 35 45 28N LONG 082 16 05W)												
SEP 1986												
29...	1.84	0.9	0.50	0.02	4.9	0.590	0.001	<0.001	10	7	1	0.4
OCT												
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
20...	--	1.1	0.52	<0.01	4.4	0.540	0.029	0.002	20	4	<1	1.0
20...	--	1.0	0.49	0.01	4.5	0.610	0.015	0.001	10	3	1	1.1
20...	--	1.1	0.47	<0.01	4.2	0.530	0.027	<0.001	30	5	3	1.2
20...	--	1.2	0.86	<0.01	4.4	0.520	0.020	<0.001	20	9	<1	1.2
0346316350 LOWER CR BELOW CAMP ALICE (MT MITCHELL), NC (LAT 35 45 19N LONG 082 16 05W)												
SEP 1986												
29...	2.2	1	0.50	0.02	4.9	0.530	<0.001	<0.001	10	6	2	0.5
0346316390 LOWER CR AT MOUTH NR BUSICK, NC (LAT 35 44 03N LONG 082 14 04W)												
SEP 1986												
30...	1.4	1.4	0.46	0.02	5.1	0.120	0.003	<0.001	30	10	2	1.7
0346378750 BEECH NURSERY CR AT MOUTH NR ESKOTA, NC (LAT 35 45 54N LONG 082 18 34W)												
SEP 1986												
30...	1.88	1.9	0.46	0.02	6.2	0.190	0.006	0.002	20	8	2	0.9
0346378755 BLUE SEA CR AT MOUTH NR ESKOTA, NC (LAT 35 45 54N LONG 082 18 36W)												
SEP 1986												
30...	1.0	1.9	0.43	0.03	5.1	0.070	0.011	<0.001	40	10	3	1.0
0346378765 BIG POPLAR CREEK HEADWATERS AT MT MITCHELL, NC (LAT 35 45 58N LONG 082 16 18W)												
SEP 1986												
29...	1.6	1.0	0.69	0.03	5.4	0.990	0.074	0.001	10	7	3	0.3
OCT												
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
20...	--	1	0.62	0.01	5.2	1.00	0.031	<0.001	10	2	2	1.8
20...	--	1.2	0.73	0.02	4.9	0.940	0.034	0.001	30	8	3	1.4
20...	--	1.1	0.62	<0.01	5.0	0.980	0.066	<0.001	30	9	3	1.2
20...	--	1.0	0.61	<0.01	5.2	1.00	0.027	0.001	20	5	3	0.8
20...	--	1	0.60	0.01	5.3	1.00	0.041	<0.001	10	3	2	0.8
0346378768 BIG POPLAR CR AT FALLS NR ESKOTA, NC (LAT 35 46 17N LONG 082 17 14W)												
SEP 1986												
30...	0.48	3.1	0.46	0.03	5.6	0.120	0.004	0.001	50	6	2	1.1
0346378770 BIG POPLAR CR AT MOUTH NR ESKOTA, NC (LAT 35 47 07N LONG 082 18 17W)												
SEP 1986												
30...	2.16	2.5	0.46	0.03	6.9	0.200	<0.001	<0.001	20	8	1	0.9

GROUND-WATER LEVELS

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, 86.98 ft below land-surface datum, December 19, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	75.74	78.64	85.95	---	84.42	86.64	81.38	82.45	---	81.45	82.54	82.18
10	75.98	79.98	86.61	---	84.67	85.37	80.46	---	---	82.71	82.86	81.92
15	75.58	79.53	86.95	---	84.51	86.68	80.76	---	---	81.85	82.59	82.23
20	75.66	82.40	82.70	---	84.69	85.80	82.03	---	81.41	82.91	81.94	81.53
25	76.16	83.40	85.25	---	84.83	85.06	82.47	---	81.75	81.97	82.67	83.26
EOM	76.80	---	84.90	---	85.67	84.28	81.15	---	81.74	83.18	82.17	84.22

BEAUFORT COUNTY

352615077083401. Local number, NC-137; NRCD 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: NRCD (North Carolina Department of Natural Resources and Community Development).
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.--Measuring point: Top of collar on casing, 0.8 ft above land-surface datum and 57.64 ft above National Geodetic Vertical Datum of 1929 (levels by NRCD).
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, 36.94 ft above NGVD, February 3, 1972; lowest recorded, 30.50 ft above NGVD, December 5-7 and 13-14, 1986.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	32.09	31.08	30.51	31.39	33.47	34.51	35.24	35.28	34.50	34.00	33.06	32.49
10	31.84	30.88	30.60	31.85	33.73	34.81	35.26	35.19	34.31	33.83	32.88	32.52
15	31.69	30.78	30.58	32.13	34.00	34.86	35.29	35.12	34.35	33.76	32.69	32.45
20	31.45	30.75	30.69	32.49	34.07	35.04	35.32	34.95	34.34	33.59	32.66	32.54
25	31.37	30.68	30.95	32.83	34.24	35.00	35.38	34.74	34.25	33.43	32.53	32.58
EOM	31.14	30.61	31.04	33.28	34.46	35.25	35.37	34.50	34.07	33.24	32.52	32.68

WTR YR 1987 MEAN 33.1 HIGH 35.43 LOW 30.50

BEAUFORT COUNTY

352037076514101. Local Number, NC-145; NRCD 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: NRCD (North Carolina Department of Natural Resources and Community Development).
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 36.64 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 2.47 ft above land-surface datum.
REMARKS.--Water-level measurements made by NRCD personnel beginning June 2, 1980, and are available in the files of the Groundwater Section, NRCD. 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, 74.90 ft below land-surface datum, April 18, 1987; lowest recorded, 84.79 ft below land-surface datum, September 14-15, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	82.86	78.73	80.25	79.17	78.18	79.14	76.44	76.01	75.42	75.10	76.21	75.97
10	82.71	79.07	80.49	78.25	78.22	78.28	75.55	76.09	75.46	75.74	76.32	75.79
15	---	78.74	80.81	---	78.19	79.08	75.28	75.98	75.34	75.59	76.13	75.99
20	---	78.97	80.21	---	78.24	78.92	75.52	75.97	75.36	75.85	76.05	75.94
25	81.98	79.11	79.69	---	78.31	78.37	75.46	75.97	75.35	75.73	76.22	76.10
EOM	79.79	79.90	79.79	---	78.43	77.51	75.45	76.03	75.41	76.38	76.15	76.79

352037076514106. Local number, NC-162; NRCD Bonnerton Research Station well P18v6.
LOCATION.--Lat 35°20'37", long 76°51'41", Hydrologic Unit 03020104, 1 mi south of Bonnerton on Secondary Road 1936. Owner: NRCD (North Carolina Department of Natural Resources and Community Development).
AQUIFER.--Yorktown aquifer of Pliocene and Miocene age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 86 ft, diameter 2.5 in, cased to 76 ft, screened interval from 76 to 86 ft; measured depth 83.4 ft, October 1986.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 37.09 ft above National Geodetic Vertical Datum of 1929 (levels by NRCD). Measuring point: Top of instrument shelf, 2.72 ft above land-surface datum.
REMARKS.--U.S. Geological Survey continuous record began December 17, 1986. Water level is affected by nearby pumping associated with mining operations. Well is part of local-effects network.
PERIOD OF RECORD.--December 1986 to September 1987.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 37.20 ft below land-surface datum, April 27, 1987; lowest recorded, 39.33 ft below land-surface datum, December 19, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), DECEMBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	38.47	38.11	37.91	38.09	37.69	38.11	38.70	38.65	37.77
10	---	---	---	38.62	38.52	38.21	37.95	38.02	38.47	38.49	38.44	37.94
15	---	---	---	38.87	38.36	38.16	37.77	37.99	38.31	38.16	37.65	37.96
20	---	---	39.17	38.53	38.09	38.07	37.42	38.14	38.37	38.39	38.00	37.81
25	---	---	38.84	38.14	38.26	38.01	37.29	38.13	38.59	38.31	38.10	38.08
EOM	---	---	38.91	38.18	38.05	37.73	37.68	38.32	38.44	38.61	38.15	38.13

BEAUFORT COUNTY

352224076570403. Local number, NC-163; NRCD Coxs Crossroads Research Station well P19m3.
LOCATION.--Lat 35°22'24", long 76°57'04", Hydrologic Unit 03020104, at North Carolina Department of Transportation Maintenance Yard near Coxs Crossroads, 0.25 mi north of N.C. Highway 32 on Secondary Road 1100. Owner: NRCD (North Carolina Department of Natural Resources and Community Development).
AQUIFER.--Castle Hayne aquifer of Oligocene and Eocene age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 250 ft, diameter 4 in, cased to 81 ft, open hole to 250 ft, measured depth 236.5 ft, September 1981.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 25.38 ft above National Geodetic Vertical Datum of 1929 (levels by NRCD). Measuring point: Top of instrument shelf, 1.9 ft above land-surface datum.
REMARKS.--U.S. Geological Survey continuous record began November 21, 1986. Well is part of areal-effects network.
PERIOD OF RECORD.--November 1986 to September 1987.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 25.39 ft below land-surface datum, March 24-25, 1987; lowest recorded, 29.15 ft below land-surface datum, December 13-14, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), NOVEMBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	28.86	28.62	---	---	26.20	25.58	26.10	26.56	27.18	26.95
10	---	---	28.84	28.29	---	---	26.00	25.67	26.21	26.49	27.19	26.94
15	---	---	29.07	---	---	---	25.82	25.70	26.17	26.54	27.06	26.97
20	---	---	29.01	---	---	---	25.57	25.75	26.31	26.77	26.90	26.95
25	---	28.59	28.73	---	---	---	25.44	25.90	26.42	26.91	---	26.99
EOM	---	28.68	28.84	---	---	26.16	25.44	26.01	26.57	27.04	26.95	26.97

BEAUFORT COUNTY

352252077050707. Local number, NC-164; NRCD Wilmar Research Station well P21k7.
LOCATION.--Lat 35°22'53", long 77°05'17", Hydrologic Unit 03020202, 3.5 mi southeast of Wilmar, 0.5 mi east of intersection of Secondary Roads 1129 and 1130 on logging road. Owner: NRCD (North Carolina Department of Natural Resources and Community Development).
AQUIFER.--Peedee aquifer of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 320 ft, diameter 6 in, cased to 290 ft, screened interval from 290 to 310 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 40.56 ft above National Geodetic Vertical Datum of 1929 (levels by NRCD). Measuring point: Top of instrument shelf, 2.94 ft above land-surface datum.
REMARKS.--U.S. Geological Survey continuous record began December 17, 1986. Well is part of areal-effects network.
PERIOD OF RECORD.--December 1986 to September 1987.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 14.57 ft below land-surface datum, April 30, 1987; lowest recorded, 19.11 ft below land-surface datum, December 22, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), DECEMBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	18.70	17.32	16.10	14.99	14.65	14.98	15.78	16.85	17.10
10	---	---	---	18.43	17.00	15.77	14.94	14.65	15.20	15.91	16.99	17.02
15	---	---	---	---	16.76	15.64	14.88	14.60	15.20	16.06	17.01	17.09
20	---	---	19.02	---	16.62	15.39	14.78	14.68	15.32	16.32	17.00	17.00
25	---	---	18.86	---	16.44	15.34	14.67	14.82	15.48	16.53	17.11	17.08
EOM	---	---	18.90	---	16.23	15.03	14.59	14.95	15.69	16.74	17.08	17.00

GROUND-WATER LEVELS

BEAUFORT COUNTY--Continued

352252077050709. Local number, NC-165; NRCD Wilmar Research Station well P21k9.
LOCATION.--Lat 35°22'53", long 77°05'17", Hydrologic Unit 03020202, 3.5 mi southeast of Wilmar, 0.5 mi east of intersection of Secondary Roads 1129 and 1130 on logging road. Owner: NRCD (North Carolina Department of Natural Resources and Community Development).
AQUIFER.--Black Creek aquifer of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 712 ft, diameter 4 in, cased to 695 ft, screened interval from 695 to 705 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 41.63 ft above National Geodetic Vertical Datum of 1929 (levels by NRCD). Measuring point: Top of instrument shelf, 2.91 ft above land-surface datum.
REMARKS.--U.S. Geological Survey continuous record began December 17, 1986. Well is part of areal-effects network.
PERIOD OF RECORD.--December 1986 to September 1987.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 49.31 ft below land-surface datum, March 1, 1987; lowest recorded, 50.80 ft below land-surface datum, September 28-29, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), DECEMBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	49.88	49.53	49.58	49.63	49.81	50.01	50.30	50.65	50.67
10	---	---	---	49.89	49.51	49.52	49.70	49.89	50.12	50.32	50.64	50.56
15	---	---	---	---	49.52	49.64	49.70	49.86	50.07	50.34	50.48	50.63
20	---	---	49.96	---	49.57	49.59	49.65	49.93	50.15	50.50	50.44	50.60
25	---	---	49.82	---	49.60	49.69	49.63	50.03	50.22	50.59	50.57	50.70
EOM	---	---	49.93	---	49.52	49.51	49.72	50.10	50.32	50.65	50.61	50.71

BERTIE COUNTY

361002076562106. Local number, NC-153; NRCD Cremo Research Station well G19b6.
LOCATION.--Lat 36°10'02", long 76°56'21", Hydrologic Unit 03010203, 0.75 mi south of Cremo, south of Secondary Road 1313 on logging road. Owner: NRCD (North Carolina Department of Natural Resources and Community Development).
AQUIFER.--Upper Cape Fear aquifer of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 431 ft, diameter 6 in, cased to 400 ft, screened interval from 400 to 410 ft; measured depth 412 ft, October 1986.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 64.49 ft above National Geodetic Vertical Datum of 1929 (levels by NRCD). Measuring point: Top of instrument shelf, 3.01 ft above land-surface datum.
REMARKS.--U.S. Geological Survey continuous record began November 14, 1986. Well is part of areal-effects network.
PERIOD OF RECORD.--November 1986 to September 1987.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 37.82 ft below land-surface datum, January 22, 1987; lowest recorded, 39.09 ft below land-surface datum, September 4, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), NOVEMBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	38.38	---	38.22	38.22	38.12	38.25	38.39	38.63	38.85	39.04
10	---	---	---	---	38.21	---	38.17	38.29	38.47	38.70	38.88	38.99
15	---	38.35	---	---	38.21	38.15	38.21	38.33	38.48	38.70	38.93	38.85
20	---	38.31	---	38.05	38.19	38.13	38.13	38.36	38.52	38.79	38.92	38.76
25	---	38.38	---	38.05	38.20	38.20	38.12	38.40	38.56	38.85	39.02	38.79
EOM	---	38.40	---	38.10	38.13	38.05	38.17	38.42	38.61	38.89	39.03	38.81

