

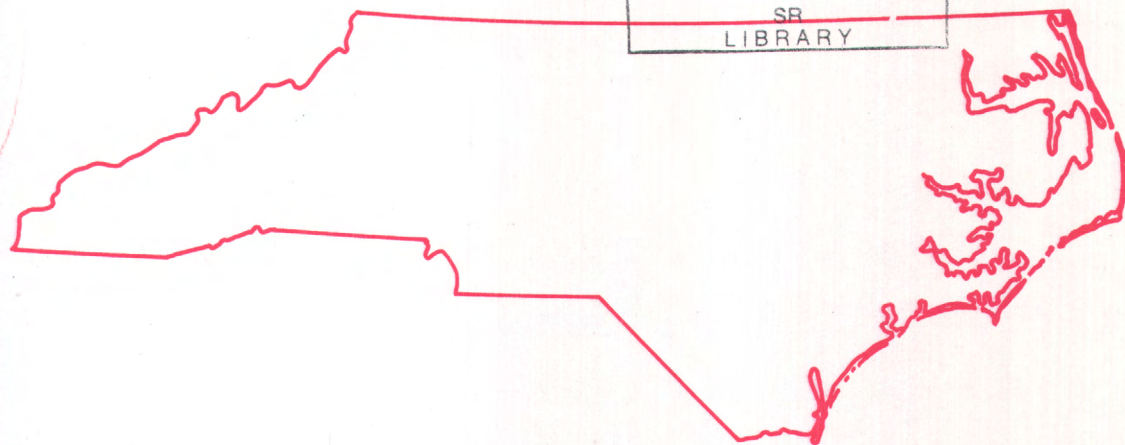
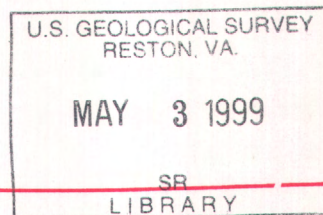


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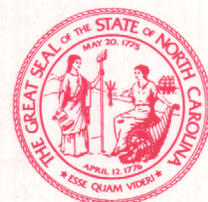
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Water Resources Data North Carolina Water Year 1997

Volume 2. Ground-Water Records



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NC-97-2
Prepared in cooperation with the North Carolina Department
of Environment, Health, and Natural Resources, and with
other State, municipal, and Federal agencies



CALENDAR FOR WATER YEAR 1997

1996

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
		1	2	3	4	5						1	2	1	2	3	4	5	6	7
6	7	8	9	10	11	12	3	4	5	6	7	8	9	8	9	10	11	12	13	14
13	14	15	16	17	18	19	10	11	12	13	14	15	16	15	16	17	18	19	20	21
20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28
27	28	29	30	31			24	25	26	27	28	29	30	29	30	31				

1997

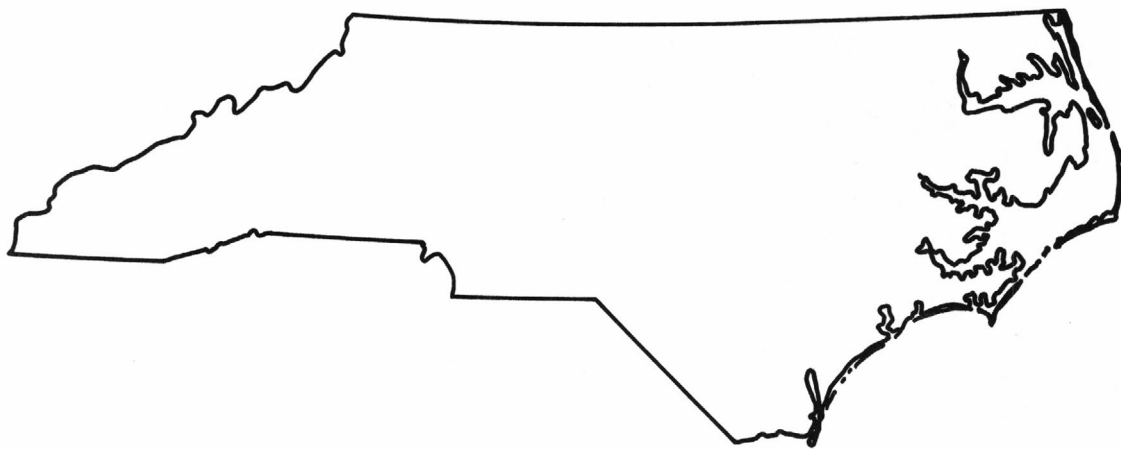
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Water Resources Data North Carolina Water Year 1997

Volume 2. Ground-Water Records

by S.S. Howe and P.L. Breton



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NC-97-2
Prepared in cooperation with the North Carolina Department
of Environment, Health, and Natural Resources, and with
other State, municipal, and Federal agencies

U. S. DEPARTMENT OF THE INTERIOR

BRUCE BABBITT, Secretary

GEOLOGICAL SURVEY

TOM CASADEVALL, Acting Director

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

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

1998

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

Water-resources data for the 1997 water year for North Carolina consist of records of ground-water levels and water quality of ground water; records of stage, discharge and water quality of streams; and stage and contents of lakes and reservoirs. This report contains ground-water-level data from 97 observation wells and ground-water-quality data from 100 wells. 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 other Federal agencies.

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 can be found in the libraries of principal cities and universities throughout the United States or can be purchased from the U.S. Geological Survey, Earth Science Information Center, Open-File Reports Section, Denver Federal Center, Box 25286, Mail Stop 517, Denver, Colorado 80225.

Ground-water-level data beginning with the 1975 water year are published only in reports on a State-by-State 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-97-2. Water-data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161.

COOPERATION

Cooperative agreements between the U.S. Geological Survey and organizations of the State of North Carolina for the systematic collection of water-resources data began in 1895 and continued through 1909. Following a lapse of 8 years, the State of North Carolina resumed cooperation in October 1918. Organizations that have cooperative agreements with the U.S. Geological Survey and assisted in collecting the water-resources data contained in this report are:

North Carolina Department of Environment and Natural Resources
Mecklenburg County
Lumber River Council of Governments
Guilford County

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

U.S. Marine Corps, Camp Lejeune
U.S. Army, Fort Bragg

OBJECTIVE CONCEPT FOR GROUND-WATER-LEVEL DATA

The ground-water-level data collected during the 1997 water year from observation wells in the statewide program and special project wells are published in this report. The statewide program is a cooperative program between the U.S. Geological Survey (USGS) and the North Carolina Department of Environment and Natural Resources (DENR). Observation wells for this program are located so that the most significant data are obtained from the fewest number of wells in the major aquifers of the State. Monitoring wells for this program are categorized in one of two networks based on specific objectives (table 1). The first network, the natural-effects network, has the objective of measuring the effects of natural stresses on ground-water storage. This network contains climatic-effects wells, which monitor the effects of climate, such as rainfall and the duration of the growing season, on ground-water storage in unconfined aquifers. This network also contains terrane-effects wells which are used to define the effects of different depths to the water table and topography and geology on ground-water storage in response to climatic stresses. The second network, the induced-effects network, defines the effect of human-induced stress on the ground-water system; the major induced stress being ground-water withdrawal by pumping. Within the induced-effects network are local-effects wells located near large-capacity pumping wells or well fields. These local-effects wells are used to measure daily or weekly water-level fluctuations. Areal-effects wells, also in the induced-effects network, 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.

The particular effect each well in the statewide program monitors is explained in the information header for each well. The headers for the special project wells contain a reference to those projects.

MAJOR AQUIFERS

The major aquifers in North Carolina can be divided into two zones related to the physiographic provinces of the State. The Piedmont and Blue Ridge Provinces (fig. 1) extend across the western 60 percent of the State and are, for the most part, underlain by fractured, igneous and metamorphic rocks (fig. 2). The fractured igneous and metamorphic rocks have low permeability but are, nevertheless, the major aquifers in the Piedmont and Blue Ridge Provinces. These rocks are covered almost everywhere by regolith, which is either a clayey or sandy saprolite consisting of weathered parent material, or sand and clayey-sand alluvium. The regolith, although not a major aquifer, contains most of the ground water in storage and is a source of water to the underlying igneous and metamorphic rock aquifers. All observation wells in the Piedmont and Blue Ridge Provinces that were measured in the 1997 water year tapped the regolith.

The Coastal Plain Province covers the eastern 40 percent of North Carolina, where aquifers are within a wedge of sedimentary rock layers that dip and thicken to the southeast (fig. 2). The Coastal Plain sediments have been divided by Winner and Coble (1989) into 10 aquifers separated by confining units.

Ground water in the regolith of the Piedmont and Blue Ridge Provinces and in the surficial aquifer of the Coastal Plain Province generally is unconfined. Ground water in the other Coastal Plain aquifers generally is under confined conditions.

Table 1.--Type, objective, and use of data from the North Carolina observation-well program

[Adapted from Winner, 1981]

Type	Objective	Use of data
Natural effects		
Climatic effects	To define effects of climate on ground-water storage.	Hydrographs showing natural changes in storage.
Terrane effects	To define effects of climate on ground-water storage as modified by topography and geology.	Hydrographs showing natural changes in storage as modified by topography and geology.
Induced effects		
Local effects	To define effects of ground-water withdrawals on storage near points of withdrawal.	Maps showing potentiometric-surface depressions.
	To define the hydraulic characteristics of aquifers.	Hydrographs showing changes in water levels with time.
	To define effectiveness of confining beds in separating aquifers.	Graphs showing water levels during pumping conditions as a function of pumping rates.
Areal effects	To determine status of storage over the entire areal extent of the aquifer.	Regional water-level maps.
	To define regional continuity of aquifers.	Maps showing net change in storage over a specific time period.
		Define recharge and discharge areas for areal extensive aquifers.

SUMMARY OF WATER-RESOURCES CONDITIONS

Precipitation

Precipitation totals for the first quarter, October through December, of the 1997 water year varied from 1.64 inches (Asheville) and 2.31 inches (Charlotte) below average in the western part of the State to 3.61 inches (Elizabeth City) above average in the eastern part of the State. Average precipitation amounts are based on data from the 30-year base period 1961-90. Rainfall data collected at key National Weather Service stations (fig. 1) indicate that rainfall totals for the quarter were at or above average from the Coastal Plain to the central Piedmont Provinces and below average in the western Piedmont and Blue Ridge Provinces of North Carolina.

The second quarter (January through March) rainfall totals for the 1997 water year resulted in drier conditions in the Coastal Plain and Piedmont Provinces. Three index stations observed below-average rainfall amounts, with Elizabeth City reporting the greatest deficiency at 3.21 inches below average. Asheville and Raleigh reported quarterly totals of 3.42 and 1.56 inches above average, respectively.

Varied amounts of rainfall occurred across the State during spring (April through June). The Coastal Plain Province experienced unusually dry conditions; rainfall amounts of 5.74 and 3.53 inches below average were observed at Elizabeth City and Wilmington for these months, respectively. In the Piedmont Province, near- to above-average rainfall amounts were observed. However, Charlotte and Asheville, in the western part of the State, experienced quarterly rainfall totals of more than 3.50 inches above average.

The remnants of Hurricane Danny brought torrential rains and flooding to parts of the State in late July. The National Weather Service reported record rainfall totals in Charlotte and Raleigh; 6.26 inches of rain was recorded in Charlotte on July 23, breaking the previous daily record of 5.91 inches set in 1944, and a record rainfall total of 4.18 inches for July 24 was set at the Raleigh-Durham Airport. Although July brought record daily rainfall amounts to some areas of the State, the fourth quarter (July through September) totals indicated below-average rainfall amounts across the State. Charlotte was the only index station that reported above-average rainfall for the entire period.

In summary, above-average annual precipitation occurred in the Blue Ridge Province and in most areas of the Piedmont Province of North Carolina during the 1997 water year. Annual precipitation amounts were well below average in the Coastal Plain Province. The National Weather Service reported the following annual rainfall amounts for the following selected stations (fig. 2): Asheville, 49.96 inches (2.37 inches above average); Charlotte, 44.78 inches (1.69 inches above average); Greensboro, 41.01 inches (1.61 inches below average); Raleigh, 44.59 inches (3.16 inches above average); Elizabeth City, 40.19 inches (8.29 inches below average); Wilmington, 47.53 inches (6.74 inches below average).

Ground Water

Ground-water levels in the surficial aquifer of the Coastal Plain Province and in the regolith of the Piedmont and Blue Ridge Provinces respond to climatic influences, as the continual discharge of ground-water to streams is offset by periodic recharge by precipitation. Water levels in these unconfined aquifers generally decline throughout the growing season and are typically highest during the winter months, when evapotranspiration losses are lowest. Water levels in deeper, confined aquifers in the Coastal Plain also respond to seasonal changes, but water levels in some aquifers additionally respond to induced effects, such as pumping.

Index Wells

Water levels in index observation wells in the Blue Ridge, Piedmont, and Coastal Plain Provinces provide a general indication of ground-water fluctuations in the shallow aquifers of the respective physiographic provinces. Figure 4 displays the hydrographs of month-end water levels in these index observation wells. Each hydrograph represents month-end water-levels for the 1997 water year, average month-end water levels for the period of record, and record high and low month-end water levels for each index well.

Water levels in the Blue Ridge index well (fig. 4) began the water year near normal. The water level in the Blue Ridge index well dipped below normal levels in October, and remained in the above average range for the rest of the water year. The water level in the Blue Ridge well ended the water year approximately 1 ft higher than normal, indicating some increase in ground-water storage. The water level in the Piedmont index well (fig. 4) was in the above average range for the entire water year but ended the water year at approximately the same water level as it began, indicating little change in ground-water storage. In the Coastal Plain index well (fig. 4), water levels began the water year about 2 ft above normal. Below average precipitation decreased water levels to well below average conditions from June through September. The water level in the Coastal Plain well ended the year nearly 2 ft lower than it began, indicating a decrease in aquifer storage.

Natural-Effects Wells

Ground-water levels in North Carolina were influenced by average to below average rainfall across the state. Water levels in climatic- and terrane-effects wells in the Blue Ridge and Piedmont generally ended the year as they began, indicating little change in aquifer storage. Water levels in climatic- and terrane-effects wells in the Coastal Plain ended the year lower than it began indicating a decrease in aquifer storage.

Induced-Effects Wells

Ground-water withdrawals in the Coastal Plain have resulted in declining water levels in confined aquifers in some places for a number of years. This declining trend is shown by the long-term record from several induced-effects observation wells that tap five of the major aquifers in eastern North Carolina -- the Castle Hayne and Black Creek aquifers (fig. 5), and the Peedee, upper Cape Fear, and lower Cape Fear aquifers (fig. 6).

The record for observation well NC-13 (fig. 5) shows the fluctuations of water levels in the Castle Hayne aquifer resulting from changes in pumping at a large mining and manufacturing operation in the eastern part of Beaufort County. Water-level fluctuations shown in the records from well NC-13 reflect changes in the location of major pumping activity. The record of well NC-145, also in Beaufort County, shows a similar pattern. The areal cone of depression resulting from this pumpage has covered more than 3,000 mi² (Coble and others, 1989). The limits of this regional cone of depression in the Castle Hayne aquifer are shown by the stabilized or rising water levels and natural water-level fluctuations in wells NC-137, NC-156, NC-159, and NC-169 in Beaufort, Washington, Hyde, and Pamlico Counties, respectively.

The record of observation well NC-139, in Carteret County, shows the effects of seasonal pumping from the Castle Hayne aquifer in order to meet the increased demand for water in the coastal area during the summer months (fig. 5). The slight decline in the long-term record indicates that annual recharge to the aquifer is less than the amount of water withdrawn. An observation well completed in the Castle Hayne aquifer in New Hanover County, NC-20, shows a similar long-term, water-level decline.

Water levels in the Castle Hayne aquifer are not declining everywhere throughout the eastern Coastal Plain. This is especially true in the subcrop areas of the aquifer that are not covered by extensive confining units (Strickland and others, 1992). An example is the natural water-level fluctuations previously noted in well NC-137 in Beaufort

County. Water levels in Castle Hayne wells NC-52 in Onslow County and NC-181 in Brunswick County exhibit climatic-effects fluctuations. Although well NC-52 is near water-supply wells at the U.S. Marine Corps Camp Geiger, no effects of withdrawals from those wells are seen in the long-term record. Short-term and minor pumping effects are seen at well NC-181; however, long-term data show no downward trend since 1988.

Ground-water withdrawals of over 29 Mgal/d have resulted in water-level declines in the State's central Coastal Plain (Eimers and others, 1990). The aquifers most affected in this 3,600-mi² area, which extends generally from Pitt County on the north to Onslow County on the south, are the Peedee, Black Creek, upper Cape Fear, and lower Cape Fear aquifers. Examples of the long-term effects of these withdrawals can be seen in several wells shown in figures 5 and 6. Well NC-44 is near the city of New Bern well field, where water has been withdrawn from the Black Creek and upper Cape Fear aquifers since 1968 (fig. 5). Well NC-183 shows the effect of pumpage from the upper Cape Fear aquifer in northern Pitt County (fig. 6), where water level declines in excess of 3 feet per year have been recorded. Major withdrawals for public supply in Onslow County in the southern part of the central Coastal Plain are from the Peedee and Black Creek aquifers. Hydrographs for well NC-187 in Jones County (Peedee aquifer - fig. 6) north of major pumping areas and for well NC-189 in Onslow County (Black Creek aquifer - fig. 5), several miles to the south, show water-level declines resulting from those withdrawals. The rate of water-level declines decreased during 1996. Declines in the Peedee aquifer at NC-187 had been nearly 2 ft/yr, but were less than 1 ft/yr in 1996 with periods of recovery in 1997. Declines in the Black Creek aquifer at NC-189 had been more than 6 ft/yr, but some recovery was seen in 1997.

Withdrawals from the upper Cape Fear aquifer for public and industrial use in the Elizabethtown area in central Bladen County have caused water-level declines of about 1.3 ft per year in well NC-177 (fig. 6), which is in eastern Robeson County. Major withdrawals for industrial use from the same aquifer began in northwestern Bladen County in September 1993; as a result, the rate of water-level decline in well NC-177 had increased to about 7 ft per year. The rate of water-level decline in well NC-177 decreased to about 4 ft per year in 1997.

Water-level decline in the lower Cape Fear aquifer shown for well NC-55 in Hertford County (fig. 6) results primarily from major withdrawals in Virginia which began in the 1940's; these withdrawals have resulted in a regional cone of depression in that aquifer which extends several tens of miles into North Carolina (Coble and others, 1989). Records from some wells in Bertie and Gates Counties also show these declines in the upper Cape Fear aquifer. These records indicate that pumping increased in 1993, when the rate of water-level decline increased from about 0.5 ft/yr to nearly 5 ft/yr. Water levels for 1997 indicated little additional drawdown from the previous year.

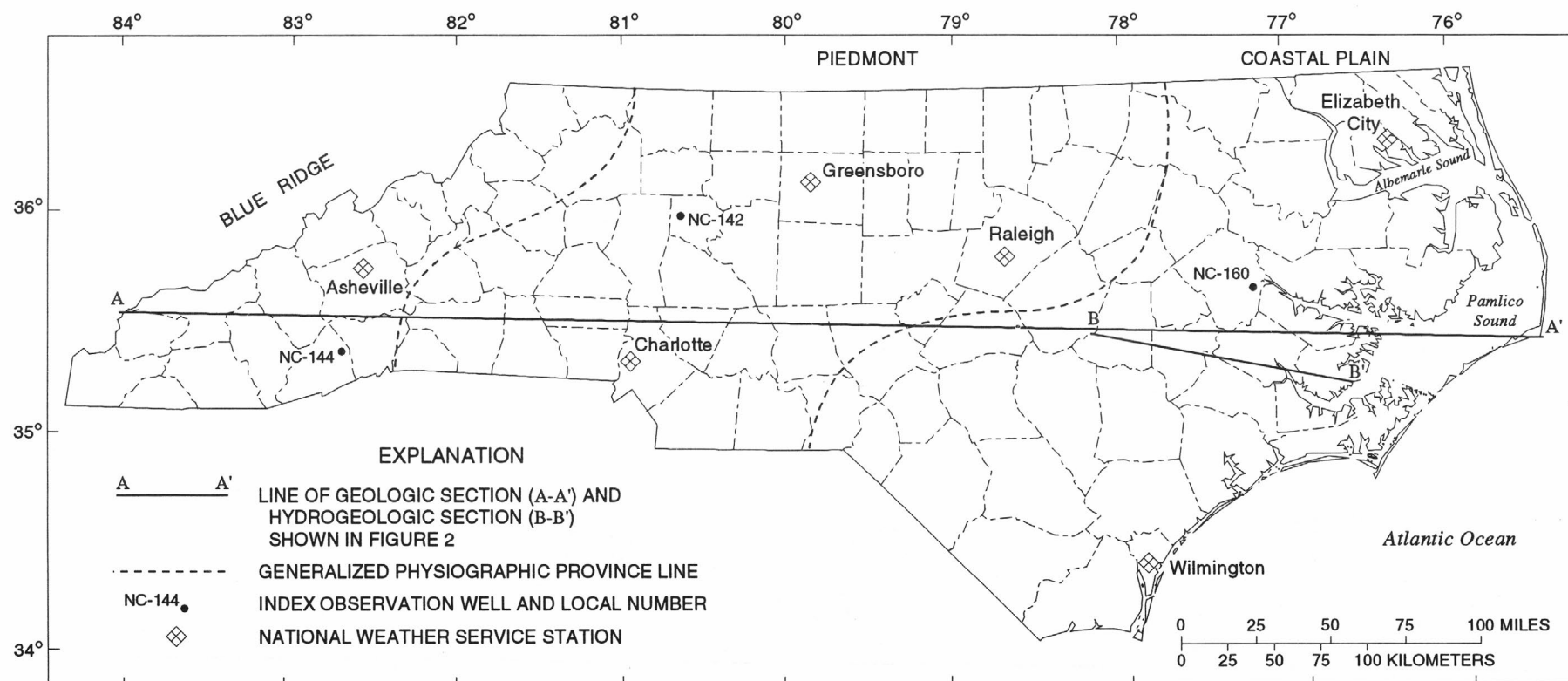


Figure 1.--Locations of weather stations and index wells in North Carolina.