361420077111407. Local number, NC-154; NRCD Roxobel Research Station well F22b7.
LOCATION.--Lat 36°14'20", long 77°11'14", Hydrologic Unit 03010203, 3.8 mi northeast of Roxobel on Secondary Road 1249. Owner: NRCD (North Carolina Department of Natural Resources and Community Development).
AQUIFER.--Surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 12 ft, diameter 4 in, cased to 7 ft, screened interval from 7 to 12 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 74 ft above National Geodetic Vertical Datum of 1929 (from topographic map). Measuring point: Top of instrument shelf, 3.05 ft above land-surface datum.
REMARKS.--Well is part of climatic-effects network.
PERIOD OF RECORD.--November 1986 to September 1987.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.28 ft below land-surface datum, January 22-23 and March 1-2, 1987; lowest recorded, 9.31 ft below land-surface datum, September 5, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), NOVEMBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	6.37	2.07	1.69	1.35	---	2.44	4.77	6.80	8.40	9.17
2	---	---	6.06	1.70	1.71	1.32	---	2.58	4.84	6.88	8.43	9.19
3	---	---	4.31	1.63	1.67	1.49	---	2.66	4.92	6.95	8.46	9.22
4	---	---	3.71	1.68	1.74	1.66	---	2.53	4.97	7.02	8.50	9.27
5	---	---	3.48	1.74	1.83	1.80	---	2.25	4.99	7.07	8.52	9.30
6	---	---	3.70	1.83	1.88	1.92	---	2.19	5.05	7.11	8.53	9.20
7	---	---	3.81	1.84	1.87	2.00	---	2.34	5.15	7.15	8.56	8.93
8	---	---	3.91	1.95	1.92	2.05	---	2.54	5.25	7.21	8.58	8.69
9	---	---	4.03	2.05	2.07	1.96	---	2.74	5.36	7.28	8.62	8.59
10	---	---	3.98	2.04	2.28	1.74	---	2.89	5.49	7.36	8.65	8.57
11	---	---	3.73	1.86	2.24	1.54	---	3.03	5.64	7.44	8.70	8.60
12	---	---	3.09	1.86	2.21	1.53	---	3.16	5.73	7.52	8.77	8.64
13	---	---	2.88	1.97	2.25	1.58	---	3.29	5.78	7.58	8.83	7.85
14	---	6.25	2.93	2.08	2.32	1.69	---	3.40	5.82	7.62	8.89	6.75
15	---	6.53	2.94	2.18	2.28	1.79	2.50	3.44	5.84	7.68	8.93	6.60
16	---	6.30	3.02	---	2.25	1.87	1.99	3.51	5.92	7.64	8.82	6.67
17	---	6.22	3.10	2.17	2.02	1.77	1.50	3.62	6.00	7.49	8.76	6.79
18	---	6.22	3.11	1.91	1.70	---	1.44	3.71	6.09	7.50	8.76	6.90
19	---	6.25	3.05	1.49	1.54	---	1.47	3.81	6.18	7.56	8.81	7.02
20	---	6.34	3.11	1.35	1.53	---	1.55	3.92	6.15	7.64	8.80	5.33
21	---	6.24	3.24	1.42	1.55	---	1.63	3.97	6.15	7.73	8.79	4.36
22	---	6.27	3.37	1.37	1.59	---	1.72	4.04	6.21	7.80	8.82	4.61
23	---	6.32	3.42	1.36	1.44	---	1.86	4.12	6.27	7.88	8.86	4.88
24	---	6.32	3.24	1.54	1.44	---	1.96	4.20	6.33	7.96	8.93	5.13
25	---	6.32	2.37	1.59	1.53	---	1.74	4.31	6.36	8.04	9.01	5.45
26	---	6.30	1.97	1.50	1.63	---	1.59	4.38	6.38	8.10	9.06	5.80
27	---	6.26	1.90	1.53	1.70	---	1.66	4.41	6.42	8.14	9.09	6.06
28	---	6.32	1.91	1.57	1.56	---	1.80	4.46	6.50	8.19	9.11	6.26
29	---	6.33	1.97	1.63	---	---	2.01	4.51	6.61	8.24	9.10	6.35
30	---	6.34	1.97	1.57	---	---	2.23	4.58	6.72	8.31	9.13	6.39
31	---	---	2.10	1.58	---	---	---	4.67	---	8.36	9.17	---
MEAN	---	---	3.28	---	1.84	---	---	3.47	5.80	7.59	8.79	7.22
LOW	---	---	6.37	---	2.32	---	---	4.67	6.72	8.36	9.17	9.30
HIGH	---	---	1.90	---	1.44	---	---	2.19	4.77	6.80	8.40	4.36

BLADEN COUNTY

343027078451903. Local number, NC-178; NRCD Bladenboro Research Station well Z41u3.
LOCATION.--Lat 34°30'27", long 78°45'19", Hydrologic Unit 03040206, 3 mi southeast of Bladenboro, south of N.C. Highway 211 on Secondary Road 1172. Owner: NRCD (North Carolina Department of Natural Resources and Community Development).
AQUIFER.--Peedee aquifer of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 110 ft, diameter 6 in, cased to 100 ft, screened interval from 100 to 110 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 116.45 ft above National Geodetic Vertical Datum of 1929 (levels by NRCD). Measuring point: Top of instrument shelf, 2.89 ft above land-surface datum.
REMARKS.--U.S. Geological Survey continuous record began January 13, 1987. Well is part of areal-effects network.
PERIOD OF RECORD.--January to September 1987.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 3.46 ft below land-surface datum, April 24, 1987; lowest recorded, 6.22 ft below land-surface datum, August 24, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), JANUARY TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	4.30	3.62	3.53	3.59	4.50	4.92	5.93	5.98
10	---	---	---	---	4.20	3.55	3.61	3.73	4.74	5.00	6.06	5.47
15	---	---	---	5.30	4.19	3.59	3.66	3.81	4.77	5.11	6.04	5.00
20	---	---	---	5.04	4.00	3.59	3.53	3.94	4.77	5.30	6.12	4.79
25	---	---	---	4.62	3.91	3.64	3.47	4.09	4.79	5.53	6.14	4.78
EOM	---	---	---	4.35	3.72	3.53	3.49	4.34	4.90	5.82	6.10	4.79

GROUND-WATER LEVELS

BRUNSWICK COUNTY

335629078115407. Local number, NC-182; NRCD Sunset Harbor Research Station well GG34s7.
LOCATION.--Lat 33°56'29", long 78°11'54", Hydrologic Unit 03040207, 1 mi north of Sunset Harbor, 4.3 mi south of N.C. Highway 211 on Secondary Road 1112. Owner: NRCD (North Carolina Department of Natural Resources and Community Development).
AQUIFER.--Surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 15 ft, diameter 4 in, cased to 10 ft, screened interval from 10 to 15 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 25 ft above National Geodetic Vertical Datum of 1929 (hand level by USGS). Measuring point: Top of collar on casing, 2.65 ft above land-surface datum.
REMARKS.--Well is part of climatic-effects network.
PERIOD OF RECORD.--January to September 1987.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.65 ft below land-surface datum, April 15, 1987; lowest recorded, 4.29 ft below land-surface datum, August 10, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), JANUARY TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	1.68	.81	1.57	1.95	2.81	3.33	4.12	3.06
2	---	---	---	---	1.69	.90	1.66	1.98	2.83	3.35	4.14	3.09
3	---	---	---	---	1.73	1.01	1.68	2.02	2.86	3.37	4.16	3.14
4	---	---	---	---	1.80	1.09	1.70	2.04	2.72	3.39	4.19	3.00
5	---	---	---	---	1.85	1.17	1.76	2.01	2.62	3.43	4.21	2.35
6	---	---	---	---	1.86	1.22	1.79	2.07	2.76	3.47	4.24	2.33
7	---	---	---	---	1.23	1.25	1.82	2.10	2.86	3.50	4.22	2.40
8	---	---	---	---	1.38	1.21	1.85	2.12	2.90	3.54	4.23	2.46
9	---	---	---	---	1.54	1.25	1.87	2.16	2.93	3.57	4.26	2.54
10	---	---	---	---	1.65	1.34	1.90	2.19	2.96	3.60	4.28	2.59
11	---	---	---	---	1.71	1.41	1.93	2.22	2.99	3.65	3.96	2.64
12	---	---	---	---	1.74	1.42	1.95	2.24	3.02	3.67	2.93	2.69
13	---	---	---	---	1.81	1.41	1.98	2.27	3.04	3.69	3.03	2.52
14	---	---	---	1.81	1.84	1.42	2.01	2.30	2.98	3.71	3.15	2.57
15	---	---	---	1.83	1.89	1.43	1.45	2.32	2.89	3.71	2.94	2.66
16	---	---	---	1.79	1.64	1.45	1.13	2.34	2.78	3.62	3.01	2.72
17	---	---	---	1.71	1.61	1.48	1.32	2.38	2.87	3.69	3.14	2.76
18	---	---	---	1.63	1.76	1.50	1.40	2.41	2.96	3.74	3.23	2.80
19	---	---	---	1.55	1.86	1.21	1.41	2.43	3.01	3.77	3.31	2.84
20	---	---	---	1.63	1.92	1.30	1.52	2.44	3.04	3.81	3.36	2.88
21	---	---	---	1.71	1.90	1.41	1.57	2.46	3.07	3.84	3.42	2.92
22	---	---	---	1.21	1.81	1.50	1.62	2.49	3.10	3.86	3.48	2.96
23	---	---	---	1.36	1.73	1.55	1.66	2.52	3.12	3.90	3.54	3.00
24	---	---	---	1.48	1.88	1.59	1.67	2.55	3.15	3.93	3.58	3.03
25	---	---	---	1.37	1.94	1.61	1.71	2.58	3.17	3.95	3.47	3.07
26	---	---	---	1.28	1.98	1.62	1.76	2.62	3.11	3.98	3.39	3.11
27	---	---	---	1.42	1.55	1.48	1.81	2.65	3.15	4.01	3.48	3.14
28	---	---	---	1.50	1.09	1.59	1.84	2.69	3.21	4.03	3.57	3.15
29	---	---	---	1.56	---	1.67	1.90	2.72	3.25	4.05	3.63	3.17
30	---	---	---	1.56	---	1.50	1.92	2.75	3.29	4.07	3.66	3.17
31	---	---	---	1.62	---	1.39	---	2.78	---	4.09	3.53	---
MEAN	---	---	---	---	1.72	1.36	1.71	2.35	2.98	3.72	3.64	2.83
LOW	---	---	---	---	1.98	1.67	2.01	2.78	3.29	4.09	4.28	3.17
HIGH	---	---	---	---	1.09	.81	1.13	1.95	2.62	3.33	2.93	2.33

CARTERET COUNTY

344323076451301. Local number, NC-139; NRCD 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 NRCD Marine Fisheries Facility on north shore of Bogue Sound. Owner: NRCD (North Carolina Department of Natural Resources and Community Development).
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 NRCD). 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, 12.97 ft below land-surface datum, August 6, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.42	8.94	8.63	8.29	8.41	8.48	8.04	8.46	10.24	11.44	12.43	11.08
10	9.99	9.09	8.17	8.16	8.30	7.99	7.75	8.50	10.71	11.59	12.33	11.28
15	9.83	8.94	8.47	8.29	8.05	7.99	7.78	8.74	10.82	11.29	11.80	11.20
20	9.76	8.44	8.08	8.06	8.50	7.85	7.95	8.97	11.02	11.55	12.02	10.69
25	9.41	8.78	8.11	8.21	8.36	7.76	7.87	9.57	10.95	12.18	11.80	10.50
EOM	9.30	8.69	8.28	8.34	8.27	7.83	8.03	10.14	11.33	12.06	11.78	10.21

WTR YR 1987 MEAN 9.47 HIGH 7.52 APR 16 LOW 12.46 AUG 6

GROUND-WATER LEVELS

COLUMBUS COUNTY

342508078360802. Local number, NC-179; NRCD Carver Moore Research Station well AA39v2.
LOCATION.--Lat 34°25'08", long 78°36'08", Hydrologic Unit 03040206, 6.7 mi north of Hallsboro, east of Secondary Road 1001 at abandoned school on Secondary Road 1724. Owner: NRCD (North Carolina Department of Natural Resources and Community Development).
AQUIFER.--Lower Cape Fear aquifer of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 506 ft, diameter 4 in, cased to 496 ft, screened interval from 496 to 506 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 105.53 ft above National Geodetic Vertical Datum of 1929 (levels by NRCD). Measuring point: Top of instrument shelf, 2.10 ft above land-surface datum.
REMARKS.--U.S. Geological Survey continuous record began January 13, 1987. Well is part of areal-effects network.
PERIOD OF RECORD.--January to September 1987.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 42.96 ft below land-surface datum, April 15, 1987; lowest recorded, 43.48 ft below land-surface datum, August 13-14, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), JANUARY TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	43.41	43.26	43.13	43.16	43.31	43.15	43.38	43.31
10	---	---	---	---	43.41	43.14	43.14	43.21	43.38	43.22	43.43	43.17
15	---	---	---	43.42	43.35	43.21	43.06	43.20	43.21	43.23	43.35	43.22
20	---	---	---	43.35	43.33	43.09	43.06	43.22	43.17	43.34	43.38	43.21
25	---	---	---	43.34	43.32	43.15	43.07	43.29	---	43.41	43.40	43.31
EOM	---	---	---	43.35	43.14	43.05	43.11	43.35	43.24	43.46	43.38	43.29

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.--Upper Cape Fear aquifer 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.--Digital recorder --60-minute punch.
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.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 6.01 ft below land-surface datum, August 25-26, 1965; lowest recorded, 109.66 ft below land-surface datum, August 22 and September 15, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	105.12	104.28	102.34	102.60	104.72	104.15	103.00	104.25	104.93	106.27	107.83	108.12
10	105.44	104.04	103.91	102.91	104.28	104.22	103.71	104.33	106.01	107.35	107.44	106.50
15	105.78	102.16	103.93	102.90	104.17	103.96	103.88	104.23	105.04	105.77	108.92	108.48
20	103.87	102.68	103.52	103.81	104.77	104.96	102.41	103.24	107.11	107.16	108.16	105.80
25	103.68	101.64	105.20	103.48	102.10	105.38	102.62	105.52	104.67	109.43	106.90	107.69
EOM	103.70	103.68	103.43	104.15	105.16	102.94	104.11	105.87	106.59	106.71	106.69	108.63