WATER-RESOURCES DATA FOR NORTH CAROLINA, 1997

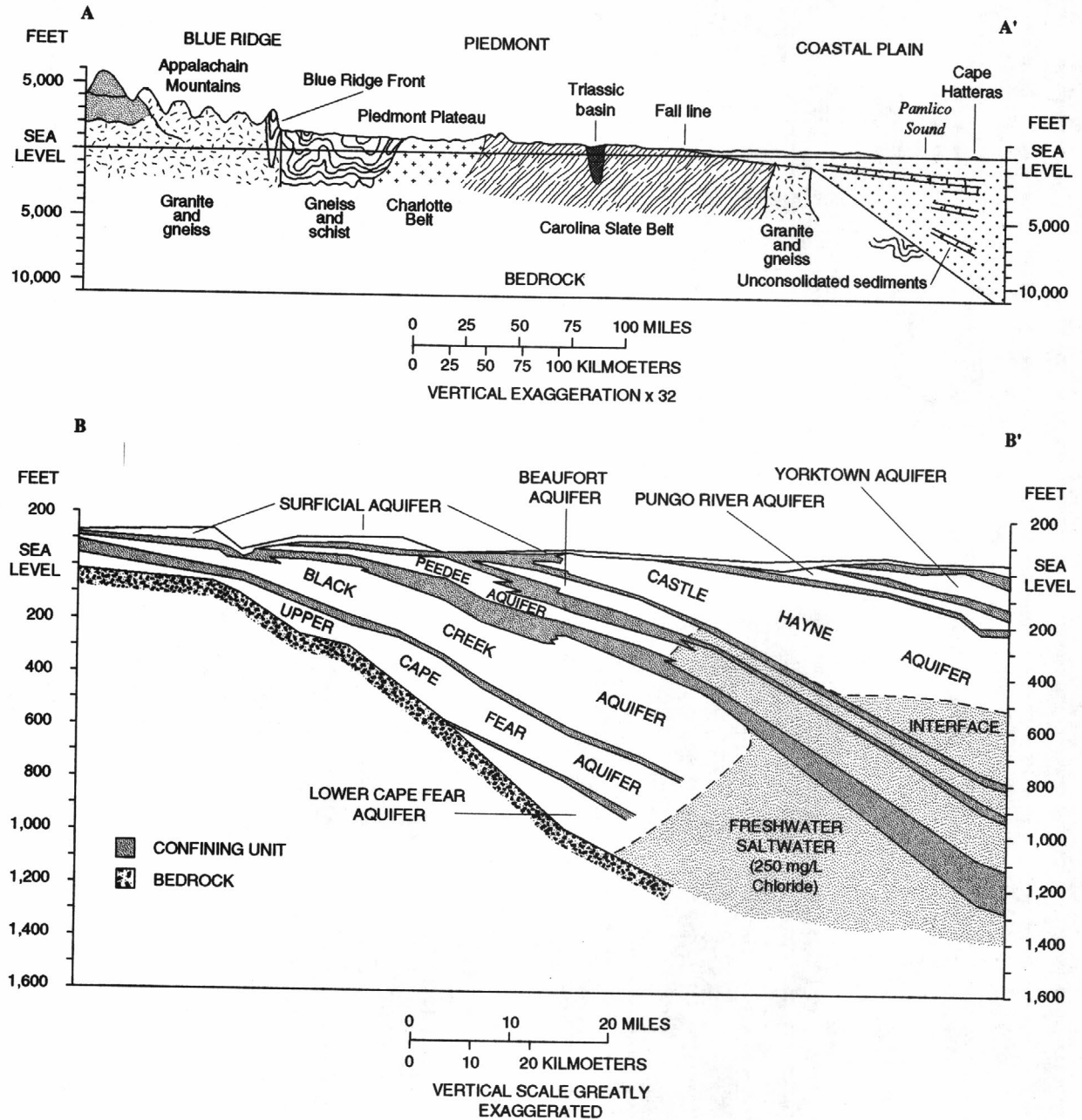


Figure 2.--Geologic section A - A' across North Carolina and hydrogeologic section B - B' in the Coastal Plain of North Carolina (as shown in figure 1).

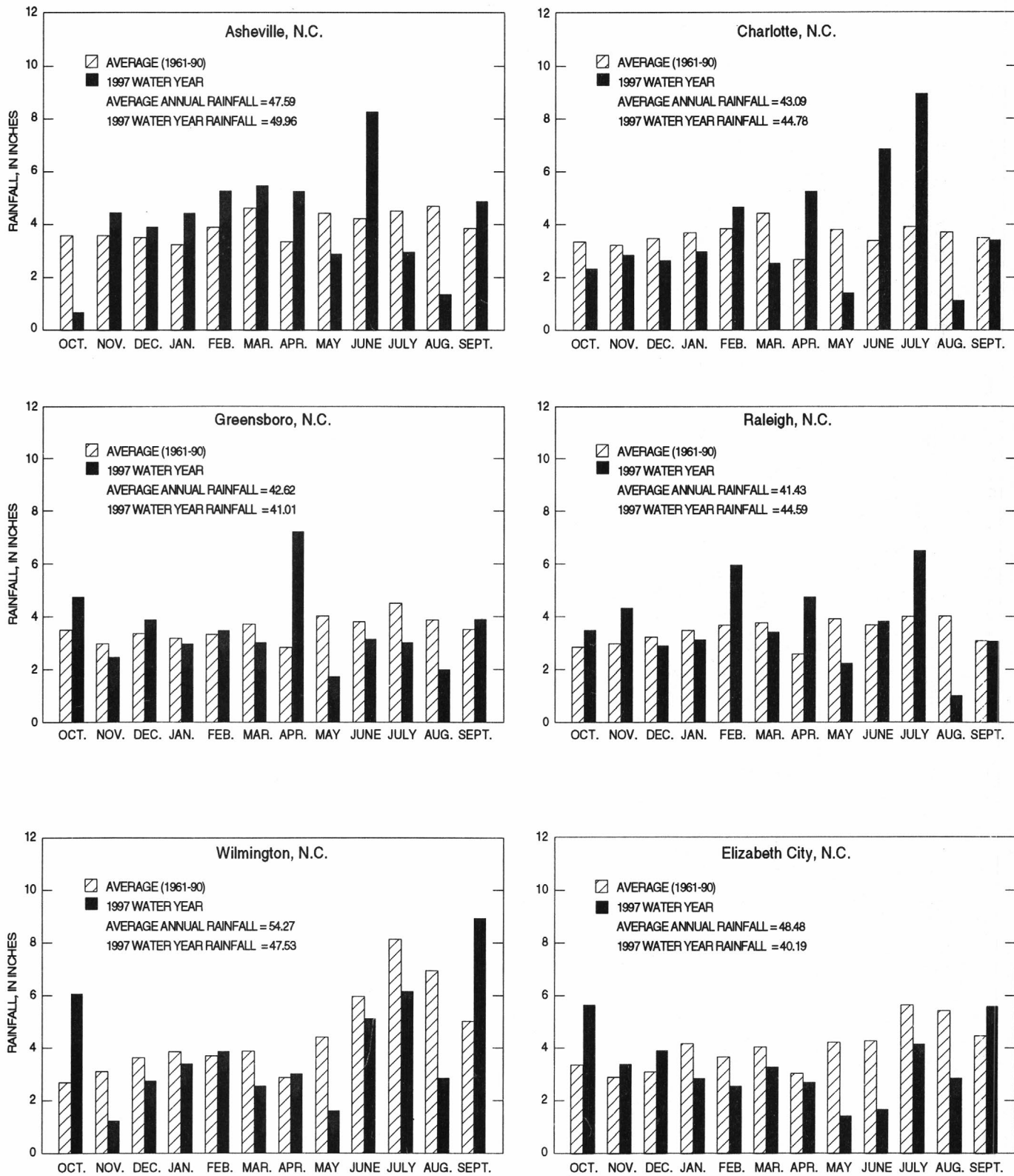


Figure 3.--Monthly rainfall at index stations for 1997 water year and average monthly rainfall for the period 1961-90 (data from National Oceanic and Atmospheric Administration reports).

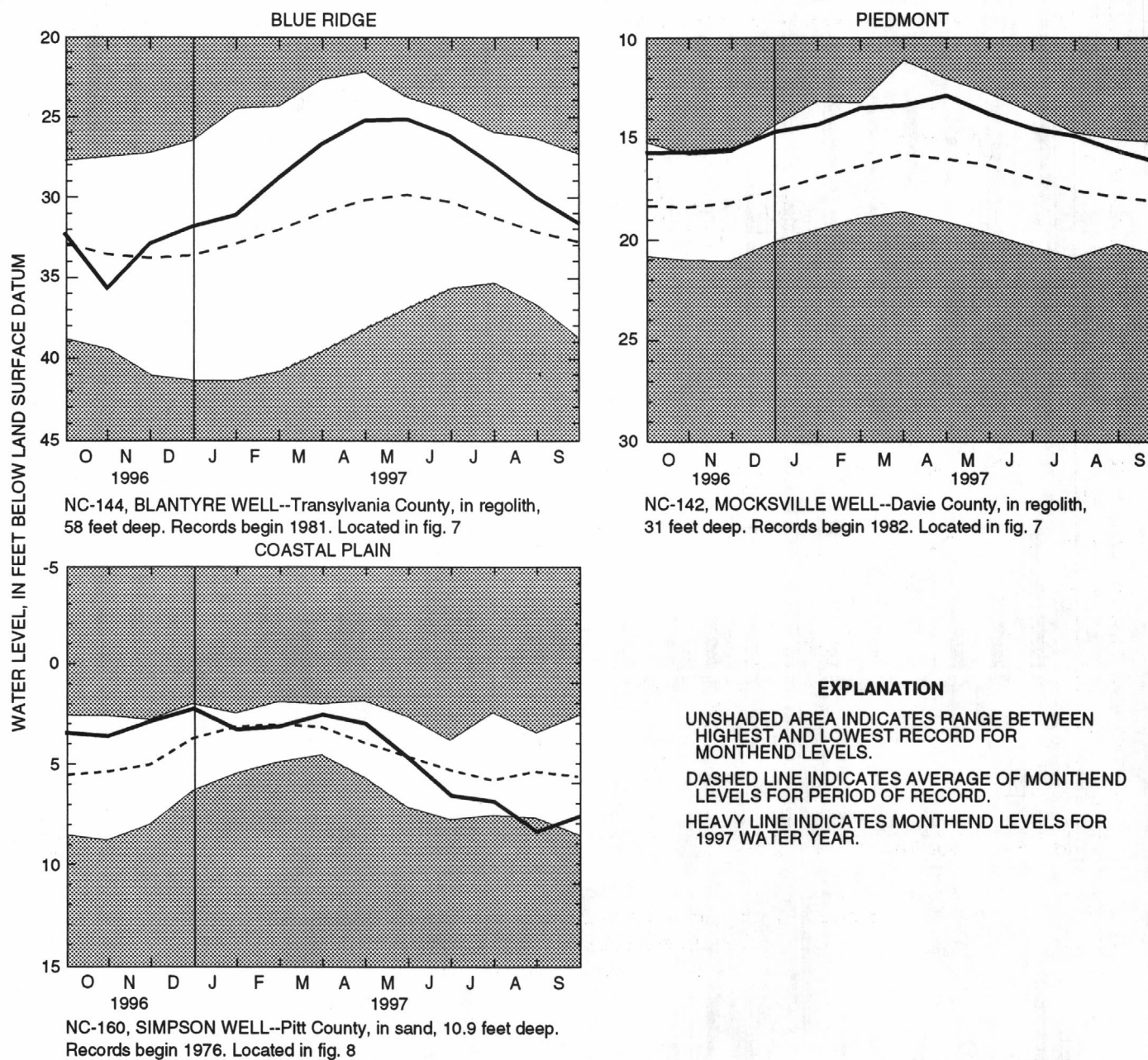


Figure 4.--Water levels in index observation wells in the Blue Ridge, Piedmont, and Coastal Plain Provinces.

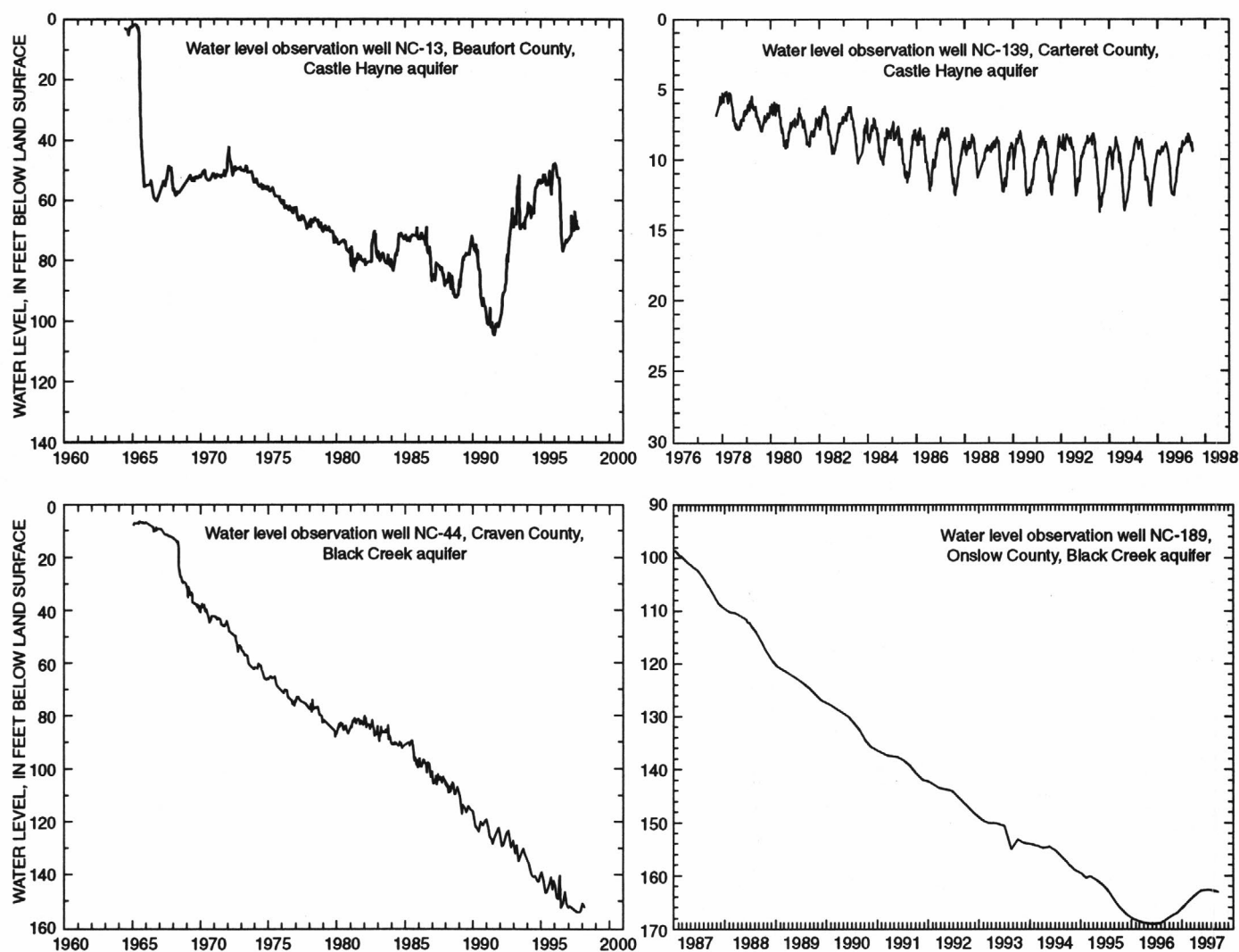


Figure 5.--Hydrographs of selected observation wells in the Castle Hayne, and Black Creek aquifers of the Coastal Plain Province.
Wells located in fig. 8.

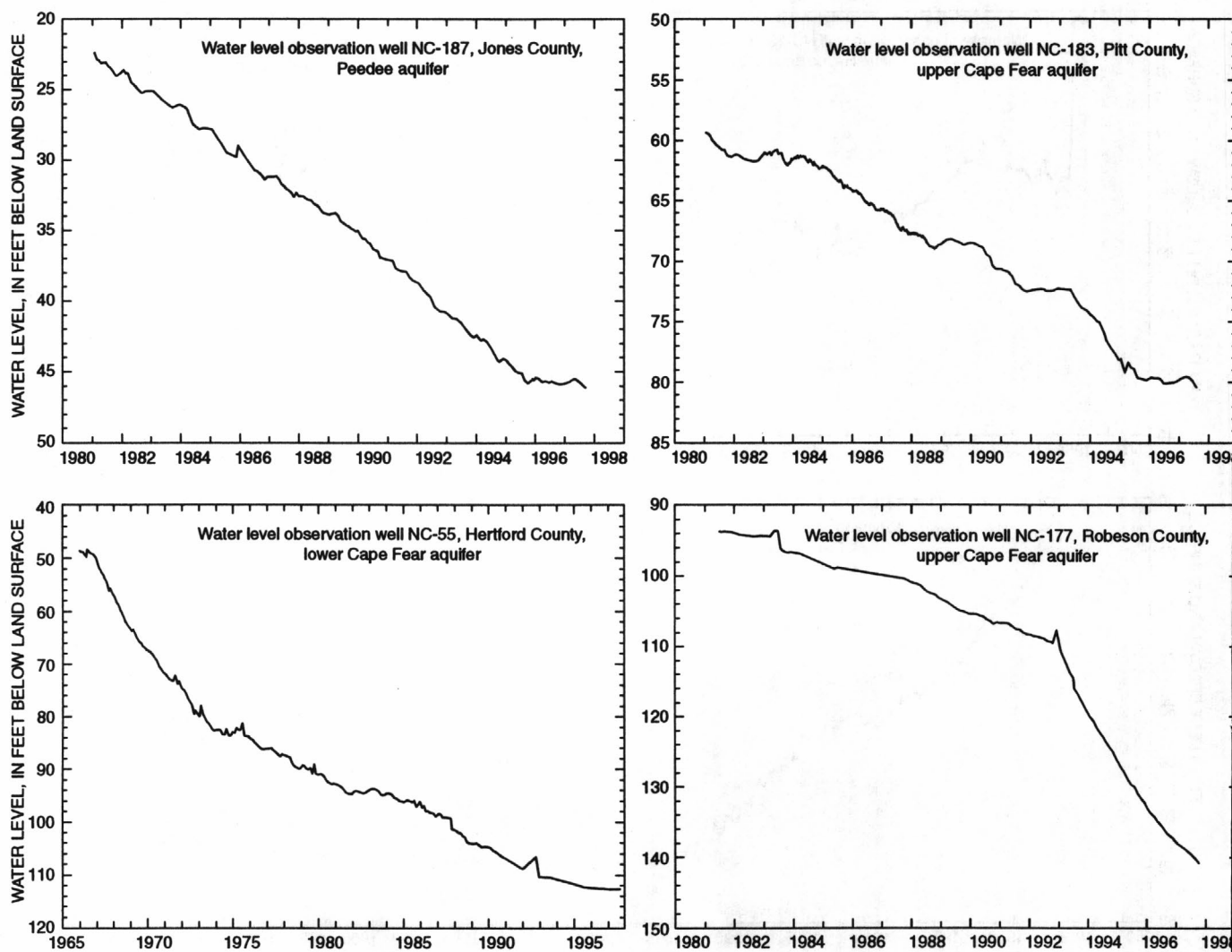


Figure 6.--Hydrographs of selected observation wells in the Peedee, upper Cape Fear, and lower Cape Fear aquifers of the Coastal Plain Province.
Wells located in fig. 8.

EXPLANATION OF RECORDS

Ground-Water-Level Data

The ground-water data published in this report are for the 1997 water year that began October 1, 1996, and ended September 30, 1997. A calendar of the water year is provided on the inside of the front cover. These data include water-level and water-quality data for ground water. The locations of the wells where the data were collected are shown in figures 7 and 8. The following sections provide a detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Site Identification Numbers

Each well in this report is assigned a unique identification number. This number usually is assigned when a well is first established and is retained for that well indefinitely; all data for that well in USGS data bases are under that site identification number.

The site identification numbers for wells are assigned according to the latitude and longitude location of the well. 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 within a 1-second grid. This site identification number, once assigned, has no locational significance. In the rare instance where the initial determination of latitude and longitude is found to be in error, the well will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the well description.

Local well numbers in this report generally fall within two numbering systems. Wells that belong in the statewide North Carolina observation-well program are indicated by the prefix NC- followed by a sequential number, for example NC-160. Other wells such as those used in special projects, are indicated by a two-letter county prefix followed by a sequential number, such as Me-251 or Rb-185 for wells in Mecklenburg and Robeson Counties, respectively.

Data Collection and Computation

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 consistently accurate and reliable.

Water-level data are obtained from direct measurements with a steel tape, an electric tape, or from the punched tape of a water-level recorder. Water-level measurements in this report are given in feet with reference to either sea level or land-surface datum. Sea level is the plane on which the national network of precise levels is based; land-surface datum is a datum plane that is approximately at land surface at each well. If known, the altitude (referenced to sea level) 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. Reported water levels in wells equipped with water-level recorders represent the mean water level 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

Water-level data are presented by counties arranged in alphabetical order. The prime identification number for a

given well is the 15-digit site identification number that appears in the upper left corner of the table. The secondary identification number is the local well number. Well locations are shown in figures 7 and 8; each well is identified on these maps by its local well number.

Each well record consists of three parts--the well description, data table of water levels observed during the water year, and for most wells, a hydrograph following the data table. Well descriptions are presented in the headings preceding the tabular data. The following comments clarify information presented in these various headings.