WTR YR 1987 MEAN 105 HIGH 99.79 OCT 1 LOW 109.43 JUL 25

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, 16.01 ft below land-surface datum, April 14, 1984; lowest recorded, 20.98 ft below land-surface datum, October 24-26, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.43	20.60	19.52	18.70	17.82	16.66	16.52	15.23	16.88	17.81	18.65	19.20
2	20.45	20.59	19.46	18.67	17.70	16.62	16.43	15.29	16.92	17.84	18.66	19.22
3	20.47	20.59	19.40	18.65	17.64	16.58	16.39	15.39	16.96	17.87	18.67	19.25
4	20.49	20.59	19.37	18.62	17.62	16.57	16.39	15.51	16.99	17.89	18.68	19.28
5	20.51	20.59	19.35	18.61	17.57	16.57	16.42	15.58	17.02	17.92	18.69	19.27
6	20.55	20.60	19.34	18.61	17.47	16.57	16.43	15.60	17.05	17.95	18.70	19.26
7	20.58	20.61	19.32	18.59	17.41	16.54	16.44	15.65	17.08	17.98	18.70	19.17
8	20.61	20.51	19.32	18.62	17.38	16.50	16.47	15.76	17.11	18.01	18.69	18.98
9	20.63	20.42	19.31	18.62	17.50	16.52	16.52	15.85	17.13	18.04	18.68	18.92
10	20.64	20.37	19.27	18.60	17.50	16.61	16.56	15.89	17.18	18.07	18.69	18.85
11	20.66	20.30	19.19	18.64	17.49	16.59	16.58	15.95	17.22	18.09	18.73	18.61
12	20.68	20.21	19.05	18.66	17.47	16.55	16.64	16.01	17.24	18.12	18.71	18.61
13	20.68	20.13	19.04	18.70	17.57	16.54	16.72	16.10	17.27	18.14	18.71	18.61
14	20.63	20.08	18.98	18.72	17.58	16.56	16.75	16.15	17.29	18.16	18.72	18.61
15	20.62	20.01	18.94	18.73	17.65	16.58	16.55	16.15	17.33	18.21	18.70	18.61
16	20.61	19.97	18.92	18.78	17.65	16.65	16.04	16.22	17.35	18.25	18.70	18.61
17	20.61	19.95	18.92	18.81	17.69	16.68	15.93	16.26	17.40	18.29	18.72	18.61
18	20.64	19.93	18.90	18.75	17.73	16.69	15.92	16.29	17.44	18.31	18.77	18.62
19	20.65	19.94	18.93	18.61	17.78	16.62	15.91	16.34	17.45	18.33	18.80	18.65
20	20.66	19.91	18.95	18.51	17.75	16.55	15.88	16.41	17.46	18.36	18.85	18.66
21	20.68	19.87	19.00	18.45	17.71	16.53	15.86	16.46	17.49	18.38	18.89	18.68
22	20.69	19.84	19.01	18.37	17.65	16.57	15.88	16.50	17.53	18.41	18.90	18.69
23	20.71	19.81	19.00	18.43	17.61	16.60	15.90	16.53	17.57	18.44	18.95	18.72
24	20.73	19.79	18.91	18.42	17.56	16.63	15.75	16.57	17.61	18.48	19.00	18.73
25	20.71	19.79	18.81	18.35	17.50	16.64	15.49	16.61	17.63	18.51	19.03	18.77
26	20.68	19.75	18.76	18.32	17.50	16.66	15.28	16.67	17.65	18.54	19.05	18.81
27	20.62	19.68	18.74	18.30	17.47	16.67	15.16	16.70	17.68	18.57	19.08	18.84
28	20.61	19.61	18.72	18.27	17.12	16.73	15.10	16.73	17.73	18.60	19.10	18.87
29	20.59	19.54	18.71	18.21	---	16.77	15.11	16.76	17.77	18.64	19.14	18.85
30	20.59	19.53	18.70	18.10	---	16.64	15.13	16.79	17.79	18.66	19.18	18.82
31	20.61	---	18.74	17.97	---	16.57	---	16.84	---	18.67	19.19	---
MEAN	20.6	20.1	19.1	18.5	17.6	16.6	16.1	16.2	17.3	18.2	18.8	18.8
LOW	20.73	20.61	19.52	18.81	17.82	16.77	16.75	16.84	17.79	18.67	19.19	19.28
HIGH	20.43	19.53	18.70	17.97	17.12	16.50	15.10	15.23	16.88	17.81	18.65	18.61

WTR YR 1987 MEAN 18.2 HIGH 15.10 LOW 20.73

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 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	78.59	79.45	79.78	80.23	79.93	80.41	80.21	79.72	80.67	80.24	79.03	79.34
10	78.78	79.34	79.64	79.95	80.06	80.14	79.88	79.37	79.41	79.37	79.92	80.61
15	79.36	80.21	80.06	79.85	79.91	79.99	80.10	80.28	80.41	79.21	80.49	79.96
20	79.20	79.84	79.75	80.80	80.27	80.38	80.56	80.00	79.85	78.95	80.82	79.54
25	79.13	79.70	81.14	80.60	80.25	79.90	81.37	79.58	79.56	78.77	79.60	79.21
EOM	79.34	79.60	79.95	80.15	81.13	80.91	80.04	79.56	79.29	78.85	79.47	79.18

WTR YR 1987 MEAN 79.8 MAX 81.49 MIN 78.55

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 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	80.42	80.93	81.06	81.29	81.31	81.41	81.43	81.36	81.45	81.43	81.06	81.19
10	80.47	80.91	81.06	81.24	81.29	81.41	81.40	81.30	81.19	81.21	81.24	81.48
15	80.95	81.06	81.15	81.22	81.30	81.36	81.42	81.42	81.38	81.17	81.43	81.40
20	80.84	81.10	81.12	81.39	81.33	81.41	81.48	81.34	81.28	81.03	81.46	81.25
25	80.80	81.07	81.41	81.41	81.33	81.35	81.76	81.27	81.23	80.78	81.25	81.16
EOM	80.91	81.05	81.22	81.35	81.54	81.54	81.45	81.25	81.15	80.93	81.20	81.14

WTR YR 1987 MEAN 81.2 MAX 81.80 MIN 80.34

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, 64.20 ft above NGVD, July 5, 1985.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	65.11	65.91	66.29	66.92	67.02	67.18	67.08	66.84	---	---	65.95	66.17
10	64.93	65.94	66.32	66.84	66.93	67.11	66.98	66.72	---	---	66.53	66.96
15	65.40	65.95	66.45	66.75	66.88	67.00	66.91	---	---	---	66.68	66.75
20	65.61	66.26	66.46	66.86	66.87	66.94	67.13	---	---	65.63	66.78	66.33
25	65.68	66.27	66.61	67.20	66.86	66.87	67.14	---	---	64.82	66.43	66.17
EOM	65.84	66.28	66.77	67.12	66.89	67.07	67.18	---	---	64.87	66.27	66.01

GROUND-WATER LEVELS

DUPLIN COUNTY--Continued

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 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	64.85	66.41	66.75	67.22	67.03	67.44	67.27	66.89	67.05	67.18	66.09	66.46
10	65.12	66.32	66.64	66.96	67.09	67.19	67.04	66.72	66.25	66.32	66.58	67.25
15	66.39	66.75	66.92	66.89	66.96	67.09	67.05	66.99	67.07	66.40	67.11	66.93
20	66.11	66.71	66.74	67.49	67.21	67.14	67.53	66.80	66.85	65.71	67.42	66.69
25	66.02	66.66	68.21	67.59	67.14	67.00	68.27	66.61	66.63	65.00	66.61	66.36
EOM	66.24	66.62	67.00	67.19	67.54	67.57	67.17	66.46	66.10	64.94	66.65	66.26

WTR YR 1987 MEAN 66.8 MAX 68.41 MIN 64.70

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 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	69.07	70.34	71.41	71.61	71.47	71.54	71.45	70.68	70.41	71.59	69.70	70.48
10	69.01	70.26	71.21	71.56	71.50	71.64	71.01	70.39	69.82	70.57	70.57	71.44
15	70.38	71.04	71.56	71.47	71.36	71.46	71.25	70.61	70.95	70.30	71.55	71.50
20	70.18	71.51	71.47	71.85	71.59	71.67	71.49	70.51	70.46	69.85	71.83	70.98
25	70.11	71.44	71.95	71.75	71.58	71.27	71.95	70.32	71.07	69.33	71.33	70.36
EOM	70.23	71.00	71.54	71.60	72.09	71.92	71.32	70.03	70.03	68.99	70.78	70.11

WTR YR 1987 MEAN 70.9 MAX 72.22 MIN 68.98

DUPLIN COUNTY

345825077571701. Local number, DU-117.
LOCATION.--Lat 34°58'25", long 77°57'17", Hydrologic Unit 03030007, 50 ft southwest 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 5.25 ft, cased to 3.25 ft, screened from 3.25 ft to 5.25 ft.
INSTRUMENTATION.--Digital recorder--60-minute punch.
DATUM.--Measuring point: Top of casing, 76.26 ft above National Geodetic Vertical Datum of 1929, 3.90 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, 73.15 ft above NGVD, June 8, 1983; lowest, 68.57 ft above NGVD, Aug. 31, 1983.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	69.54	71.53	72.14	72.33	72.28	72.34	72.31	71.99	71.30	71.98	70.29	---
10	69.87	71.44	72.13	72.33	72.29	72.37	72.23	71.69	70.11	71.23	72.09	---
15	71.60	72.07	72.23	72.32	72.30	72.33	72.29	71.79	71.57	70.67	72.25	---
20	71.13	72.13	72.23	72.38	72.33	72.32	72.26	71.64	71.24	69.88	72.23	---
25	70.93	72.15	72.36	72.37	72.31	72.21	72.40	71.36	70.87	69.34	71.90	---
EOM	71.28	72.08	72.32	72.29	72.47	72.41	72.18	70.58	70.03	69.07	71.67	70.97

DUPLIN COUNTY--Continued

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 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	89.09	90.75	91.02	91.33	91.14	91.51	91.21	91.24	91.27	91.09	88.40	90.42
10	89.08	90.62	90.90	91.12	91.15	91.29	91.13	91.09	90.67	90.46	90.38	91.07
15	90.75	91.08	91.09	91.07	91.13	91.21	91.52	91.14	91.17	90.08	90.88	90.92
20	90.51	91.04	91.06	92.17	91.30	91.25	91.98	91.28	90.99	89.63	91.89	90.85
25	90.44	91.06	92.75	91.81	91.24	91.13	93.59	91.01	90.97	88.96	90.66	90.54
EOM	90.68	90.95	91.12	91.27	92.22	91.51	91.35	90.83	90.44	88.20	90.56	90.50

WTR YR 1987 MEAN 90.9 MAX 93.59 MIN 88.17

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 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	96.65	97.35	97.38	97.47	97.42	97.51	97.48	97.47	97.40	97.45	96.74	97.30
10	96.68	97.35	97.39	97.44	97.46	97.53	97.40	97.41	97.36	97.37	97.21	97.48
15	97.31	97.40	97.45	97.41	97.45	97.45	97.40	97.45	97.44	97.24	97.38	97.50
20	97.28	97.40	97.44	97.58	97.50	97.50	97.55	97.44	97.45	97.04	97.45	97.40
25	97.26	97.39	97.52	97.54	97.48	97.40	97.55	97.46	97.41	96.58	97.44	97.27
EOM	97.32	97.39	97.44	97.50	97.58	97.58	97.50	97.39	97.31	96.22	97.32	97.09

WTR YR 1987 MEAN 97.4 MAX 97.68 MIN 96.20

DUPLIN COUNTY

345051078012101. Local number, NC-174; NRCD Rose Hill Research Station well V32v1.
LOCATION.--Lat 34°50'51", long 78°01'21", Hydrologic Unit 03030007, 1.5 mi north of Rose Hill at Rose Hill-Magnolia Elementary School, east of U.S. Highway 117 on Secondary Road 1911. Owner: NRCD (North Carolina Department of Natural Resources and Community Development).
AQUIFER.--Peedee aquifer of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 98 ft, diameter 4 in, cased to 83 ft, screened interval from 83 to 98 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 85.89 ft above National Geodetic Vertical Datum of 1929 (levels by NRCD). Measuring point: Top of instrument shelf, 1.75 ft above land-surface datum.
REMARKS.--U.S. Geological Survey continuous record began January 15, 1987. Well is part of areal-effects network.
PERIOD OF RECORD.--January to September 1987.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 14.30 ft below land-surface datum, March 31, 1987; lowest recorded, 18.10 ft below land-surface datum, August 7, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), JANUARY TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	15.11	14.73	14.61	14.99	16.11	15.64	17.85	17.26
10	---	---	---	---	15.07	14.78	14.92	15.24	16.65	15.92	17.70	16.12
15	---	---	---	15.43	15.16	14.87	15.00	15.59	16.20	16.25	17.09	16.13
20	---	---	---	14.89	14.95	14.88	14.67	15.72	16.33	16.77	16.98	16.29
25	---	---	---	14.63	14.94	15.01	14.50	15.82	16.17	17.30	16.94	16.54
EOM	---	---	---	14.80	14.78	14.35	14.65	15.86	15.55	17.79	16.96	16.63

GROUND-WATER LEVELS

GATES COUNTY

362646076361405. Local number, NC-149; NRCD Sunbury Research Station well C15s5.
LOCATION.--Lat 36°26'46", long 76°36'14", Hydrologic Unit 03010203, in northeast section of Sunbury, east of N.C. Highway 32 on Secondary Road 1338. Owner: NRCD (North Carolina Department of Natural Resources and Community Development).
AQUIFER.--Upper Cape Fear aquifer of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 570 ft, diameter 4 in, cased to 555 ft, screened interval from 555 to 565 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 37.44 ft above National Geodetic Vertical Datum of 1929 (levels by NRCD). Measuring point: Top of instrument shelf, 3.04 ft above land-surface datum.
REMARKS.--U.S. Geological Survey continuous record began November 14, 1986. Well is part of areal-effects network.
PERIOD OF RECORD.--November 1986 to September 1987.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 25.15 ft below land-surface datum, February 23, 1987; lowest recorded, 26.50 ft below land-surface datum, September 4, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), NOVEMBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	25.74	---	25.53	25.41	25.34	25.36	---	25.91	26.34	26.45
10	---	---	25.67	---	25.48	25.30	25.38	25.41	---	25.97	26.20	26.32
15	---	25.77	25.73	---	25.45	25.36	25.41	25.48	---	26.04	26.31	26.25
20	---	25.71	---	25.49	25.44	25.32	25.31	---	25.75	26.16	26.29	26.17
25	---	25.77	---	25.44	25.41	25.39	25.30	---	25.81	26.31	26.36	26.19
EOM	---	25.77	---	25.39	25.38	25.27	25.31	---	25.90	26.39	26.40	26.18

GUILFORD COUNTY

361248079394201. Local number, GU-382.
LOCATION.--Lat 36°12'48", long 79°39'42", Hydrologic Unit 0303002, at Monticello. Owner: U. S. Geological Survey.
AQUIFER.--Saprolite derived from felsic intrusive igneous rock.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in, depth 18.5 ft, cased to 8.5 ft, screened from 8.5 to 18.5 ft.
INSTRUMENTATION.--Digital recorder--60 minute punch.
DATUM.--Land-surface datum is 809.47 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.50 ft above land-surface datum.
REMARKS.--Well is operated as part of a study of the effects of agricultural land-management practices on sediment and chemical transport in Piedmont streams.
PERIOD OF RECORD.--April 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.70 ft above land-surface datum, March 1, 1987; lowest measured, 5.95 ft below land-surface datum, August 10, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.11	5.68	2.31	1.36	.00	.41	.71	.67	1.50	2.42	3.73	5.00
10	5.35	5.20	2.46	1.63	.80	-.01	1.01	1.00	1.93	2.85	3.97	3.55
15	4.94	4.34	1.61	1.87	1.02	.55	.43	.99	2.11	2.96	4.12	3.68
20	5.49	3.77	2.08	.17	.60	.55	-.08	1.13	2.26	3.24	4.37	3.97
25	5.66	3.17	.48	.65	.18	.84	-.39	1.35	2.53	3.33	4.65	4.23
EOM	5.64	3.24	1.65	.01	.01	.63	.37	1.50	2.80	3.72	4.93	4.40