Description

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 that the well taps. Names of aquifers in the Coastal Plain Province are those mentioned in the "Major Aquifers" section of this report. Aquifers in the Piedmont and Blue Ridge Provinces are identified by the type of the crystalline igneous or metamorphic rock that the well taps, or by the regolith derived from the underlying rock

WELL CHARACTERISTICS.--This entry describes the well in terms of depth, casing diameter and 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 altitude of the land-surface datum is described in feet above sea level; it is reported with a precision depending on the method of determination. 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).

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) or the special project to which the well belongs.

PERIOD OF RECORD.--This entry indicates the period for which there are published records for the well. It reports the month and year at 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 sea level, and the dates of occurrence.

Water-Level Tables

A table of water levels follows the well description for each well. Water-level measurements in this report are given in feet with reference to either sea level or land-surface datum (lsd). Missing records are indicated by dashes in place of the water-level value.

For wells not equipped with recorders, water-level measurements were obtained periodically by steel or electric tape. Tables of periodic water-level measurements in these wells show the date of measurement and the measured water-level value.

Hydrographs

The hydrographs are a graphic display of water-level fluctuations over a period of time. In this report, current year, 10-year, and for some wells, period of record hydrographs are shown. Those hydrographs which display periodic water-level measurements are indicated by points which are connected with a dashed line from one measurement to the next. Hydrographs which display recorder data are indicated by a solid line representing the mean water level recorded for each day. Missing data are indicated by a blank space or break in a hydrograph. Missing data may occur as a result of recorder malfunctions, battery or clock failures, or mechanical problems related to the response of the recorder's float mechanism to water-level fluctuations in a well.

Ground-Water-Quality Data

Records of ground-water quality data in this report differ from other types of records in that, for most sampling sites, they consist of only one set of measurements for the water year.

Data Collection and Computation

The ground-water quality data in this report were obtained as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some counties but not for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality statewide.

Most methods for collecting and analyzing water samples are described in "U.S. Geological Survey Techniques of Water-Resources Investigations" manuals. Procedures for on-site measurements and for collecting, treating, and shipping samples are given in Techniques of Water-Resources Investigations (TWRI), Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chaps. A1, A3, and A4. These references are listed on pages 21-24 of this report. Also, detailed information on collecting, treating, and shipping samples can be obtained from the U.S. Geological Survey North Carolina District office in Raleigh.

Chemical-quality data published in this report are considered to be the most representative values available for the wells listed. The values reported represent as much as possible water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis.

Analysis for sulfide and measurement of alkalinity, pH, water temperature, specific conductance and dissolved oxygen are performed on site. All other sample analyses are performed at the U.S. Geological Survey laboratory in Arvada, Colorado, unless otherwise noted. Methods used by the U.S. Geological Survey laboratory are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; and Book 5, Chap. A1, A3, and A4.

Remarks Codes

The following remarks 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 (nonideal 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
V	Analyte was detected in both the environmental sample and the associated blanks.

Dissolved Trace-Element Concentrations

NOTE: Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter. Present data above the microgram per liter level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes. However, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols in water year 1994.

Water Quality-Control Data

Data generated from quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental sample data cannot be adequately interpreted because the errors associated with the sample data are unknown. The various types of QC samples collected by this district are described in the following section. Procedures have been established for the storage of water-quality-control data within the USGS. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples.

Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated by the overall data-collection process. The blank solution used to develop specific types of blank samples is a solution that is free of the analytes of interest. Any measured value signal in a blank sample for an analyte (a specific component measured in a chemical analysis) that was absent in the blank solution is believed to be due to contamination. There are many types of blank samples possible, each designed to segregate a different part of the overall data-collection process. The types of blank samples collected in this district are:

Field blank - a blank solution that is subjected to all aspects of sample collection, field processing preservation, transportation, and laboratory handling as an environmental sample.

Trip blank - a blank solution that is put in the same type of bottle used for an environmental sample and kept with the set of sample bottles before and after sample collection.

Blank Samples--Continued

Equipment blank - a blank solution that is processed through all equipment used for collecting and processing an environmental sample (similar to a field blank but normally done in the more controlled conditions of the office).

Sampler blank - a blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

Filter blank - a blank solution that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

Splitter blank - a blank solution that is mixed and separated using a field splitter in the same manner and through the same apparatus used for an environmental sample.

Preservation blank - a blank solution that is treated with the sampler preservatives used for an environmental sample.

Reference Samples

Reference material is a solution or material prepared by a laboratory whose composition is certified for one or more properties so that it can be used to assess a measurement method. Samples of reference material are submitted for analysis to ensure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properties are similar to the environmental sample properties.

Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. There are many types of replicate samples possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this district are:

Sequential samples - a type of replicate sample in which the samples are collected one after the other, typically over a short time.

Split sample - a type of replicate sample in which a sample is split into subsamples contemporaneous in time and space.

Spike Samples

Spike samples are samples to which known quantities of a solution with one or more well-established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis.

ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the world wide web (WWW). These data may be accessed at

<http://water.usgs.gov>

Some water-quality and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on magnetic tape or 3-1/2 inch floppy disk. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division District Offices (See address on the back of the title page.)

SPECIAL NETWORKS AND PROGRAMS

The National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 53 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key federal, State, and local water resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies.

Additional information about the NAWQA Program is available through the world wide web at:

http://wwwrvares.er.usgs.gov/nawqa/nawqa_home.html

REFERENCES

- Coble, R. W., Strickland, A. G., and Bailey, M. C., 1989, Ground-water level data for North Carolina, 1987: U.S. Geological Survey Open-File Report 89-68, 152 p.
- Eimers, J. L., Lyke, W. L., and Brockman, A. R., 1990, Simulation of ground-water flow in aquifers in Cretaceous rocks in the central Coastal Plain, North Carolina: U.S. Geological Survey Water-Resources Investigations Report 89-4153, 101 p.
- Strickland, A. G., Coble, R. W., Edwards, L. A., and Pope, B. F., 1992, Ground-water level data for North Carolina, 1988-90: U.S. Geological Survey Open-File Report 92-57, 167 p.
- Winner, M. D., Jr., 1981, An observation-well network concept as applied to North Carolina: U.S. Geological Survey Water-Resources Investigations Report 81-13, 59 p.
- Winner, M.D., Jr., and Coble, R.W., 1989, Hydrogeologic framework of the North Carolina Coastal Plain Aquifer System: U.S. Geological Survey Open-File 87-690, 155p. + 44 pl.

DEFINITION OF TERMS

Alluvium is a general term for clay, silt, sand, gravel or similar unconsolidated material deposited during recent geologic time by a stream or other body of running water.

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 unit. 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; such as, 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 plus or minus 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 plus or minus 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 plus or minus 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.

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 micro-organisms, such as bacteria.

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.

Color unit is produced by 1 milligram per liter of platinum in the form of the chloroplatinate 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.

DEFINITION OF TERMS--Continued

Dissolved is that material in a representative water sample which passes through a 0.45- μm 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.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate (CaCO_3).

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

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

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

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

Micrograms per liter (UG/L, $\mu\text{g/L}$) 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 1 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 milligrams per liter and is based on the mass of dry sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place. This term is no longer used in this series of reports.

Parameter Code is a 5-digit number used in the U.S. Geological Survey's data system, National Water Information System (NWIS), to uniquely identify a specific constituent. The codes used in NWIS are the same as those used in the U.S. Environmental Protection Agency's data system, STORET.

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

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

DEFINITION OF TERMS--Continued

Regolith is a general term for the layer of loose unconsolidated material, either residual or transported, that forms the surface of the land and overlies more coherent bedrock. Collectively, this unconsolidated material is composed of saprolite, alluvium, and soil.

Saprolite is the clay-rich residual material derived from in-place weathering of bedrock.

Sea level in this report refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)--a geodetic datum derived from a general adjustment of the first-order level nets of the United States and Canada, formerly called Sea Level Datum of 1929.

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 water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of 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 aquifer to aquifer, and it can vary in the same aquifer with changes in the composition of the water.

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" in this context has double meaning here, indicate 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, 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; 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.

Water table is the level in the saturated zone of 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 U.S. Geological Survey reports is the 12-month period from 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 ending September 30, 1994, is called the "1994 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 a series of previously published reports.

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.

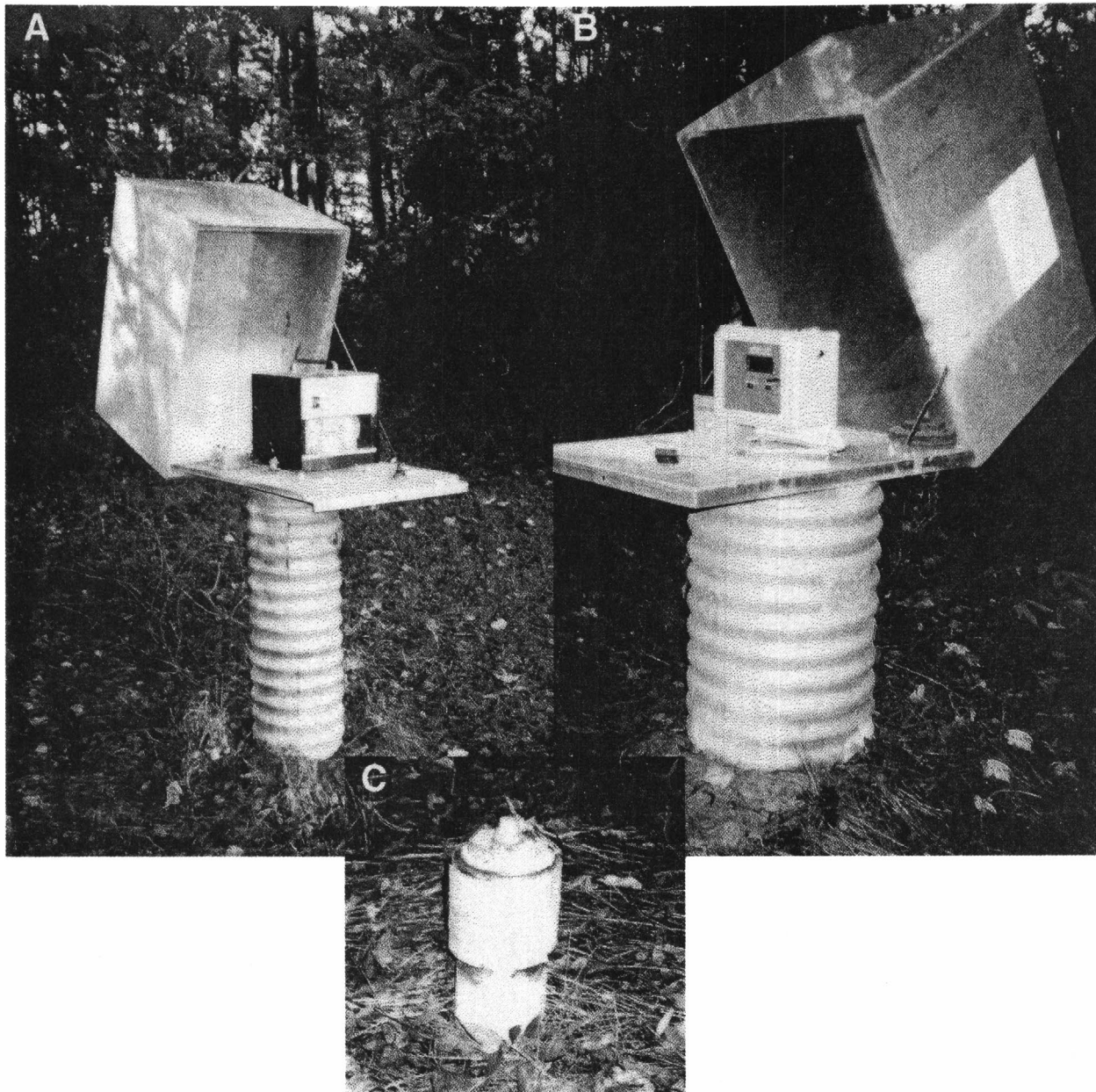
The reports listed below are for sale by the U.S. Geological Survey, Branch of Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

- 1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F. P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L.M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W. S. Keys: USGS--TWRI Book 2, Chapter E2. 1990. 150 pages.
- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W. E. Teasdale: USGS--TWRI Book 2, Chapter F1. 1989. 97 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurement at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.

- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F. A. Kilpatrick and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1989. 27 pages.
- 3-A10. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.
- 3-A11. *Measurement of discharge by the moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-A12. *Fluorometric procedures for dye tracing*, Revised, by J. F. Wilson, Jr., E. D. Cobb, and F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 34 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. *Use of flumes in measuring discharge*, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-A16. *Measurement of discharge using tracers*, by F. A. Kilpatrick and E. D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F. A. Kilpatrick, R. E. Rathbun, Nobuhiro Yotsukura, G. W. Parker, and L. L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.
- 3-A19. *Levels at streamflow gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 31 pages.
- 3-A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A20. 1993. 38 pages.
- 3-A21. *Stream-gaging cableways*, by C. Russell Wagner: USGS--TWRI Book 3, Chapter A21. 1995. 56 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.
- 3-B4. *Regression modeling of ground-water flow*, by R. L. Cooley and R. L. Naff: USGS--TWRI Book 3, Chapter B4. 1990. 232 pages.
- 3-B4. *Supplement 1. Regression modeling of ground-water flow - Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R. L. Cooley: USGS--TWRI Book 3, Chapter B4. 1993. 8 pages.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems--An introduction*, by O. L. Franke, T. E. Reilly, and G. D. Bennett: USGS--TWRI Book 3, Chapter B5. 1987. 15 pages.
- 3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T. E. Reilly, O. L. Franke, and G. D. Bennett: USGS--TWRI Book 3, Chapter B6. 1987. 28 pages.
- 3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E. J. Wexler: USGS--TWRI Book 3, Chapter B7. 1992. 190 pages.
- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.

- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L. C. Friedman, editors: USGS--TWRI Book 5, Chapter A1. 1989. 545 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
- 5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R. L. Wershaw, M. J. Fishman, R. R. Grabbe, and L. E. Lowe: USGS--TWRI Book 5, Chapter A3. 1987. 80 pages.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L. J. Britton and P. E. Greenson, editors: USGS--TWRI Book 5, Chapter A4. 1989. 363 pages.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M. G. McDonald and A. W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 pages.
- 6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S. A. Leake and D. E. Prudic: USGS--TWRI Book 6, Chapter A2. 1991. 68 pages.
- 6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L. J. Torak: USGS--TWRI Book 6, Chapter A3. 1993. 136 pages.
- 6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R. L. Cooley: USGS--TWRI Book 6, Chapter A4. 1992. 108 pages.
- 6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L. J. Torak: USGS--TWRI Book 6, Chapter A5, 1993. 243 pages.
- 6-A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler. 1995. 125 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. Schaffranek, 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.
- 9-A7. *National Field Manual for the Collection of Water-Quality Data: Biological Indicators*, by D. N. Myers and F. D. Wilde: USGS--TWRI Book 9, Chapter A7. 1997. 49 pages.



USGS observation well equipment; (A) digital recorder, (B) electronic recorder, and (C) tape-down well.

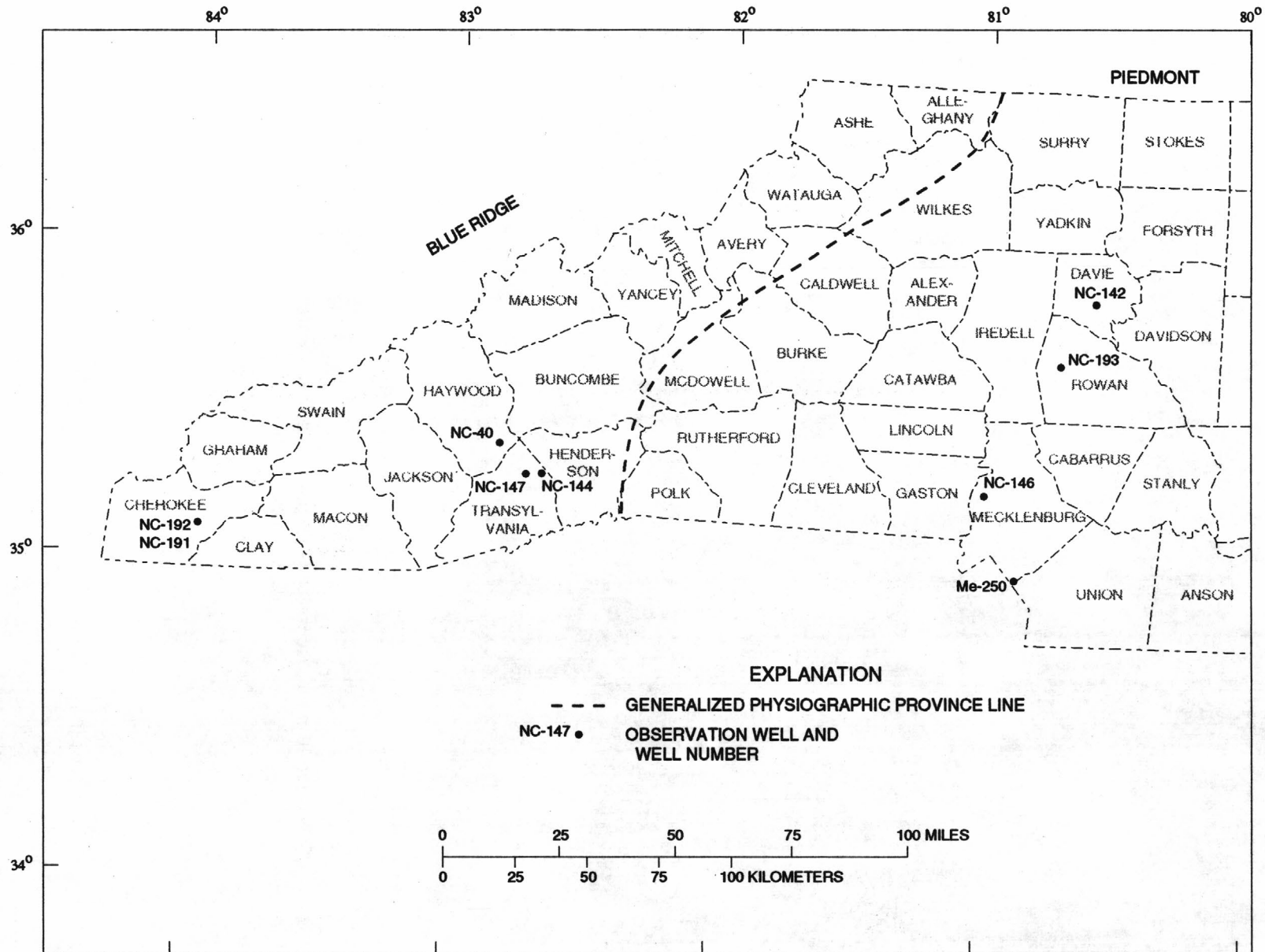
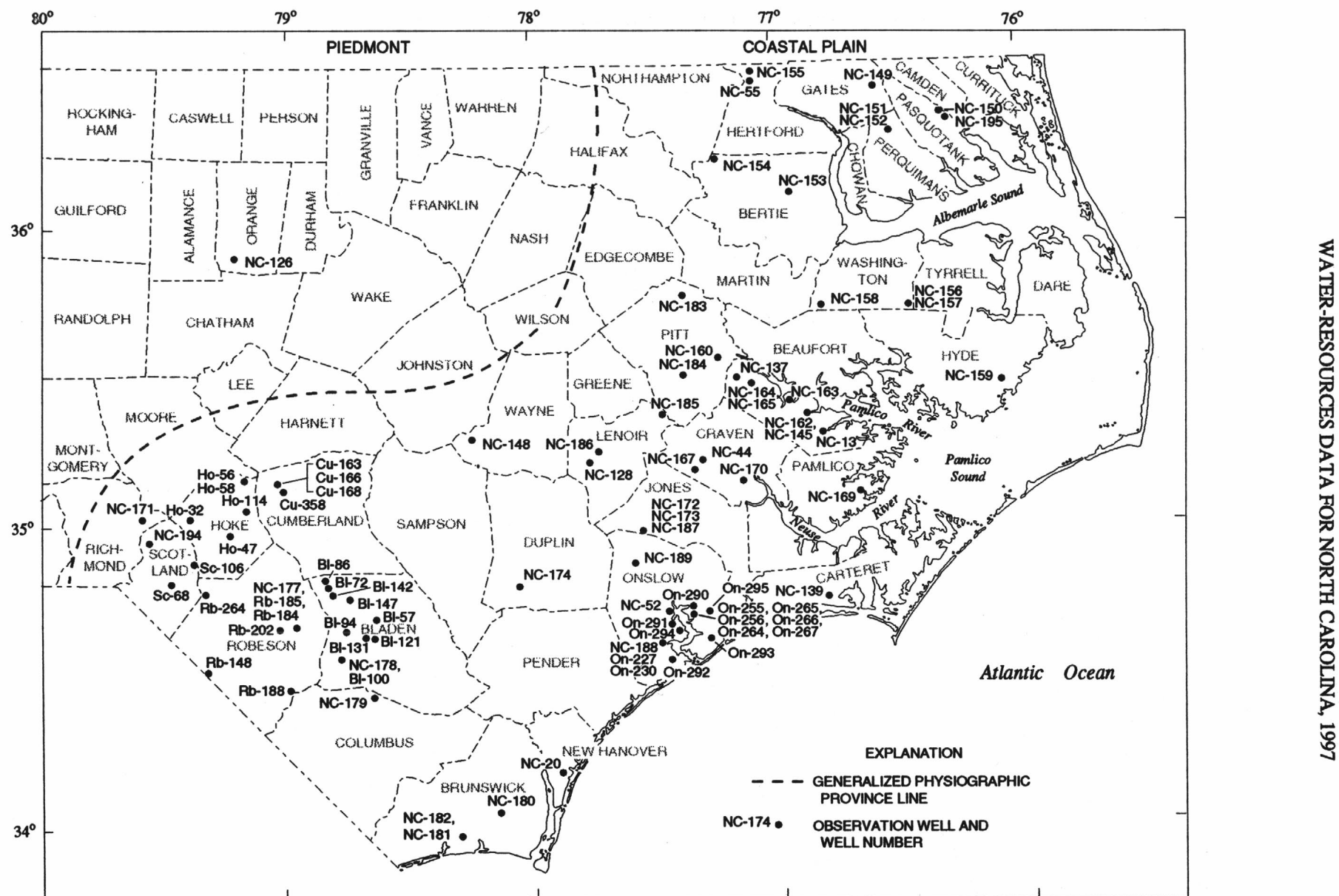


Figure 7.--Locations of observation wells in western North Carolina.