WTR YR 1987 MEAN 2.38 HIGH -.57 MAR 1 LOW 5.70 NOV 4

GROUND-WATER LEVELS

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.
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.--Water level responds to climatic effects.
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 7-9, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.80	6.23	4.98	4.89	4.88	3.22	3.87	3.66	4.72	5.22	5.75	6.08
2	6.81	6.28	4.00	4.90	4.82	3.72	3.88	3.75	4.75	5.24	5.75	6.10
3	6.83	6.31	4.32	4.93	4.78	3.98	3.87	3.78	4.77	5.26	5.72	6.12
4	6.84	6.34	4.55	4.94	4.86	4.14	3.86	3.78	4.78	5.28	5.73	6.14
5	6.86	6.37	4.71	4.96	4.91	4.23	3.87	3.79	4.81	5.31	5.73	6.13
6	6.88	6.41	4.83	4.97	4.95	4.29	3.88	3.79	4.87	5.33	5.67	5.94
7	6.89	6.42	4.92	4.97	4.97	4.30	3.86	3.75	4.92	5.35	5.52	5.48
8	6.90	6.31	4.99	4.98	4.98	4.26	3.82	3.68	4.96	5.35	5.55	5.39
9	6.89	6.19	5.04	4.99	5.01	4.18	3.81	3.70	4.99	5.36	5.60	5.48
10	6.84	6.18	5.03	4.96	5.04	4.12	3.82	3.79	5.02	5.38	5.65	5.53
11	6.81	6.20	4.91	4.97	5.05	4.09	3.82	3.95	4.99	5.40	5.70	5.58
12	6.77	6.15	4.83	4.99	5.03	4.03	3.81	4.11	4.88	5.42	5.73	5.45
13	6.73	6.14	4.91	5.03	4.98	3.97	3.86	4.14	4.90	5.45	5.75	5.31
14	6.52	6.18	4.98	5.05	4.94	3.93	3.86	4.16	4.94	5.46	5.78	5.39
15	6.43	6.23	5.04	5.07	4.96	3.89	3.85	4.20	4.97	5.47	5.81	5.48
16	6.42	6.29	5.09	5.09	4.90	3.87	3.86	4.24	4.99	5.49	5.83	5.57
17	6.44	6.34	5.13	5.11	4.83	3.86	3.87	4.29	4.99	5.51	5.84	5.68
18	6.48	6.39	5.15	4.94	4.85	3.85	3.89	4.32	4.95	5.53	5.86	5.78
19	6.53	6.43	5.18	4.37	4.88	3.72	3.95	4.35	4.77	5.55	5.88	5.86
20	6.57	6.46	5.21	4.52	4.90	3.73	3.96	4.39	4.83	5.56	5.91	5.91
21	6.61	6.46	5.24	4.68	4.89	3.79	3.96	4.43	4.84	5.58	5.93	5.97
22	6.65	6.46	5.27	4.75	4.80	3.84	3.90	4.48	4.82	5.60	5.95	6.02
23	6.68	6.47	5.25	4.83	4.62	3.84	3.74	4.51	4.89	5.62	5.98	6.06
24	6.71	6.48	4.24	4.90	4.71	3.84	3.96	4.54	4.96	5.62	5.99	6.09
25	6.32	6.45	4.37	4.91	4.78	3.84	4.06	4.58	5.00	5.64	6.01	6.12
26	5.50	4.31	4.54	4.82	4.83	3.83	3.98	4.63	5.04	5.65	6.01	6.15
27	5.67	4.37	4.65	4.86	4.61	3.85	3.78	4.49	5.09	5.67	6.03	6.17
28	5.79	4.84	4.73	4.90	3.60	3.87	4.01	4.44	5.13	5.69	6.05	6.18
29	5.90	5.08	4.79	4.96	---	3.88	4.09	4.52	5.17	5.70	6.05	6.17
30	6.02	5.25	4.83	4.91	---	3.87	3.62	4.60	5.20	5.71	6.07	6.11
31	6.14	---	4.87	4.84	---	3.86	---	4.68	---	5.73	6.08	---
MEAN	6.52	6.07	4.86	4.90	4.83	3.93	3.88	4.18	4.93	5.49	5.84	5.85
LOW	6.90	6.48	5.27	5.11	5.05	4.30	4.09	4.68	5.20	5.73	6.08	6.18
HIGH	5.50	4.31	4.00	4.37	3.60	3.22	3.62	3.66	4.72	5.22	5.52	5.31

WTR YR 1987 MEAN 5.11 HIGH 3.22 LOW 6.90

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 six 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.--Water level responds to areal effects.
PERIOD OF RECORD.--December 1965 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 48.36 ft below land-surface datum, May 30-31, 1966; lowest measured, 99.24 ft below land-surface datum, August 4, 1987.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 6	98.50	Jan. 16	98.53	Mar. 11	98.62	Apr. 14	99.21	June 19	99.15	Aug. 4	99.24
Nov. 18	99.00										

GROUND-WATER LEVELS

HERTFORD COUNTY--Continued

363026077001906. Local number, NC-155; NRCD Como Research Station well B20u6.
LOCATION.--Lat 36°30'26", long 77°00'19", Hydrologic Unit 03010203, 0.5 mi northeast of Como, northwest of U.S. Highway 258 on Secondary Road 1316. Owner: NRCD (North Carolina Department of Natural Resources and Community Development).
AQUIFER.--Lower Cape Fear aquifer of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 818 ft, diameter 4 in, cased to 560 ft, screened interval from 560 to 570 ft, cemented from 575 to 818 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 68.83 ft above National Geodetic Vertical Datum of 1929 (levels by NRCD). Measuring point: Top of instrument shelf, 3.0 ft above land-surface datum.
REMARKS.--U.S. Geological Survey continuous record began November 18, 1986. Well is part of areal-effects network.
PERIOD OF RECORD.--November 1986 to September 1987.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 146.97 ft below land-surface datum, November 18, 1986; lowest recorded, 150.12 ft below land-surface datum, September 30, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), NOVEMBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	147.96	---	147.37	147.47	147.97	148.04	---	---	149.65	149.91
10	---	---	147.95	---	147.42	147.45	148.11	148.21	---	---	149.71	149.94
15	---	---	148.04	---	147.41	147.67	148.22	148.34	---	---	149.76	149.98
20	---	147.51	---	147.31	147.43	147.74	148.13	---	148.92	---	149.79	150.01
25	---	147.80	---	147.35	147.45	147.93	148.04	---	148.89	---	149.86	150.07
EOM	---	147.89	---	147.36	147.45	147.85	---	---	148.91	---	149.88	150.11

HYDE COUNTY

352527076123103. Local number, NC-159; NRCD Hydeland Research Station well O10w3.
LOCATION.--Lat 35°25'27", long 76°12'31", Hydrologic Unit 03020105, 0.7 mi east of Secondary Road 1121 on Secondary Road 1122. Owner: NRCD (North Carolina Department of Natural Resources and Community Development).
AQUIFER.--Castle Hayne aquifer of Oligocene and Eocene age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 700 ft, diameter 6 in, cased to 640 ft, open hole to 700 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 3.17 ft above National Geodetic Vertical Datum of 1929 (levels by NRCD). Measuring point: Top of instrument shelf, 1.83 ft above land-surface datum.
REMARKS.--U.S. Geological Survey continuous record began November 21, 1986. Well is part of areal-effects network.
PERIOD OF RECORD.--November 1986 to September 1987.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.73 ft above land-surface datum, January 22, 1987; lowest recorded, 0.32 ft below land-surface datum, September 4, 1987.

DEPTH BELOW OR ABOVE (-) LAND SURFACE (WATER LEVEL) (FEET), NOVEMBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	-.14	-.25	.0	.1	-.27	.0	---	---	---	.17
10	---	---	-.28	-.40	-.1	-.15	-.15	.0	---	---	---	.0
15	---	---	-.13	-.19	-.1	.0	.0	.1	.1	---	---	---
20	---	---	-.19	-.21	.0	-.21	-.13	.10	.11	---	---	---
25	---	-.19	-.30	-.27	.0	-.1	-.18	.18	---	---	---	---
EOM	---	-.22	-.15	-.36	.0	-.39	-.19	---	---	---	.16	---

GROUND-WATER LEVELS

JONES COUNTY

345809077301408. Local number, NC-173; NRCD Comfort Research Station well U26j8.
LOCATION.--Lat 34°58'09", long 77°30'12", Hydrologic Unit 03020204, 2.5 mi south of Comfort at North Carolina Division of Forest Resources Fire Tower on Secondary Road 1003. Owner: NRCD (North Carolina Department of Natural Resources and Community Development).
AQUIFER.--Surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 15 ft, diameter 4 in, cased to 5 ft, screened interval from 5 to 15 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 68 ft above National Geodetic Vertical Datum of 1929 (from topographic map). Measuring point: Top of instrument shelf, 2.35 ft above land-surface datum.
REMARKS.--Well is part of climatic-effects network.
PERIOD OF RECORD.--January to September 1987.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.40 ft below land-surface datum, March 1, 1987; lowest recorded, 9.26 ft below land-surface datum, August 10-11, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), JANUARY TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	2.11	.64	3.15	4.12	5.95	8.09	9.09	7.69
2	---	---	---	---	2.16	.95	3.22	4.26	6.11	8.04	9.11	7.78
3	---	---	---	---	2.31	1.23	3.30	4.40	6.29	8.05	9.15	7.88
4	---	---	---	---	2.46	1.51	3.30	4.51	6.31	7.48	9.18	7.89
5	---	---	---	---	2.57	1.73	3.36	4.57	6.34	7.44	9.20	7.75
6	---	---	---	---	2.62	1.89	3.46	4.66	6.54	7.50	9.23	7.63
7	---	---	---	---	2.55	2.01	3.57	4.79	6.70	7.56	9.23	7.54
8	---	---	---	---	2.57	2.07	3.67	4.85	6.84	7.66	9.20	7.22
9	---	---	---	---	2.77	2.12	3.78	4.98	6.99	7.85	9.22	7.00
10	---	---	---	---	2.86	2.33	3.89	5.10	7.17	7.98	9.25	6.89
11	---	---	---	---	2.93	2.44	3.97	5.22	7.32	8.10	9.24	6.85
12	---	---	---	---	2.98	2.50	4.06	5.32	7.40	8.13	9.15	6.84
13	---	---	---	---	3.11	2.60	4.17	5.43	7.51	8.20	9.11	6.80
14	---	---	---	---	3.16	2.72	4.24	5.42	7.26	8.30	9.11	6.86
15	---	---	---	2.88	3.25	2.82	4.11	5.46	7.10	8.29	9.02	6.94
16	---	---	---	2.94	3.23	2.92	3.26	5.61	7.24	8.30	8.90	7.03
17	---	---	---	2.56	2.37	3.01	3.07	5.72	7.47	8.48	8.83	7.05
18	---	---	---	2.10	2.24	3.10	3.10	5.84	7.49	8.55	8.79	7.12
19	---	---	---	1.60	2.37	3.07	3.16	5.97	7.43	8.62	8.77	7.23
20	---	---	---	1.69	2.49	2.89	3.24	5.71	7.25	8.69	8.70	7.28
21	---	---	---	1.85	2.58	2.98	3.35	5.15	7.20	8.74	8.51	7.42
22	---	---	---	.78	2.60	3.12	3.51	4.85	7.26	8.79	8.31	7.57
23	---	---	---	.92	2.41	3.26	3.61	4.72	7.33	8.84	8.15	7.72
24	---	---	---	1.21	2.56	3.36	3.66	4.72	7.38	8.88	8.09	7.82
25	---	---	---	1.21	2.67	3.45	3.64	4.82	7.47	8.92	8.00	7.97
26	---	---	---	1.04	2.78	3.52	3.55	4.95	7.58	8.95	7.89	8.12
27	---	---	---	1.40	2.56	3.55	3.58	5.09	7.70	8.99	7.85	8.21
28	---	---	---	1.60	1.49	3.40	3.70	5.25	7.97	9.00	7.88	8.23
29	---	---	---	1.75	---	3.31	3.86	5.40	8.10	9.03	7.94	8.21
30	---	---	---	1.77	---	3.26	4.01	5.60	8.16	9.05	7.88	8.12
31	---	---	---	1.96	---	3.16	---	5.78	---	9.08	7.74	---
MEAN	---	---	---	---	2.60	2.61	3.58	5.11	7.16	8.37	8.70	7.49
LOW	---	---	---	---	3.25	3.55	4.24	5.97	8.16	9.08	9.25	8.23
HIGH	---	---	---	---	1.49	.64	3.07	4.12	5.95	7.44	7.74	6.80

LENOIR COUNTY

351600077381001. Local number, NC-128.
LOCATION.--Lat 35°16'00", long 77°38'10", 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, 82.88 ft below land-surface datum, August 21, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	77.43	79.46	81.19	78.92	77.48	76.81	78.99	78.60	80.26	80.86	82.58	82.76
10	78.22	79.83	81.52	78.93	77.74	76.63	78.40	78.32	80.33	81.30	81.95	82.42
15	77.86	80.29	81.07	78.78	77.53	77.31	78.32	78.70	80.08	81.41	82.33	82.00
20	77.73	80.26	80.40	78.48	77.92	79.18	77.29	79.11	80.49	80.82	82.73	81.80
25	78.70	80.80	79.08	77.94	77.55	80.21	76.65	78.98	80.77	81.89	81.88	82.17
EOM	79.49	81.27	79.31	77.07	77.22	80.86	77.71	79.72	81.06	82.18	82.21	82.45

WTR YR 1987 MEAN 79.7 HIGH 76.18 MAR 9 LOW 82.81 AUG 21

GROUND-WATER LEVELS

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 filled 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, 14.16 ft below land-surface datum, Apr. 8, 1987; lowest, 24.38 ft below land-surface datum Nov. 19, 20, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	23.54	24.19	22.88	20.55	17.96	16.30	14.27	15.08	---	18.77	20.39	21.95
10	23.66	24.28	22.37	20.18	17.57	15.80	14.24	15.38	---	19.02	20.64	22.06
15	23.77	24.35	21.91	19.97	17.34	15.38	14.31	15.66	---	19.29	20.91	21.15
20	23.88	24.36	21.63	19.54	17.27	15.03	14.47	16.01	17.88	19.57	21.18	20.66
25	23.97	24.11	21.38	18.63	17.21	14.86	14.57	16.34	18.08	19.82	21.42	20.53
EOM	24.11	23.48	21.07	18.23	16.50	14.54	14.70	---	18.49	20.12	21.71	20.56

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 filled 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, 13.85 ft below land-surface datum, Mar. 1 1987; lowest, 16.49 ft below land-surface datum, Oct. 7, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.39	16.05	15.55	15.27	14.87	14.35	14.30	14.78	15.31	15.52	15.98	16.42
10	16.34	16.06	15.45	15.32	14.99	14.27	14.43	14.90	15.43	15.63	15.98	15.94
15	16.25	15.81	15.45	15.39	14.94	14.41	14.41	14.94	15.48	15.71	16.09	15.35
20	16.32	15.71	15.56	14.83	14.81	14.28	14.47	15.04	15.20	15.77	16.20	15.58
25	16.25	15.65	15.14	14.75	14.80	14.39	14.49	15.17	15.32	15.84	16.31	15.75
EOM	16.19	15.64	15.45	14.80	14.19	14.09	14.66	15.29	15.47	15.91	16.38	15.76

WTR YR 1987 MEAN 15.4 HIGH 13.90 MAR 1 LOW 16.48 OCT 7

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, sand packed from 22 ft to 32 ft.
INSTRUMENTATION.--Digital recorder -- 60-minute punch.
DATUM.--Elevation of land-surface datum is 740 ft above National Geodetic Vertical Datum of 1929 from topographic map. Measuring point: Top of casing, 4.4 ft above land-surface datum.
REMARKS.--Well is part of the Charlotte-Mecklenburg urban hydrology study, Harrisburg Road landfill well HBW 2201.
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, 13.93 ft below land-surface datum Sept. 30, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.17	22.50	21.13	31.03	31.32	30.95	30.30	30.09	30.04	30.59	31.23	31.59
10	23.41	22.64	21.36	31.34	31.30	30.83	30.21	30.05	30.21	30.60	31.16	31.36
15	22.77	22.20	20.95	31.77	31.37	30.76	30.12	29.76	30.35	30.68	31.29	31.21
20	23.06	21.96	31.46	31.64	31.37	30.67	30.13	29.69	30.44	30.89	31.33	31.14
25	23.44	21.84	31.54	31.50	31.37	30.61	30.16	29.89	30.46	31.05	31.53	31.11
EOM	22.71	21.51	31.09	30.97	31.12	30.44	30.04	29.94	30.52	31.12	31.60	31.04