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 State Highway 306 and Secondary Road 1942. Owner: PCS Phosphate, Aurora Division.

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.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 10 ft above sea level (from topographic map). Measuring point: Bottom of angle iron bar, 2.33 ft above land-surface datum; revised from 0.36 ft below land-surface datum, Aug. 25, 1993.

REMARKS.--Since 1965 water levels affected by nearby pumping associated with mining operations. Well is part of local-effects network.

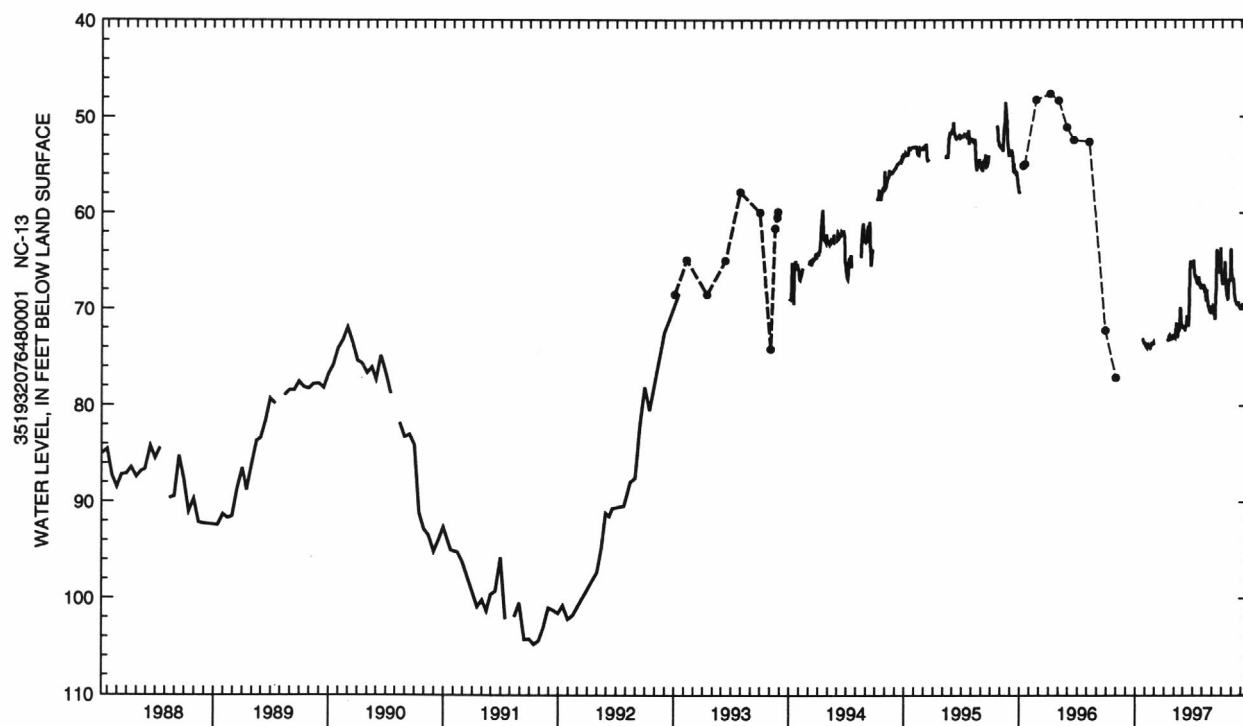
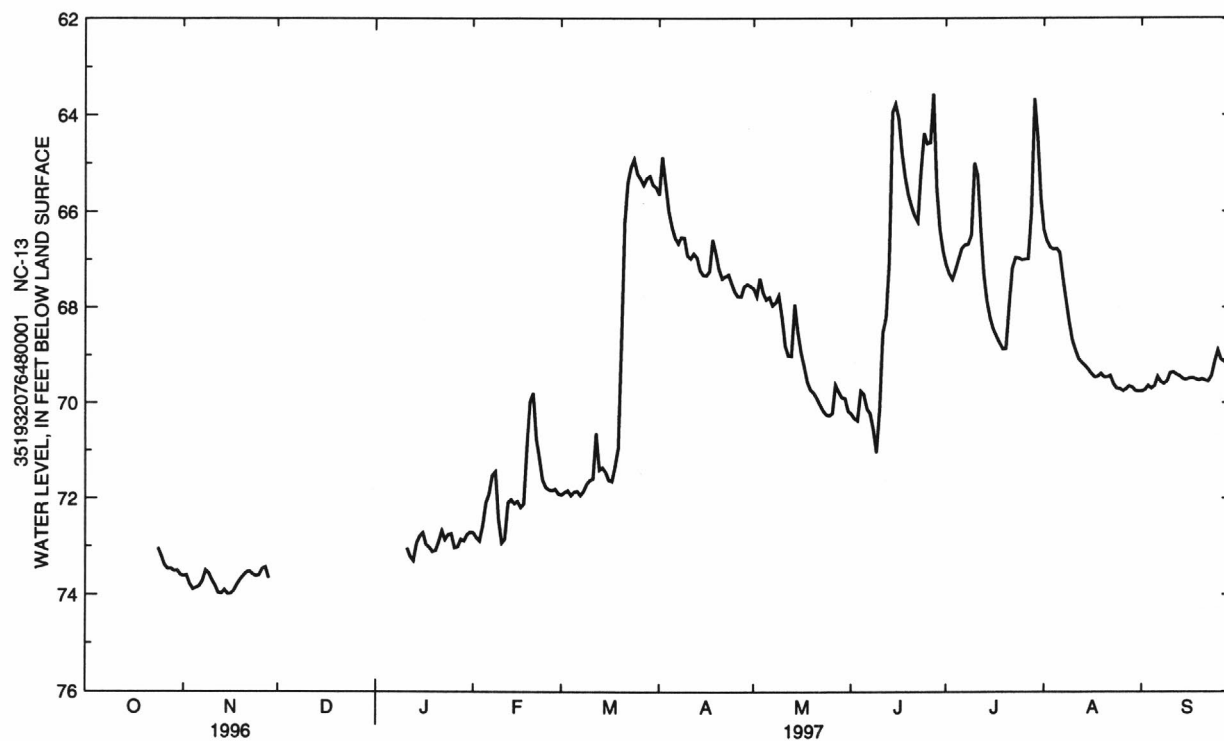
PERIOD OF RECORD.--June 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.38 ft below land-surface datum, Apr. 9, 1965; lowest water level recorded, 107.25 ft below land-surface datum, July 11, 1991.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	73.61	---	---	72.72	71.93	65.65	67.61	70.23	67.11	66.39	69.76
2	---	73.60	---	---	72.83	71.88	64.87	67.77	70.33	67.30	66.62	69.73
3	---	73.78	---	---	72.89	71.84	65.45	67.40	70.37	67.42	66.75	69.64
4	---	73.89	---	---	72.57	71.94	65.99	67.70	69.75	67.23	66.79	69.70
5	---	73.86	---	---	72.10	71.87	66.32	67.84	69.82	66.98	66.78	69.65
6	---	73.83	---	---	71.90	71.85	66.55	67.79	70.13	66.77	66.86	69.45
7	---	73.72	---	---	71.52	71.94	66.67	67.96	70.22	66.70	67.40	69.56
8	---	73.50	---	---	71.44	71.86	66.54	67.90	70.57	66.69	67.85	69.60
9	---	73.56	---	---	72.43	71.71	66.55	67.76	71.04	66.49	68.33	69.54
10	---	73.69	---	---	72.93	71.63	66.92	68.22	70.12	65.00	68.69	69.37
11	---	73.82	---	73.04	72.85	71.59	66.98	68.80	68.53	65.28	68.90	69.36
12	---	73.96	---	73.22	72.09	70.64	66.88	69.01	68.21	66.36	69.08	69.41
13	---	73.98	---	73.30	72.03	71.41	66.96	69.02	67.07	67.34	69.16	69.44
14	---	73.91	---	72.93	72.11	71.36	67.23	67.94	63.95	67.87	69.22	69.50
15	---	73.99	---	72.79	72.07	71.45	67.33	68.51	63.78	68.23	69.30	69.51
16	---	73.99	---	72.72	72.19	71.62	67.34	68.94	64.09	68.46	69.39	69.49
17	---	73.92	---	72.96	72.12	71.65	67.25	69.23	64.78	68.61	69.46	69.48
18	---	73.79	---	73.02	70.87	71.34	66.59	69.56	65.30	68.74	69.45	69.50
19	---	73.69	---	73.11	69.97	70.95	66.88	69.73	65.65	68.87	69.39	69.53
20	---	73.62	---	73.09	69.80	68.74	67.21	69.79	65.90	68.86	69.46	69.50
21	---	73.54	---	72.91	70.75	66.23	67.40	69.90	66.09	67.95	69.46	69.53
22	---	73.52	---	72.68	71.17	65.40	67.36	70.04	66.22	67.19	69.43	69.55
23	---	73.58	---	72.86	71.61	65.08	67.32	70.16	65.20	66.96	69.61	69.43
24	73.04	73.62	---	72.76	71.77	64.92	67.50	70.25	64.39	66.97	69.70	69.15
25	73.22	73.60	---	72.74	71.82	65.22	67.68	70.27	64.60	67.01	69.71	68.90
26	73.39	73.47	---	73.03	71.84	65.32	67.77	70.22	64.58	67.00	69.75	69.09
27	73.47	73.43	---	73.02	71.81	65.45	67.78	69.63	63.57	66.99	69.71	69.14
28	73.46	73.66	---	72.85	71.91	65.32	67.57	69.77	65.54	66.04	69.65	69.03
29	73.51	---	---	72.89	---	65.27	67.52	69.89	66.37	63.67	69.68	68.92
30	73.50	---	---	72.76	---	65.45	67.56	69.91	66.83	64.46	69.75	68.72
31	73.59	---	---	72.71	---	65.51	---	70.17	---	65.75	69.76	---
WTR YR 1997	MEAN 69.54		HIGH 63.57		LOW 73.99							



BEAUFORT COUNTY--Continued

352615077083401. Local number, NC-137; DENR Creeping Swamp Research Station well O21q1.

LOCATION.--Lat 35°26'15", long 77°08'38", Hydrologic Unit 03020202, 1 mi west of U.S. Highway 17 on State Highway 102, and 3 mi north of Wilmar. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Castle Hayne aquifer of Oligocene and Eocene age.