WTR YR 1987 MEAN 28.9 HIGH 19.12 OCT 2 LOW 31.88 JAN 17

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 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, 16.18 ft below land-surface datum, Apr. 4, 1987; lowest, 24.37 ft below land-surface datum, Nov. 10-12, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	23.67	24.27	22.93	20.91	18.95	17.35	16.25	16.88	18.30	20.08	21.07	22.57
10	23.80	24.37	22.64	20.76	18.91	16.90	16.40	17.07	18.64	19.63	21.28	20.75
15	23.90	24.32	22.13	20.80	18.89	16.76	16.48	17.24	18.98	19.80	21.59	19.51
20	24.03	24.25	21.98	20.30	18.93	16.64	16.40	17.42	19.29	20.10	21.84	19.28
25	24.13	23.92	21.76	19.56	18.72	16.59	16.45	17.68	19.59	20.42	22.10	19.42
EOM	24.23	23.48	21.53	19.02	18.15	16.33	16.58	17.99	19.93	20.77	22.36	19.54

WTR YR 1987 MEAN 20.1 HIGH 16.21 APR 4 LOW 24.37 NOV 10
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, depth 33.8 ft, cased to 28.8 ft, screened from 28.8 ft to 33.8 ft. Sand 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. Mud in well 0.30 ft. deep, 8/22/86. Well dry at depth 33.53 ft. below Land Surface Datum.
PERIOD OF RECORD.--September 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 24.94 ft below land-surface datum, May 11, 12, 1987; lowest, 33.53 ft below land-surface datum, Nov. 3-14, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	33.38	33.53	33.41	---	---	---	26.00	---	25.97	28.16	30.24	32.08
10	33.50	33.53	33.38	---	---	27.55	25.77	---	26.33	28.47	30.54	31.03
15	33.50	33.52	33.35	---	---	27.15	25.52	24.98	26.71	28.81	30.85	30.88
20	33.51	33.49	33.30	---	---	26.87	25.40	25.11	27.07	29.17	31.15	30.97
25	33.51	33.46	32.94	---	---	26.63	25.26	25.31	27.45	29.52	31.45	30.94
EOM	33.52	33.43	32.46	---	---	---	26.26	25.05	25.62	27.83	29.91	31.79

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 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 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.11	7.86	5.77	5.49	5.36	5.52	5.91	7.31	7.82	7.78	7.99	8.39
10	8.06	7.90	5.24	6.07	5.95	4.95	6.45	7.44	7.94	7.88	8.03	7.99
15	7.99	7.02	5.52	7.04	6.55	5.78	6.82	7.43	7.95	7.90	8.25	6.35
20	8.05	6.23	6.48	4.41	5.30	5.31	6.64	7.57	7.59	7.95	8.32	7.40
25	8.02	6.90	4.43	2.87	5.42	6.01	6.03	7.75	7.65	7.98	8.39	7.71
EOM	7.97	6.42	6.11	4.56	1.62	3.53	6.98	7.85	7.79	7.93	8.44	7.72

WTR YR 1987 MEAN 6.81 HIGH 1.62 FEB 28 LOW 8.49 SEP 4

GROUND-WATER LEVELS

MECKLENBURG COUNTY--Continued

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.--Altitude of land-surface datum is 734 ft. 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, well SRW °N15-A
PERIOD OF RECORD.--February 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.28 ft. below land-surface datum, Apr. 16, 1987; lowest, 14.32 ft. below land-surface datum Oct. 24, 25, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.03	13.61	10.92	9.15	7.32	6.26	5.13	5.76	8.29	10.33	12.27	13.99
10	14.13	13.79	10.66	9.28	7.67	5.40	5.77	6.15	8.78	10.52	12.52	13.91
15	14.18	12.78	10.13	9.49	7.88	6.18	4.88	6.49	9.22	10.77	12.80	12.56
20	14.26	12.27	10.30	7.74	7.40	5.55	4.81	6.89	9.55	11.08	13.06	12.77
25	14.31	11.95	9.12	7.72	6.91	6.09	4.12	7.32	9.90	11.46	13.38	13.12
EOM	13.96	11.55	9.74	6.53	4.87	3.68	5.13	7.88	10.13	11.91	13.75	13.05

WTR YR 1987 MEAN 9.72 HIGH 3.36 APR 16 LOW 14.31 OCT 24

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, 2.45 ft below land-surface datum, March 1, 1987; lowest recorded, 7.91 ft below land-surface datum, September 2-3, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.58	6.82	5.48	4.43	3.71	2.65	3.39	4.04	5.24	6.12	7.14	7.82
2	7.61	6.63	5.15	4.08	3.72	3.19	3.46	4.09	5.26	6.14	7.18	7.87
3	7.63	6.63	5.01	4.28	3.74	3.44	3.55	4.13	5.33	6.17	7.20	7.88
4	7.66	6.62	5.11	4.39	3.85	3.60	3.60	4.18	5.32	6.19	7.25	7.83
5	7.70	6.61	5.17	4.49	3.94	3.72	3.68	4.23	5.29	6.19	7.29	7.76
6	7.72	6.60	5.21	4.55	3.95	3.79	3.75	4.24	5.35	6.19	7.33	7.54
7	7.75	6.60	5.23	4.57	3.95	3.81	3.80	4.27	5.41	6.25	7.25	7.17
8	7.75	6.58	5.25	4.64	3.98	3.74	3.85	4.34	5.47	6.27	7.16	5.89
9	7.68	6.56	5.24	4.67	4.12	3.36	3.89	4.42	5.52	6.32	7.17	5.90
10	7.57	6.57	5.15	4.64	4.16	3.46	3.95	4.46	5.58	6.38	7.23	6.04
11	7.52	6.54	4.90	4.71	4.16	3.62	3.97	4.51	5.62	6.41	7.27	5.19
12	7.49	6.33	4.70	4.73	4.15	3.66	4.03	4.54	5.63	6.46	7.26	4.90
13	7.43	6.25	4.81	4.78	4.23	3.71	4.09	4.51	5.67	6.50	7.34	4.62
14	7.27	6.26	4.85	4.80	4.24	3.78	4.12	4.34	5.67	6.52	7.39	4.89
15	7.27	6.19	4.88	4.79	4.29	3.82	3.69	4.35	5.71	6.58	7.40	5.07
16	7.26	6.11	4.92	4.81	4.29	3.88	3.01	4.41	5.72	6.62	7.29	5.22
17	7.26	6.12	4.95	4.83	4.30	3.93	3.29	4.50	5.74	6.67	7.30	5.34
18	7.26	6.12	4.98	4.60	4.27	3.93	3.48	4.56	5.77	6.70	7.41	5.48
19	7.26	6.14	5.03	3.87	4.13	3.69	3.61	4.63	5.75	6.75	7.48	5.60
20	7.26	5.91	5.05	3.96	4.03	3.59	3.70	4.68	5.74	6.81	7.52	5.64
21	7.27	5.59	5.10	4.09	4.00	3.65	3.76	4.71	5.79	6.82	7.57	5.73
22	7.28	5.65	5.13	4.09	3.98	3.75	3.83	4.76	5.86	6.83	7.62	5.83
23	7.29	5.69	5.11	4.10	3.78	3.84	3.89	4.80	5.91	6.89	7.68	5.90
24	7.30	5.72	4.66	4.08	3.87	3.89	3.55	4.85	5.97	6.93	7.72	5.96
25	7.16	5.74	4.39	3.95	3.94	3.88	3.51	4.92	5.91	6.97	7.73	6.02
26	7.00	5.67	4.53	3.76	4.02	3.71	3.62	4.98	5.82	7.01	7.75	6.09
27	6.90	5.47	4.64	3.87	3.65	3.71	3.71	5.02	5.84	7.04	7.79	6.13
28	6.90	5.47	4.70	3.94	2.88	3.66	3.77	5.06	5.95	7.05	7.83	6.17
29	6.92	5.49	4.75	3.98	---	3.71	3.88	5.09	6.02	7.08	7.85	6.18
30	6.90	5.52	4.76	3.76	---	3.45	3.93	5.14	6.08	7.09	7.87	5.99
31	6.91	---	4.83	3.60	---	3.20	---	5.20	---	7.09	7.86	---
MEAN	7.35	6.14	4.96	4.32	3.98	3.64	3.71	4.58	5.66	6.61	7.46	6.12
LOW	7.75	6.82	5.48	4.83	4.30	3.93	4.12	5.20	6.08	7.09	7.87	7.88
HIGH	6.90	5.47	4.39	3.60	2.88	2.65	3.01	4.04	5.24	6.12	7.14	4.62

WTR YR 1987 MEAN 5.39 HIGH 2.65 LOW 7.88

GROUND-WATER LEVELS

NEW HANOVER COUNTY

341000077524201. Local number, NC-20.
LOCATION.--Lat 34°10'00", long 77°52'42", Hydrologic Unit 03030001, southeast of Wilmington, 1 mi west of Secondary Road 1492 on Secondary Road 1516. Owner: Walter J. Hodder.
AQUIFER.--Peedee aquifer of late Cretaceous 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 six 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 17, 1964, to November 18, 1980. Water level responds to areal effects.
PERIOD OF RECORD.--November 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.42 ft below land-surface datum, June 10, 1966; lowest, 23.89 ft below land-surface datum, July 10, 1985.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 2	21.53	Jan. 13	17.82	Mar. 11	17.44	May 6	18.77	July 1	21.24	Sept. 1	20.54
Nov. 18	17.85										

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-water marsh-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 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	.56	1.12	.97	1.04	.94	.94	.99	.95	-.55	.24	.90	1.16
10	.93	.94	.93	1.05	.91	.97	.91	.85	-.97	.76	.94	1.03
15	.94	1.04	.93	.95	.89	.97	.90	.55	.28	1.08	1.07	.98
20	.86	1.10	1.00	1.02	.94	1.13	.99	.54	-.17	.87	.98	.87
25	.92	.94	1.04	1.02	.95	1.04	1.02	.20	-.34	.80	.89	.92
EOM	.96	.98	1.03	.97	1.15	1.13	.99	-.24	.14	.82	.95	.96

WTR YR 1987 MEAN .82 MAX 1.71 MIN -1.02

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-water marsh-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 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	.34	1.10	.99	.98	.91	.94	.98	.96	-.65	.21	.90	1.15
10	.94	.92	.94	1.02	.90	.96	.90	.84	-1.07	.59	.91	.98
15	.94	1.04	.96	.93	.86	.93	.89	.42	.39	1.06	1.07	.93
20	.84	1.10	1.01	.98	.93	1.10	.98	.40	-.14	.87	1.00	.81
25	.93	.97	1.05	1.01	.94	1.01	1.00	-.03	-.32	.61	.91	.83
EOM	.93	.99	1.0	.93	1.14	1.12	.99	-.45	.14	.83	.92	.87

WTR YR 1987 MEAN .79 MAX 1.69 MIN -1.12

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-water marsh-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 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	.42	1.10	.98	1.01	.94	.96	1.00	.93	-.77	.31	.87	1.17
10	.96	.92	.94	1.00	.93	.99	.93	.82	-1.16	.70	.94	1.04
15	.97	1.00	.95	.96	.92	.98	.86	.44	.22	1.06	1.05	.98
20	.89	1.11	1.01	1.00	.96	1.13	.99	.31	-.24	.87	.95	.82
25	.95	.96	1.03	1.00	.96	1.04	.99	.00	-.34	.56	.79	.93
EOM	.96	.98	1.00	.97	1.14	1.12	.98	-.59	.16	.82	.91	.94

WTR YR 1987 MEAN .79 MAX 1.70 MIN -1.20

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-water marsh-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 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	.38	1.14	.98	1.04	.95	.95	.99	.99	-.77	.23	.86	1.16
10	.98	.98	.94	1.06	.94	.99	.91	.84	-1.12	.69	.92	1.02
15	1.01	1.05	.95	.96	.89	.97	.87	.40	.28	1.09	1.05	.95
20	.89	1.15	1.03	1.03	.95	1.17	1.00	.38	-.39	.82	.95	.75
25	.96	.95	1.06	1.02	.95	1.06	1.02	-.11	-.51	.55	.84	.90
EOM	.95	.98	1.02	.99	1.16	1.18	1.03	-.59	.09	.74	.96	.92

WTR YR 1987 MEAN .79 MAX 1.70 MIN -1.16

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 24.45 ft above National Geodetic Vertical Datum of 1929. 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 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.04	6.61	4.38	3.49	4.09	3.40	4.15	5.24	6.49	5.50	6.78	5.38
10	7.03	6.65	4.70	3.86	4.15	3.71	4.67	5.46	6.69	5.73	6.95	4.20
15	6.71	5.77	3.83	4.31	4.50	4.06	4.90	5.66	6.80	6.02	6.87	4.41
20	6.84	5.03	4.10	2.78	3.90	3.70	4.48	5.91	6.75	6.15	6.27	4.95
25	7.09	5.13	3.34	2.88	3.92	4.24	4.84	6.09	6.70	6.45	6.31	5.44
EOM	6.91	5.27	4.21	3.45	2.63	4.15	4.95	6.32	6.92	6.54	5.47	5.68

WTR YR 1987 MEAN 5.23 HIGH 1.98 MAR 1 LOW 7.23 OCT 7

ONSLOW COUNTY--Continued

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.--Water level responds to areal effects.
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 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.70	17.17	17.59	18.98	19.30	18.83	17.45	15.07	17.22	18.56	21.69	20.14
10	19.26	17.09	17.42	19.26	19.44	18.04	16.79	14.76	17.59	19.84	21.74	20.45
15	18.38	17.83	18.21	19.01	18.92	18.54	16.03	14.72	17.41	19.92	20.92	20.31
20	18.26	17.60	18.31	18.70	19.95	18.44	15.52	15.13	17.90	19.81	21.64	20.44
25	17.90	17.61	17.80	19.13	19.54	17.93	15.05	15.42	18.18	21.18	20.88	19.66
EOM	17.57	17.16	18.44	19.68	19.54	16.47	15.07	16.52	18.49	21.00	21.01	19.20

WTR YR 1987 MEAN 18.4 HIGH 14.72 MAY 15 LOW 21.87 AUG 6

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 six 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.--Well is part of terrane-effects network.
PERIOD OF RECORD.--August 1938 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 35.22 ft below land-surface datum, May 14, 1984; lowest measured, dry, October 11 to December 31, 1940.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 29	45.24	Nov. 26	45.71	Jan. 28	45.46	Mar. 26	43.37	Apr. 30	42.67	June 30	42.41
Nov. 5	46.39	Dec. 17	45.98	Feb. 24	44.89	Apr. 6	43.18	May 29	42.27	July 31	42.73

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-water marsh-management techniques. Water level affected by tidal fluctuations.
PERIOD OF RECORD.--March 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.58 ft above NGVD, Nov. 4, 1985; lowest, 1.64 ft below NGVD, June 29, 1985.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	.38	1.57	1.55	1.83	1.62	1.63	1.57	1.73	1.54	1.46	1.54	1.76
10	1.78	1.63	1.52	1.58	1.53	1.78	1.54	1.54	1.33	1.51	1.58	1.53
15	1.63	1.62	1.54	1.53	1.54	1.60	1.54	1.45	1.57	1.69	2.06	1.57
20	1.59	1.63	1.56	1.58	1.57	1.69	1.93	1.38	1.47	1.52	1.62	1.82
25	1.55	1.54	1.60	1.58	1.57	1.67	1.75	1.49	.67	.62	1.40	1.53
EOM	1.74	1.65	1.56	1.58	1.63	1.72	1.63	1.47	.07	.26	1.39	1.58

WTR YR 1987 MEAN 1.50 MAX 2.24 MIN .07

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-water marsh-management techniques. Water level affected by tidal fluctuations.
PERIOD OF RECORD.--March 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.42 ft above NGVD, Nov. 4, 1985; lowest, 0.50 ft below NGVD, June 29, 1985.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1.05	1.57	1.53	1.81	1.59	1.65	1.53	1.70	1.49	1.38	1.45	1.76
10	1.75	1.60	1.47	1.54	1.48	1.73	1.51	1.49	1.39	1.44	1.49	1.52
15	1.65	1.62	1.50	1.47	1.49	1.60	1.49	1.43	1.52	1.63	2.08	1.55
20	1.67	1.64	1.50	1.55	1.55	1.72	1.94	1.43	1.44	1.46	1.55	1.81
25	1.54	1.51	1.59	1.53	1.55	1.68	1.71	1.45	1.29	1.40	1.41	1.51
EOM	1.72	1.61	1.52	1.56	1.61	1.77	1.60	1.42	.63	1.24	1.42	1.54

WTR YR 1987 MEAN 1.54 MAX 2.24 MIN .63

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-water marsh-management techniques. Water level affected by tidal fluctuations.
PERIOD OF RECORD.--March 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.00 ft above NGVD, Nov. 4, 1985; lowest, 0.89 ft below NGVD, June 26, 1985.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	e.40	1.51	1.55	1.78	1.51	1.63	1.50	1.66	1.36	1.02	1.34	1.69
10	.99	e1.55	1.46	1.53	1.38	1.64	1.26	1.26	.70	1.28	1.42	1.55
15	1.59	e1.70	1.52	1.37	1.30	1.59	1.17	.96	1.49	1.66	2.09	1.56
20	1.61	1.62	1.52	1.54	1.50	1.68	1.90	.98	1.23	1.35	1.57	1.69
25	1.34	1.51	1.60	1.51	1.52	1.65	1.70	1.28	.64	.71	1.08	1.45
EOM	1.52	1.51	1.51	1.54	1.63	1.72	1.56	.97	.14	.38	1.15	1.50

WTR YR 1987 MEAN 1.39 MAX 2.10 MIN .10

e Estimated

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-water marsh-management techniques. Water level affected by tidal fluctuations.
PERIOD OF RECORD.--March 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.18 ft above NGVD, Nov. 4, 1985; lowest, 0.76 ft below NGVD, June 26, 1985.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	.52	1.63	1.64	1.86	1.61	1.71	1.58	1.73	1.35	1.13	1.35	1.68
10	1.16	1.57	1.50	1.59	1.47	1.69	1.47	1.51	1.04	1.40	1.48	1.61
15	1.68	1.72	1.58	1.42	1.45	1.69	1.40	1.29	1.48	1.66	2.15	1.58
20	1.75	1.70	1.55	1.60	1.64	1.79	1.99	1.17	1.39	1.47	1.57	1.72
25	1.50	1.57	1.67	1.57	1.57	1.75	1.79	1.43	.91	.98	1.38	1.55
EOM	1.62	1.59	1.56	1.65	1.67	1.86	1.70	1.18	.47	.64	1.26	1.53

WTR YR 1987 MEAN 1.50 MAX 2.20 MIN .40

PAMLICO COUNTY--Continued

350523076392206. Local number, NC-169; NRCD Whortonsville Research Station well S15y6.
LOCATION.--Lat 35°05'23", long 76°39'22", Hydrologic Unit 03020204, 3.4 mi east of Merritt on Secondary Road 1321, 0.5 mi northeast of intersection of Secondary Roads 1321 and 1322. Owner: NRCD (North Carolina Department of Natural Resources and Community Development).
AQUIFER.--Castle Hayne aquifer of Oligocene and Eocene age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 290 ft, diameter 4 in, cased to 223 ft and from 228 to 270 ft, screened intervals from 223 to 228 ft and 270 to 275 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 7.54 ft above National Geodetic Vertical Datum of 1929 (levels by NRCD). Measuring point: Top of instrument shelf, 2.64 ft above land-surface datum.
REMARKS.--U.S. Geological Survey continuous record began December 18, 1986. Well is part of areal-effects network.
PERIOD OF RECORD.--December 1986 to September 1987.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 4.38 ft below land-surface datum, March 31, 1987; lowest recorded, 6.88 ft below land-surface datum, August 10, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), DECEMBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	5.96	---	---	4.49	4.58	5.41	6.42	6.82	6.06
10	---	---	---	5.83	---	---	4.55	4.67	5.71	6.56	6.86	5.83
15	---	---	---	---	---	---	4.60	4.77	5.80	6.51	6.61	5.70
20	---	---	6.43	---	---	---	4.55	4.87	6.01	6.61	6.56	5.56
25	---	---	6.25	---	---	4.52	4.48	5.01	6.20	6.70	6.57	5.48
EOM	---	---	6.14	---	---	4.42	4.53	5.23	6.37	6.79	6.27	5.46

PASQUOTANK COUNTY

362050076163705. Local number, NC-150; NRCD Elizabeth City Forest Service Research Station well D11v5.
LOCATION.--Lat 36°20'50", long 76°16'37", Hydrologic Unit 03010205, 4 mi northwest of Elizabeth City at North Carolina Division of Forest Resources Maintenance Yard, west of U.S. Highways 17 and 158 on Secondary Road 1338. Owner: NRCD (North Carolina Department of Natural Resources and Community Development).
AQUIFER.--Yorktown aquifer of Pliocene and Miocene age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 500 ft, diameter 4 in, cased to 120 ft, screened interval from 120 to 130 ft, cemented from 130 to 500 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 7.14 ft above National Geodetic Vertical Datum of 1929 (levels by NRCD). Measuring point: Top of instrument shelf, 3.13 ft above land-surface datum.
REMARKS.--U.S. Geological Survey continuous record began November 19, 1986. Well is part of areal-effects network.
PERIOD OF RECORD.--November 1986 to September 1987.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 5.06 ft below land-surface datum, April 25, 1987; lowest recorded, 8.29 ft below land-surface datum, August 24, 25, and September 4, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), NOVEMBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	7.26	---	6.14	5.69	5.24	5.16	5.76	6.89	8.17	8.21
10	---	---	7.19	---	6.00	5.53	5.23	5.21	5.97	7.14	8.11	8.16
15	---	---	7.19	---	5.94	5.49	5.23	5.24	6.06	7.37	8.16	8.14
20	---	7.30	---	6.33	5.94	5.41	5.16	5.26	6.24	7.56	8.16	8.07
25	---	7.34	---	6.27	5.84	5.46	5.09	5.42	6.52	7.81	8.28	8.03
EOM	---	7.30	---	6.12	5.77	5.26	5.11	5.59	6.71	8.10	8.23	7.92

GROUND-WATER LEVELS

PASQUOTANK COUNTY--Continued

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 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.75	4.79	5.07	2.31	1.23	.60	1.30	1.93	3.30	4.43	5.36	5.19
2	3.81	4.59	4.84	.90	1.14	.75	1.43	1.99	3.34	4.46	5.35	5.25
3	3.93	4.57	4.64	.97	1.25	1.03	1.48	2.10	3.43	4.49	5.35	5.30
4	3.87	4.56	4.79	1.07	1.52	1.28	1.22	2.18	3.40	4.48	5.36	5.36
5	3.93	4.54	4.88	1.19	1.68	1.47	1.45	2.22	3.41	4.53	5.24	5.32
6	4.17	4.59	4.92	1.32	1.64	1.57	1.52	2.22	3.50	4.64	4.78	5.23
7	4.39	4.79	4.85	1.33	1.53	1.56	1.59	2.24	3.62	4.63	4.81	5.21
8	4.39	4.75	4.80	1.58	1.58	1.50	1.68	2.31	3.63	4.67	4.82	5.14
9	4.35	4.68	4.75	1.68	1.78	1.43	1.78	2.44	3.63	4.75	4.82	5.20
10	4.35	4.88	4.69	1.18	1.93	1.40	1.87	2.48	3.75	4.81	4.84	5.18
11	4.38	4.73	4.71	.81	1.93	1.38	1.93	2.53	3.87	4.87	4.97	5.20
12	4.34	4.73	4.55	1.04	1.80	1.16	1.98	2.58	3.82	4.90	5.02	5.21
13	4.24	4.72	4.50	1.32	1.99	.99	2.08	2.71	3.79	4.91	5.10	5.04
14	4.11	4.89	4.43	1.47	1.97	1.28	2.16	2.76	3.79	4.93	5.14	5.02
15	4.37	4.62	4.29	1.54	2.03	1.44	2.06	2.68	3.80	5.04	5.11	5.11
16	4.43	4.49	4.25	1.72	1.97	1.53	1.71	2.78	3.87	5.06	5.09	5.13
17	4.50	4.54	4.22	1.63	.97	1.55	1.38	2.84	3.74	5.14	5.12	5.12
18	4.65	4.56	4.05	.98	.63	1.63	1.51	2.84	3.87	5.13	5.15	5.12
19	4.66	4.78	4.17	.32	.89	1.58	1.62	2.88	3.87	5.11	4.92	5.22
20	4.60	4.69	4.29	.52	1.04	1.49	1.69	2.63	3.83	5.16	4.73	5.14
21	4.59	4.63	4.38	.62	1.12	1.57	1.71	2.66	3.90	5.17	4.86	5.16
22	4.63	4.86	4.43	.29	1.11	1.73	1.78	2.75	3.99	5.18	4.84	5.21
23	4.66	4.90	4.26	.58	.62	1.85	1.86	2.80	4.07	5.21	4.88	5.27
24	4.67	4.87	3.69	.90	.87	1.91	1.83	2.85	4.17	5.26	5.03	5.30
25	4.69	4.97	2.42	.74	1.03	1.95	1.43	2.91	4.18	5.26	5.07	5.35
26	4.50	4.84	2.42	.48	1.23	1.92	1.39	3.01	4.16	5.23	5.06	5.43
27	4.45	4.91	2.52	.73	1.34	1.72	1.50	3.06	4.05	5.24	5.04	5.46
28	4.67	5.00	2.57	.91	1.33	.87	1.53	3.10	4.29	5.27	5.07	5.48
29	4.72	4.97	2.65	.98	---	1.05	1.66	3.11	4.45	5.34	5.11	5.42
30	4.67	5.04	2.53	.70	---	.94	1.78	3.15	4.45	5.38	5.21	5.28
31	4.85	---	2.85	.98	---	.78	---	3.23	---	5.37	5.18	---
MEAN	4.40	4.75	4.08	1.06	1.40	1.38	1.66	2.64	3.83	4.97	5.05	5.23
LOW	4.85	5.04	5.07	2.31	2.03	1.95	2.16	3.23	4.45	5.38	5.36	5.48
HIGH	3.75	4.49	2.42	.29	.62	.60	1.22	1.93	3.30	4.43	4.73	5.02

WTR YR 1987 MEAN 3.38 HIGH .29 LOW 5.48

GROUND-WATER LEVELS

PERQUIMANS COUNTY

361744076274402. Local number, NC-151; NRCD Parkville Research Station well E13m2.
LOCATION.--Lat 36°17'44", long 76°27'44", Hydrologic Unit 03010205, 3.5 mi west of Parkville, west of Secondary Road 1223 on logging road. Owner: NRCD (North Carolina Department of Natural Resources and Community Development).
AQUIFER.--Lower Cape Fear aquifer of late Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 1019 ft, diameter 4 in, cased to 1009 ft, screened interval from 1009 to 1019 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 16.82 ft above National Geodetic Vertical Datum of 1929 (levels by NRCD). Measuring point: Top of instrument shelf, 3.02 ft above land-surface datum.
REMARKS.--U.S. Geological Survey continuous record began November 19, 1986. Well is part of areal-effects network.
PERIOD OF RECORD.--November 1986 to September 1987.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 53.41 ft below land-surface datum, Jan. 22, 1987; lowest recorded, 55.20 ft below land-surface datum, September 28, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), NOVEMBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	53.93	---	53.94	54.08	53.87	---	---	54.66	54.89	55.14
10	---	---	53.84	---	53.91	53.97	53.93	---	---	54.73	54.90	55.05
15	---	---	53.95	---	53.90	54.03	54.03	---	---	54.76	55.01	55.04
20	---	53.65	53.90	53.69	54.01	53.93	53.87	---	54.49	54.91	54.93	54.99
25	---	53.82	53.77	53.76	54.01	54.03	53.94	---	54.52	54.95	55.09	55.06
EOM	---	53.86	53.93	53.71	54.00	53.79	54.00	---	54.66	54.98	55.09	55.05

PERQUIMANS COUNTY

361744076274403. Local number, NC-152; NRCD Parkville Research Station well E13m3.
LOCATION.--Lat 36°17'44", long 76°27'44", Hydrologic Unit 03010205, 3.5 mi west of Parkville, west of Secondary Road 1223 on logging road. Owner: NRCD (North Carolina Department of Natural Resources and Community Development).
AQUIFER.--Castle Hayne aquifer of Oligocene and Eocene age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 351 ft, diameter 4 in, cased to 336 ft, open hole to 351 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 16.73 ft above National Geodetic Vertical Datum of 1929 (levels by NRCD). Measuring point: Top of instrument shelf, 3.49 ft above land-surface datum.
REMARKS.--U.S. Geological Survey continuous record began November 19, 1986. Well is part of areal-effects network.
PERIOD OF RECORD.--November 1986 to September 1987.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 8.13 ft below land-surface datum, January 22, 1987; lowest recorded, 9.25 ft below land-surface datum, July 30, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), NOVEMBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	8.90	---	8.60	8.58	8.46	8.63	8.76	9.03	9.12	9.18
10	---	---	8.83	---	8.57	8.48	8.54	8.69	8.87	9.08	9.10	9.09
15	---	---	8.87	---	8.55	8.52	8.58	8.70	8.85	9.10	9.16	9.05
20	---	8.83	8.82	8.44	8.57	8.46	8.50	8.71	8.89	9.20	9.04	8.99
25	---	8.89	8.68	8.43	8.54	8.56	8.48	8.79	8.92	9.22	9.16	9.06
EOM	---	8.90	8.77	8.42	8.53	8.39	8.54	8.84	9.03	9.23	9.15	9.02

PITT COUNTY

353352077150101. Local number, PI-527.
LOCATION.--Lat 35°33'52", long 77°15'01", Hydrologic Unit 03020103, at Galloway Crossroads. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined sand and clay of the surficial aquifer of Post-Miocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 6 in, depth 14.6 ft, cased to 9.6 ft, screened from 9.6 ft to 14.6 ft.
INSTRUMENTATION.--Digital Recorder --60-minute punch.
DATUM.--Measuring point: Top of casing, 28.43 ft above National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).
REMARKS.--During most summers, water levels affected for short periods by nearby irrigation of row crops.
PERIOD OF RECORD.--December 1976 to April 1987 (discontinued).
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 25.54 ft above NGVD, May 5, 1978; lowest, 18.73 ft above NGVD, July 22, 1980.

ELEVATION (FEET NGVD), OCTOBER 1986 TO APRIL 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.97	22.13	22.53	23.34	23.18	23.52						
10	22.06	22.15	22.51	23.13	23.07	23.82						
15	22.18	22.23	22.68	23.01	23.00	23.36						
20	22.09	22.32	22.68	24.13	23.30	23.33						
25	22.02	22.34	23.36	23.73	23.28	23.13						
EOM	22.13	22.36	23.02	23.44	23.64	23.53						

353350077150101. Local number, PI-528.
LOCATION.--Lat 35°33'50", long 77°15'01", Hydrologic Unit 03020103, at Galloway Crossroads. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined sand and clay of the surficial aquifer of Post-Miocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 6 in, depth 14.2 ft, cased to 9.2 ft, screened from 9.2 ft to 14.2 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Measuring point: Top of casing, 35.96 ft above National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).
REMARKS.--During most summers, water levels affected for short periods by nearby irrigation of row crops.
PERIOD OF RECORD.--December 1976 to April 1987 (discontinued).
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 31.82 ft above NGVD, Nov 6-7, 1977; lowest, 25.91 ft above NGVD, Aug. 15-17, 1977.

ELEVATION (FEET NGVD), OCTOBER 1986 TO APRIL 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	27.36	27.02	27.46	29.40	28.60	29.40						
10	27.30	26.97	27.49	29.17	28.35	29.62						
15	27.24	27.00	27.85	28.44	28.18	29.00						
20	27.16	27.03	27.85	30.17	28.97	28.85						
25	27.11	27.09	29.05	29.92	28.89	28.56						
EOM	27.04	27.21	28.79	29.17	29.74	29.49						

PITT COUNTY

353304077151401. Local number, PI-529.
LOCATION.--Lat 35°33'04", long 77°15'14", Hydrologic Unit 03020103, at Galloway Crossroads. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined sand and clay of the surficial aquifer of Post-Miocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 6 in, depth 14.4 ft, cased to 9.4 ft, screened from 9.4 ft to 14.4 ft.
INSTRUMENTATION. --Digital recorder --60-minute punch.
DATUM.--Measuring point: Top of casing, 49.93 ft above National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).
PERIOD OF RECORD.--December 1976 to April 1987 (discontinued).
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 47.68 ft above NGVD, Feb. 14, 1983; lowest, 41.34 ft above NGVD, Nov. 6-7, 1978.

ELEVATION (FEET NGVD), OCTOBER 1986 TO APRIL 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	44.11	42.88	43.18	45.92	---	46.45						
10	43.89	42.67	43.27	45.79	---	46.71						
15	43.66	42.77	43.85	---	---	46.36						
20	43.39	42.74	43.92	---	---	46.57						
25	43.21	42.88	44.80	---	---	46.05						
EOM	42.97	42.87	45.10	---	46.92	46.75						

PITT COUNTY

353208077153801. Local number, PI-533.
LOCATION.--Lat 35°32'08", long 77°15'38", Hydrologic Unit 03020103, at Galloway Crossroads. Owner: U.S. Geological Survey.
AQUIFER.--Unconfined sand and clay of the surficial aquifer of Post-Miocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 6 in, depth 9.3 ft, cased to 4.3 ft, screened from 4.3 ft to 9.3 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Measuring point: Top of casing, 53.61 ft above National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).
PERIOD OF RECORD.--December 1976 to April 1987 (discontinued).
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 52.03 ft above NGVD, Feb. 25, 1979; lowest, 45.93 ft above NGVD, Nov. 6, 1978.

ELEVATION (FEET NGVD), OCTOBER 1986 TO APRIL 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	47.01	46.68	47.18	50.24	49.84	50.25						
10	46.94	46.60	47.14	49.61	49.46	50.73						
15	46.90	46.69	47.89	49.29	49.16	49.97						
20	46.81	46.70	47.81	51.29	49.96	49.89						
25	46.78	46.94	50.45	50.82	49.99	49.35						
EOM	46.72	46.82	49.45	50.52	50.85	49.99						

353219077153801. Local number, NC-160; USGS Galloway Crossroads 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.--Measuring point: Top of casing, 57.31 ft above National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).
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, 55.22 ft above NGVD, September 14, 1984; lowest recorded, 47.43 ft above NGVD, November 6-8, 1978.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50.21	---	48.72	53.42	53.66	54.64	53.69	53.09	50.82	50.63	49.69	49.24
2	50.10	---	48.93	54.13	53.63	54.18	53.58	52.99	51.01	50.66	50.94	49.05
3	50.01	---	49.67	53.85	53.58	53.93	53.51	52.92	50.79	50.57	50.51	48.95
4	49.93	---	49.73	53.73	53.48	53.76	53.64	52.86	51.63	50.51	50.27	48.88
5	49.85	---	49.63	53.61	53.41	53.65	53.55	52.89	51.54	50.47	50.14	49.10
6	49.72	---	49.56	53.52	53.40	53.56	53.46	52.83	51.33	50.84	49.92	49.01
7	49.67	---	49.52	53.45	53.43	53.52	53.37	52.72	51.17	51.61	50.14	49.20
8	49.65	---	49.48	53.38	53.41	53.50	53.28	52.65	51.04	51.37	50.10	49.28
9	49.61	---	49.44	53.31	53.24	53.71	53.18	52.53	50.92	51.32	49.84	49.18
10	49.74	---	49.40	53.41	53.17	54.17	53.09	52.42	50.79	51.11	49.98	50.65
11	49.77	---	49.58	53.56	53.18	53.91	53.03	52.33	50.72	50.99	51.50	50.41
12	49.62	---	49.98	53.42	53.16	53.90	52.97	52.26	50.74	50.95	51.26	50.17
13	49.54	48.45	50.93	53.27	53.06	53.80	52.87	52.24	50.70	50.90	50.99	50.30
14	49.53	48.37	51.06	53.23	53.04	53.67	52.80	52.23	51.14	50.72	50.83	50.51
15	49.42	48.58	51.06	53.22	53.00	53.58	52.89	52.14	51.22	50.66	51.02	50.27
16	49.36	48.87	51.07	53.17	53.06	53.54	54.29	52.00	50.97	50.56	51.12	50.05
17	49.29	48.79	51.09	53.38	54.06	53.51	54.23	51.91	50.91	50.44	50.84	49.90
18	49.22	48.76	51.10	53.93	53.98	53.44	53.96	51.82	52.10	50.30	50.64	49.76
19	49.18	48.62	51.05	54.68	53.78	53.52	53.85	51.73	52.02	50.16	50.60	49.63
20	49.16	48.57	50.98	54.30	53.67	53.81	53.74	51.72	51.82	50.03	50.91	51.39
21	---	48.55	50.90	54.10	53.60	53.67	53.65	51.66	51.67	49.91	50.64	51.95
22	---	48.45	50.85	54.73	53.60	53.52	53.54	51.58	51.55	49.78	50.62	51.81
23	---	48.43	50.85	54.27	54.00	53.38	53.46	51.48	51.42	49.69	50.53	51.64
24	---	48.61	51.46	53.97	53.78	53.31	53.44	51.40	51.37	49.63	50.35	51.52
25	---	49.07	53.14	53.99	53.65	53.25	54.05	51.31	51.27	49.59	50.22	51.36
26	---	49.11	53.21	54.22	53.57	53.21	53.89	51.29	51.15	49.51	50.09	51.20
27	---	48.97	53.17	53.93	53.81	53.44	53.68	51.20	51.00	49.39	49.88	51.04
28	---	48.87	53.11	53.80	54.38	54.07	53.54	51.13	50.80	49.36	49.72	50.92
29	---	48.80	53.05	53.73	---	53.85	53.37	51.05	50.71	49.27	49.59	50.84
30	---	48.74	53.03	53.89	---	53.84	53.21	50.95	50.61	49.17	49.51	50.89
31	---	---	52.90	53.81	---	53.91	---	50.82	---	49.12	49.47	---
MEAN	---	---	50.9	53.8	53.5	53.7	53.5	52.0	51.2	50.3	50.4	50.3
HIGH	---	---	53.21	54.73	54.38	54.64	54.29	53.09	52.10	51.61	51.50	51.95
LOW	---	---	48.72	53.17	53.00	53.21	52.80	50.82	50.61	49.12	49.47	48.88

GROUND-WATER LEVELS

SAMPSON COUNTY

351121078340411. Local number, NC-168; NRCD Mingo Research Station well R38p11.
LOCATION.--Lat 35°11'21", long 78°34'04", Hydrologic Unit 03030006, at Mingo in northeast corner of intersection of Secondary Roads 1002 and 1606. Owner: NRCD (North Carolina Department of Natural Resources and Community Development).
AQUIFER.--Surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 20 ft, diameter 4 in, cased to 5 ft, screened interval from 5 to 20 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 192 ft above National Geodetic Vertical Datum of 1929 (from topographic map). Measuring point: Top of instrument shelf, 2.79 ft above land-surface datum.
REMARKS.--Well is part of climatic-effects network.
PERIOD OF RECORD.--December 1986 to September 1987.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 3.73 ft below land-surface datum, April 17-18, 1987; lowest recorded, 17.66 ft below land-surface datum, December 1-2, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), DECEMBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	17.64	10.90	5.44	4.43	4.37	4.21	5.32	5.99	7.41	7.68
2	---	---	17.66	10.46	5.41	4.10	4.37	4.26	5.36	6.02	7.47	7.75
3	---	---	17.64	9.69	5.42	4.03	4.37	4.29	5.42	6.03	7.52	7.80
4	---	---	17.63	8.76	5.48	4.04	4.40	4.29	5.45	6.06	7.58	7.85
5	---	---	17.61	8.52	5.51	4.05	4.43	4.31	5.49	6.09	7.64	7.88
6	---	---	17.55	8.36	5.51	4.07	4.44	4.33	5.54	6.13	7.70	7.90
7	---	---	17.46	8.26	5.49	4.07	4.46	4.37	5.58	6.16	7.75	7.93
8	---	---	17.33	8.22	5.50	4.04	4.48	4.38	5.62	6.21	7.80	7.97
9	---	---	17.19	8.18	5.58	4.04	4.50	4.44	5.65	6.25	7.80	8.03
10	---	---	17.02	8.11	5.60	4.10	4.54	4.49	5.69	6.29	7.81	8.05
11	---	---	16.84	8.14	5.59	4.13	4.55	4.52	5.75	6.34	7.83	7.88
12	---	---	16.67	8.14	5.57	4.11	4.59	4.54	5.79	6.39	7.86	7.64
13	---	---	16.53	8.18	5.60	4.12	4.62	4.57	5.81	6.43	7.87	7.50
14	---	---	16.41	8.18	5.59	4.15	4.65	4.60	5.84	6.46	7.81	7.42
15	---	---	16.22	8.16	5.61	4.17	4.47	4.64	5.87	6.51	7.74	7.33
16	---	---	16.00	8.17	5.62	4.18	3.96	4.69	5.91	6.56	7.71	7.22
17	---	---	15.73	8.17	5.62	4.23	3.76	4.73	5.96	6.63	7.68	7.13
18	---	---	15.29	8.13	5.64	4.24	3.74	4.77	5.98	6.67	7.67	7.07
19	---	---	14.64	8.10	5.67	4.23	3.77	4.81	5.88	6.72	7.66	7.02
20	---	---	13.76	7.60	5.56	4.28	3.81	4.83	5.77	6.78	7.67	6.98
21	---	---	13.12	7.04	5.40	4.31	3.83	4.87	5.70	6.82	7.67	6.98
22	---	---	12.79	6.72	5.29	4.34	3.88	4.91	5.68	6.86	7.65	6.98
23	---	---	12.47	5.94	5.26	4.36	3.91	4.95	5.69	6.92	7.62	6.98
24	---	---	12.13	5.69	5.18	4.39	3.92	4.99	5.71	6.97	7.62	6.98
25	---	---	11.91	5.56	5.11	4.40	3.97	5.03	5.75	7.03	7.59	6.99
26	---	---	11.90	5.48	5.07	4.41	4.04	5.06	5.77	7.08	7.56	7.04
27	---	---	11.95	5.47	5.04	4.42	4.08	5.10	5.79	7.14	7.54	7.09
28	---	---	11.98	5.45	4.93	4.44	4.10	5.14	5.88	7.20	7.54	7.13
29	---	---	11.91	5.43	---	4.37	4.15	5.19	5.94	7.25	7.57	7.15
30	---	---	11.62	5.40	---	4.27	4.19	5.24	5.96	7.31	7.60	7.14
31	---	---	11.31	5.43	---	4.30	---	5.28	---	7.36	7.63	---
MEAN	---	---	15.0	7.55	5.44	4.22	4.21	4.70	5.72	6.60	7.66	7.42
LOW	---	---	17.66	10.90	5.67	4.44	4.65	5.28	5.98	7.36	7.87	8.05
HIGH	---	---	11.31	5.40	4.93	4.03	3.74	4.21	5.32	5.99	7.41	6.98

GROUND-WATER LEVELS

TRANSYLVANIA COUNTY

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, 23.46 ft below land-surface datum, May 29, 1984; lowest recorded, 37.95 ft below land-surface datum, December 23-24, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35.82	35.61	33.88	31.36	29.68	27.67	27.02	26.06	26.43	26.94	27.30	27.94
2	35.84	35.56	33.62	31.37	29.52	28.14	26.88	26.03	26.46	26.89	27.36	27.96
3	35.86	35.53	33.69	31.35	29.58	28.24	26.77	26.04	26.50	26.88	27.41	28.00
4	35.86	35.50	33.74	31.23	29.60	28.29	26.79	26.05	26.45	26.84	27.46	28.02
5	35.88	35.44	33.70	31.19	29.58	28.29	26.76	26.10	26.54	26.85	27.52	27.98
6	35.95	35.44	33.62	31.09	29.43	28.26	26.72	26.02	26.62	26.84	27.59	27.96
7	35.95	35.40	33.51	30.99	29.31	28.14	26.66	25.98	26.66	26.80	27.50	27.92
8	35.95	35.32	33.42	30.95	29.27	27.98	26.63	26.03	26.66	26.77	27.60	27.91
9	35.94	35.27	33.30	30.85	29.50	27.94	26.62	26.09	26.63	26.75	27.63	27.97
10	35.95	35.26	33.24	30.69	29.40	28.09	26.60	26.07	26.65	26.69	27.67	28.01
11	35.99	35.15	33.14	30.78	29.27	28.09	26.54	26.04	26.70	26.67	27.75	28.02
12	35.97	35.11	33.09	30.69	29.12	28.03	26.54	26.02	26.68	26.67	27.81	27.96
13	35.93	35.16	33.17	30.68	29.15	27.96	26.56	26.04	26.65	26.63	27.87	27.94
14	35.90	35.13	33.03	30.57	29.06	27.89	26.50	26.07	26.67	26.61	27.91	28.00
15	35.95	34.95	32.91	30.45	29.07	27.81	26.28	26.02	26.72	26.68	27.91	28.00
16	35.96	34.90	32.82	30.40	28.98	27.74	26.24	26.05	26.73	26.76	27.91	27.95
17	35.97	34.84	32.69	30.36	29.00	27.73	26.28	26.07	26.79	26.83	27.92	27.89
18	35.99	34.78	32.57	30.17	29.00	27.59	26.39	26.05	26.86	26.81	27.90	27.86
19	35.96	34.85	32.58	30.06	29.04	27.45	26.40	26.05	26.86	26.80	27.80	27.88
20	35.94	34.68	32.51	30.16	28.97	27.44	26.35	26.10	26.83	26.85	27.91	27.89
21	35.96	34.73	32.47	30.08	28.84	27.37	26.28	26.16	26.86	26.89	27.97	27.93
22	35.96	34.66	32.37	29.91	28.72	27.34	26.23	26.19	26.87	26.89	27.93	27.91
23	35.95	34.57	32.20	30.11	28.82	27.28	26.18	26.18	26.80	26.92	27.92	27.89
24	35.92	34.47	31.88	30.06	28.86	27.18	26.16	26.20	26.86	26.99	27.98	27.85
25	35.83	34.40	31.91	29.82	28.77	27.07	26.22	26.24	26.84	27.04	27.97	27.85
26	35.65	34.08	31.85	29.86	28.72	e27.00	26.24	26.28	26.79	27.05	27.95	27.88
27	35.69	34.03	31.79	29.90	28.57	e26.96	26.17	26.33	26.88	27.07	27.93	27.90
28	35.74	33.99	31.72	29.84	28.17	e26.92	26.12	26.34	27.00	27.12	27.92	27.88
29	35.70	33.94	31.63	29.85	---	e26.87	26.13	26.35	27.03	27.20	27.93	27.75
30	35.70	33.93	31.56	29.67	---	26.83	26.06	26.36	27.01	27.26	27.97	27.66
31	35.71	---	31.56	29.76	---	26.91	---	26.40	---	27.27	27.92	---
MEAN	35.9	34.9	32.7	30.5	29.1	27.6	26.4	26.1	26.7	26.9	27.8	27.9
LOW	35.99	35.61	33.88	31.37	29.68	28.29	27.02	26.40	27.03	27.27	27.98	28.02
HIGH	35.65	33.93	31.56	29.67	28.17	26.83	26.06	25.98	26.43	26.61	27.30	27.66

WTR YR 1987 MEAN 29.4 HIGH 25.98 LOW 35.99

e Estimated

GROUND-WATER LEVELS

TRANSYLVANIA COUNTY--Continued

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, 8.11 ft below land-surface datum, March 1, 1987; lowest recorded, 17.66 ft below land-surface datum, October 8-9, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.48	16.32	13.28	13.09	13.01	8.30	11.77	12.58	13.43	14.23	15.62	15.44
2	17.49	16.36	11.83	13.17	12.98	8.29	11.78	12.64	13.43	14.21	15.60	15.51
3	17.51	16.38	11.44	13.27	12.97	8.86	11.84	12.67	13.45	14.23	15.47	15.60
4	17.54	16.40	11.90	13.32	12.98	9.42	11.86	12.72	13.46	14.24	15.38	15.68
5	17.57	16.42	12.36	13.38	13.04	9.94	11.89	12.78	13.39	14.18	15.28	15.71
6	17.60	16.42	12.71	13.43	13.07	10.36	11.85	12.81	13.43	14.19	15.00	15.61
7	17.63	16.43	12.97	13.45	13.08	10.66	11.64	12.85	13.51	14.24	13.31	15.35
8	17.64	16.34	13.18	13.51	13.12	10.84	11.56	12.91	13.60	14.30	12.99	15.11
9	17.66	16.13	13.37	13.55	13.22	11.00	11.62	12.99	13.68	14.36	12.83	14.95
10	17.64	15.98	13.49	13.56	13.31	11.18	11.73	13.04	13.75	14.46	12.93	14.86
11	17.61	15.91	13.48	13.62	13.35	11.37	11.82	13.08	13.76	14.50	13.19	14.83
12	17.58	15.81	13.20	13.68	13.37	11.50	11.92	13.11	13.74	14.55	13.44	14.38
13	17.53	15.68	13.14	13.75	13.42	11.61	12.03	13.10	13.78	14.62	13.62	12.96
14	17.43	15.62	13.20	13.80	13.46	11.71	12.11	13.05	13.81	14.72	13.78	12.73
15	17.33	15.59	13.30	13.82	13.52	11.80	11.95	12.91	13.87	14.80	13.93	12.90
16	17.28	15.63	13.43	13.86	13.53	11.89	11.65	12.75	13.93	14.87	14.06	13.17
17	17.24	15.68	13.53	13.89	13.50	11.99	11.58	12.67	13.98	14.96	14.17	13.29
18	17.22	15.72	13.62	13.86	13.48	12.06	11.69	12.72	14.01	15.03	14.23	13.21
19	17.20	15.76	13.72	13.24	13.48	12.01	11.82	12.79	14.01	15.09	14.30	13.28
20	17.18	15.73	13.79	12.81	13.45	11.91	11.91	12.79	14.02	15.17	14.42	13.35
21	17.18	15.70	13.86	12.77	13.37	11.89	11.98	12.82	14.04	15.24	14.58	13.48
22	17.18	15.62	13.92	12.80	13.26	11.96	12.05	12.87	14.08	15.30	14.70	13.62
23	17.18	15.54	13.95	12.94	13.13	12.05	12.11	12.94	14.13	15.37	14.82	13.74
24	17.17	15.48	13.02	13.08	13.03	12.14	12.16	12.99	14.18	15.44	14.94	13.84
25	17.12	15.43	12.16	13.13	13.00	12.19	12.24	13.07	14.22	15.51	15.04	13.95
26	16.32	12.97	12.27	13.04	13.07	12.14	12.33	13.14	14.20	15.57	15.11	14.07
27	16.10	11.27	12.46	12.93	12.90	12.11	12.38	13.22	14.04	15.63	15.19	14.15
28	16.10	12.11	12.62	12.90	11.35	12.12	12.41	13.26	14.01	15.68	15.28	14.23
29	16.14	12.71	12.75	12.95	---	12.18	12.47	13.30	14.06	15.74	15.35	14.29
30	16.19	13.10	12.87	12.97	---	12.16	12.52	13.33	14.16	15.76	15.40	14.29
31	16.27	---	13.02	13.01	---	11.90	---	13.39	---	15.67	15.44	---
MEAN	17.2	15.3	13.0	13.3	13.2	11.3	12.0	12.9	13.8	14.9	14.5	14.3
LOW	17.66	16.43	13.95	13.89	13.53	12.19	12.52	13.39	14.22	15.76	15.62	15.71
HIGH	16.10	11.27	11.44	12.77	11.35	8.29	11.56	12.58	13.39	14.18	12.83	12.73

WTR YR 1987 MEAN 13.8 HIGH 8.29 LOW 17.66

WASHINGTON COUNTY

354351076260501. Local number, NC-156; NRCD Lake Phelps Research Station well L13i1.
LOCATION.--Lat 35°43'51", long 76°26'05", Hydrologic Unit 03010205, on south shore of Lake Phelps, south of Secondary Road 1126 on Secondary Road 1183. Owner: NRCD (North Carolina Department of Natural Resources and Community Development).
AQUIFER.--Castle Hayne aquifer of Oligocene and Eocene age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 510 ft, diameter 6 in, cased to 390 ft, open hole to 510 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 16.15 ft above National Geodetic Vertical Datum of 1929 (levels by NRCD). Measuring point: Top of instrument shelf, 2.60 ft above land-surface datum.
REMARKS.--U.S. Geological Survey continuous record began November 20, 1986. Well is part of areal-effects network.
PERIOD OF RECORD.--November 1986 to September 1987.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 14.06 ft below land-surface datum, March 31, 1987; lowest recorded, 15.87 ft below land-surface datum, September 4, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), NOVEMBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	14.91	14.66	---	---	14.26	14.49	14.66	15.06	15.46	15.72
10	---	---	14.70	---	---	14.38	14.33	14.46	14.82	15.12	15.48	15.53
15	---	---	14.82	---	---	14.47	14.39	14.44	14.82	15.14	15.64	15.54
20	---	---	14.72	---	---	14.34	14.35	14.38	14.86	15.33	15.69	15.43
25	---	14.88	14.60	---	---	14.46	14.30	14.54	14.97	15.41	15.83	15.46
EOM	---	14.84	14.76	---	---	14.16	14.28	14.63	15.09	15.48	15.76	15.34

GROUND-WATER LEVELS

WASHINGTON COUNTY--Continued

354351076260502. Local number, NC-157; NRCD Lake Phelps Research Station well L13i2.
LOCATION.--Lat 35°43'51", long 76°26'05", Hydrologic Unit 03010205, on south shore of Lake Phelps, south of Secondary Road 1126 on Secondary Road 1183. Owner: NRCD (North Carolina Department of Natural Resources and Community Development).
AQUIFER.--Yorktown aquifer of Pliocene and Miocene age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 130 ft, diameter 4 in, cased to 110 ft, screened interval from 110 to 120 ft; measured depth 120.2 ft, October 1986.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 16.35 ft above National Geodetic Vertical Datum of 1929 (levels by NRCD). Measuring point: Top of instrument shelf, 3.20 ft above land-surface datum.
REMARKS.--U.S. Geological Survey continuous record began November 20, 1986. Well is part of areal-effects network.
PERIOD OF RECORD.--November 1986 to September 1987.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 5.96 ft below land-surface datum, March 10, 1987; lowest recorded, 7.34 ft below land-surface datum, November 22-23, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), NOVEMBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	7.20	6.65	---	---	6.06	6.31	---	6.22	6.94	7.10
10	---	---	7.06	---	---	6.02	6.11	6.38	---	6.35	6.79	6.83
15	---	---	7.01	---	---	6.13	6.18	6.43	6.43	6.42	6.79	6.69
20	---	---	6.91	---	---	6.11	6.16	6.35	6.30	6.56	6.80	6.72
25	---	7.29	6.82	---	---	6.22	6.15	---	6.33	6.70	6.94	6.75
EOM	---	7.25	6.88	---	---	6.03	6.19	---	6.23	6.87	7.05	6.77

354418076463601. Local number, NC-158; USGS Van Swamp well.
LOCATION.--Lat 35°44'18", long 76°46'36", Hydrologic Unit 03020104, 2.4 mi west of N.C. Highway 32 on Secondary Road 1101. Owner: U.S. Geological Survey.
AQUIFER.--Surficial aquifer of post-Miocene age.
WELL CHARACTERISTICS.--Drilled observation well, drilled to 15 ft, diameter 4 in, cased to 10 ft, screened interval from 10 to 15 ft.
INSTRUMENTATION.--Digital recorder --60-minute punch.
DATUM.--Land-surface datum is 35 ft above National Geodetic Vertical Datum of 1929 (from topographic map). Measuring point: Top of instrument shelf, 2.49 ft above land-surface datum.
REMARKS.--Well is part of climatic-effects network.
PERIOD OF RECORD.--December 1986 to September 1987.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.97 ft below land-surface datum, January 22, 1987; lowest recorded, 4.68 ft below land-surface datum, July 10, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), DECEMBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	2.05	---	---	1.24	1.43	---	4.23	---	3.38
2	---	---	---	1.65	---	---	1.29	1.50	---	4.27	---	3.44
3	---	---	---	1.64	---	---	1.32	1.58	---	4.32	---	3.51
4	---	---	---	1.66	---	---	1.27	1.64	---	4.35	---	3.58
5	---	---	---	1.67	---	---	1.28	1.67	---	4.41	---	3.07
6	---	---	---	1.69	---	---	1.32	1.72	---	4.46	---	2.12
7	---	---	---	1.70	---	---	---	1.79	---	4.52	---	2.03
8	---	---	---	1.72	---	---	---	1.85	---	4.57	---	1.90
9	---	---	---	1.75	---	---	---	1.90	---	4.63	---	1.91
10	---	---	---	1.66	---	1.42	---	1.99	---	4.67	---	1.88
11	---	---	---	1.49	---	1.47	---	2.08	---	---	---	1.91
12	---	---	---	1.53	---	1.46	---	2.16	4.37	---	---	1.92
13	---	---	---	1.58	---	1.43	---	2.24	4.43	---	---	1.61
14	---	---	---	1.63	---	1.47	---	2.30	4.42	---	---	1.47
15	---	---	---	1.65	---	1.51	---	2.36	4.37	---	---	1.52
16	---	---	---	1.67	---	1.54	---	2.44	4.38	---	---	1.57
17	---	---	2.92	1.61	---	1.53	---	2.54	4.25	---	---	1.63
18	---	---	2.94	1.45	---	1.57	---	2.63	4.09	---	---	1.68
19	---	---	2.92	1.16	---	1.55	---	2.72	4.05	---	---	1.76
20	---	---	2.93	1.14	---	1.41	---	2.78	3.95	---	---	1.59
21	---	---	2.96	1.19	---	1.43	---	2.83	3.92	---	---	1.41
22	---	---	2.98	1.07	---	1.48	---	2.89	3.85	---	---	1.46
23	---	---	2.99	1.01	---	1.53	---	---	3.83	---	---	1.55
24	---	---	2.88	---	---	1.57	---	---	3.85	---	---	1.63
25	---	---	2.37	---	---	1.61	---	---	3.87	---	---	1.71
26	---	---	2.28	---	---	1.65	---	---	3.91	---	---	1.79
27	---	---	2.26	---	---	1.58	---	---	3.96	---	---	---
28	---	---	2.24	---	---	1.18	1.23	---	4.05	---	---	---
29	---	---	2.24	---	---	1.19	1.29	---	4.13	---	---	---
30	---	---	2.19	---	---	1.21	1.35	---	4.18	---	---	---
31	---	---	2.19	---	---	1.19	---	---	---	---	3.41	---

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.--Water level responds to climatic effects.
PERIOD OF RECORD.--February 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.12 ft above land-surface datum, March 1, 1987; lowest recorded, 8.40 ft below land-surface datum, September 19-20, 1983.

DEPTH BELOW OR ABOVE (-) LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.90	5.62	---	1.13	---	-.07	.79	---	---	4.69	4.79	5.04
2	6.00	5.51	---	.67	---	.06	.92	---	---	4.70	4.80	5.06
3	6.10	5.44	---	.68	---	.19	1.00	---	---	4.70	4.80	5.07
4	6.18	5.38	---	.76	---	.32	1.06	---	---	4.70	4.80	5.09
5	6.27	5.29	---	.85	---	.46	1.15	---	---	4.71	4.81	5.10
6	6.37	5.22	---	.93	---	.58	1.22	---	---	4.71	4.81	5.11
7	6.45	5.18	---	.96	---	.68	1.29	---	---	4.71	4.81	5.13
8	6.49	5.13	---	1.03	---	.74	1.36	---	---	4.72	4.82	5.14
9	6.52	5.10	---	1.07	---	.76	1.44	---	3.85	4.72	4.82	5.16
10	6.54	5.15	---	.86	---	.79	1.51	---	4.07	4.72	4.82	5.17
11	6.57	5.12	---	.61	---	.87	1.55	---	4.20	4.73	4.83	5.19
12	6.57	5.09	---	.66	---	.91	1.58	---	4.29	4.73	4.83	5.20
13	6.58	5.08	---	.83	---	.95	1.65	---	4.38	4.73	4.83	5.22
14	6.43	5.08	---	.95	---	1.02	1.70	---	4.42	4.74	4.84	5.24
15	6.25	4.99	---	1.00	---	1.09	1.21	---	4.46	4.74	4.83	5.25
16	6.13	4.86	---	1.04	---	1.13	.15	---	4.52	4.74	4.84	5.27
17	6.05	---	---	.75	---	1.18	.17	---	4.59	4.75	4.85	5.28
18	6.01	---	---	---	---	1.22	.16	---	4.61	4.75	4.85	5.30
19	5.98	---	---	---	---	1.11	.30	---	4.61	4.75	4.85	5.31
20	5.95	---	---	---	---	.93	.44	---	4.63	4.76	4.86	5.32
21	5.94	---	---	---	---	1.05	.58	---	4.64	4.76	4.87	5.34
22	5.94	---	---	---	---	1.18	.72	---	4.65	4.76	4.89	5.36
23	5.97	---	---	---	---	1.28	---	---	4.66	4.77	4.90	5.38
24	6.03	---	---	---	---	1.33	---	---	4.66	4.77	4.92	5.40
25	6.05	---	---	---	.41	1.39	---	---	4.67	4.77	4.93	5.41
26	6.02	---	---	---	.55	1.41	---	---	4.68	4.78	4.95	5.43
27	5.97	---	---	---	.44	1.12	---	---	4.68	4.78	4.97	5.44
28	5.93	---	---	---	.01	.36	---	---	4.68	4.78	4.98	5.46
29	5.87	---	---	---	---	.50	---	---	4.69	4.79	5.00	5.47
30	5.78	---	1.42	---	---	.65	---	---	4.69	4.79	5.01	5.48
31	5.72	---	1.52	---	---	.66	---	---	---	4.79	5.02	---
MEAN	6.15	---	---	---	---	.83	---	---	---	4.74	4.87	5.26
LOW	6.58	---	---	---	---	1.41	---	---	---	4.79	5.02	5.48
HIGH	5.72	---	---	---	---	-.07	---	---	---	4.69	4.79	5.04

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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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