WELL CHARACTERISTICS.--Drilled observation well, drilled to 143 ft, diameter 4 in., cased to 72 ft, open hole to 143 ft; measured depth 141.6 ft, September 1981.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 56.84 ft above sea level (levels by DENR). Measuring point: Top of collar on casing, 0.80 ft above land-surface datum.

REMARKS.--Well is part of areal-effects network.

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

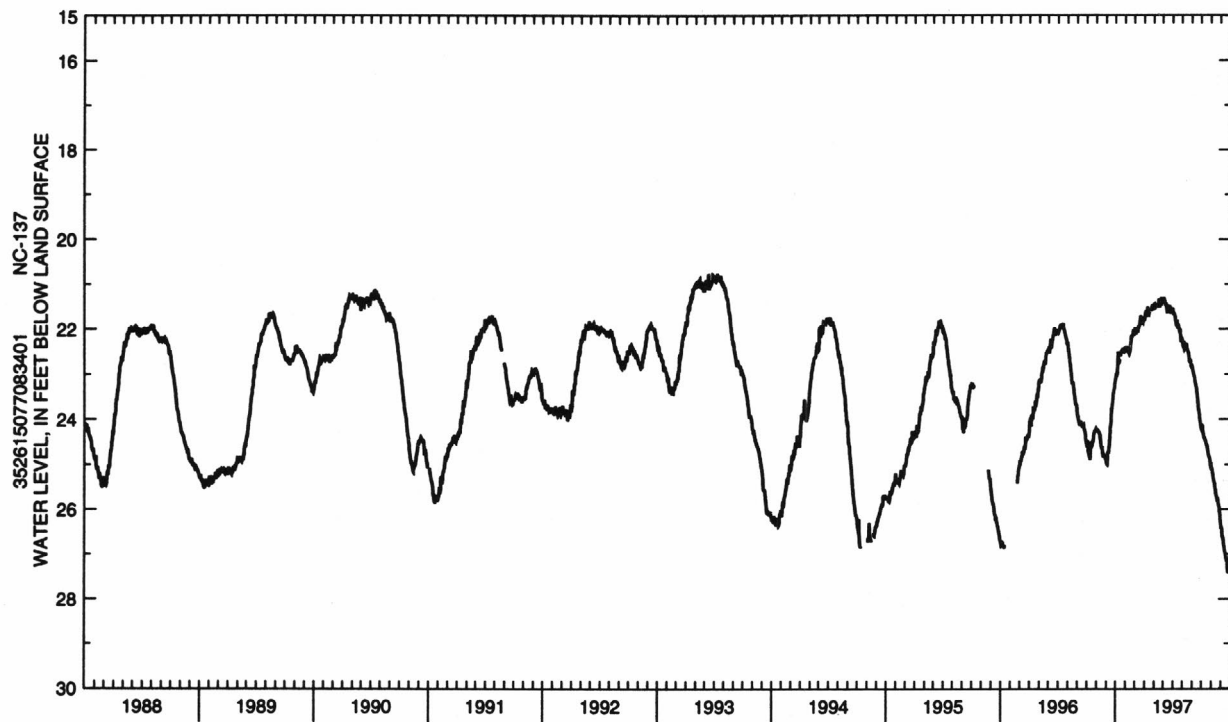
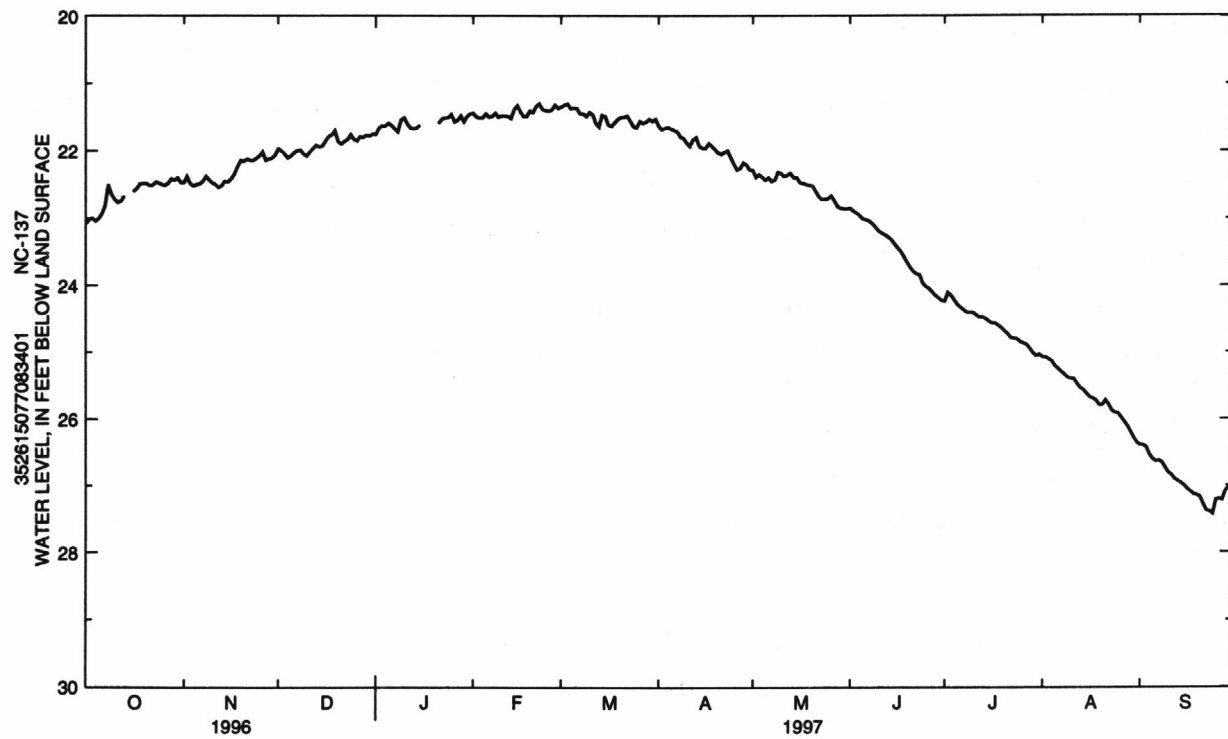
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 19.90 ft below land-surface datum, Feb. 3, 1972; lowest water level recorded, 27.47 ft below land-surface datum, Sept. 24, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.07	22.47	21.97	21.76	21.44	21.35	21.63	22.29	22.85	24.24	25.08	26.40
2	23.01	22.38	22.00	21.66	21.50	21.32	21.68	22.39	22.89	24.11	25.08	26.40
3	23.00	22.48	22.05	21.63	21.51	21.30	21.66	22.35	22.92	24.15	25.11	26.43
4	23.04	22.52	22.11	21.63	21.51	21.37	21.65	22.39	22.96	24.22	25.14	26.54
5	23.00	22.50	22.08	21.59	21.45	21.36	21.67	22.43	23.01	24.29	25.21	26.61
6	22.93	22.49	22.03	21.62	21.50	21.37	21.69	22.40	23.02	24.33	25.25	26.64
7	22.81	22.45	22.00	21.67	21.49	21.45	21.71	22.45	23.04	24.37	25.30	26.63
8	22.50	22.38	21.99	21.72	21.44	21.45	21.79	22.43	23.08	24.41	25.34	26.66
9	22.64	22.43	22.05	21.54	21.50	21.49	21.81	22.32	23.13	24.41	25.39	26.74
10	22.72	22.47	22.08	21.51	21.48	21.43	21.88	22.33	23.19	24.41	25.40	26.81
11	22.76	22.50	22.02	21.60	21.48	21.46	21.93	22.38	23.22	24.45	25.41	26.85
12	22.74	22.54	21.97	21.66	21.49	21.59	21.83	22.36	23.25	24.48	25.48	26.91
13	22.67	22.52	21.92	21.67	21.52	21.64	21.80	22.33	23.28	24.48	25.54	26.94
14	---	22.45	21.94	21.66	21.38	21.47	21.93	22.40	23.32	24.50	25.57	26.97
15	---	22.46	21.93	21.62	21.33	21.49	21.96	22.40	23.38	24.54	25.63	27.01
16	22.60	22.42	21.85	---	21.42	21.61	21.96	22.47	23.44	24.57	25.68	27.06
17	22.56	22.35	21.79	---	21.49	21.63	21.89	22.48	23.49	24.57	25.70	27.10
18	22.49	22.24	21.76	---	21.49	21.58	21.93	22.50	23.57	24.60	25.73	27.14
19	22.48	22.15	21.70	---	21.41	21.53	21.98	22.51	23.65	24.64	25.80	27.15
20	22.48	22.16	21.86	---	21.43	21.50	22.03	22.52	23.73	24.69	25.80	27.18
21	22.51	22.13	21.90	21.59	21.34	21.50	22.05	22.60	23.79	24.73	25.73	27.29
22	22.51	22.14	21.86	21.53	21.30	21.48	22.02	22.68	23.83	24.79	25.79	27.38
23	22.46	22.15	21.83	21.51	21.38	21.56	22.00	22.72	23.84	24.80	25.88	27.39
24	22.47	22.12	21.76	21.51	21.40	21.64	22.10	22.72	23.97	24.81	25.91	27.43
25	22.50	22.08	21.83	21.46	21.41	21.65	22.20	22.71	24.02	24.85	25.92	27.22
26	22.51	22.02	21.85	21.57	21.39	21.56	22.28	22.67	24.05	24.87	25.98	27.21
27	22.48	22.14	21.79	21.55	21.32	21.59	22.26	22.74	24.10	24.89	26.05	27.22
28	22.41	22.13	21.80	21.48	21.37	21.57	22.18	22.83	24.15	24.95	26.11	27.09
29	22.43	22.11	21.77	21.57	---	21.53	22.21	22.85	24.19	25.02	26.20	27.03
30	22.40	22.07	21.78	21.49	---	21.56	22.28	22.86	24.23	25.06	26.29	27.02
31	22.47	---	21.75	21.45	---	21.53	---	22.86	---	25.04	26.36	---

WTR YR 1997 MEAN 23.07 HIGH 21.30 LOW 27.43



BEAUFORT COUNTY--Continued

352037076514101. Local number, NC-145; DENR 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: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Castle Hayne aquifer of Oligocene and Eocene age.

WELL CHARACTERISTICS.--Drilled observation well, drilled to 280 ft, diameter 4 in., cased to 169 ft, open hole to 280 ft; measured depth 278 ft, September 1981.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals. Measured periodically with steel tape October 1992 to September 1994.

DATUM.--Land-surface datum is 36.41 ft above sea level (levels by DENR); revised from 36.64 ft above sea level, October 1987. Measuring point: Top of instrument shelf, 2.70 ft above land-surface datum; revised from 2.47 ft above land-surface datum, October 1987.

REMARKS.--Water level is affected by nearby pumping associated with mining operations. Well is part of local-effects network.

PERIOD OF RECORD.--June 1980 to current year. Continuous record began July 1984. Records from June 1980 to June 1984 are unpublished and available in the files of the Groundwater Section, DEHNR.

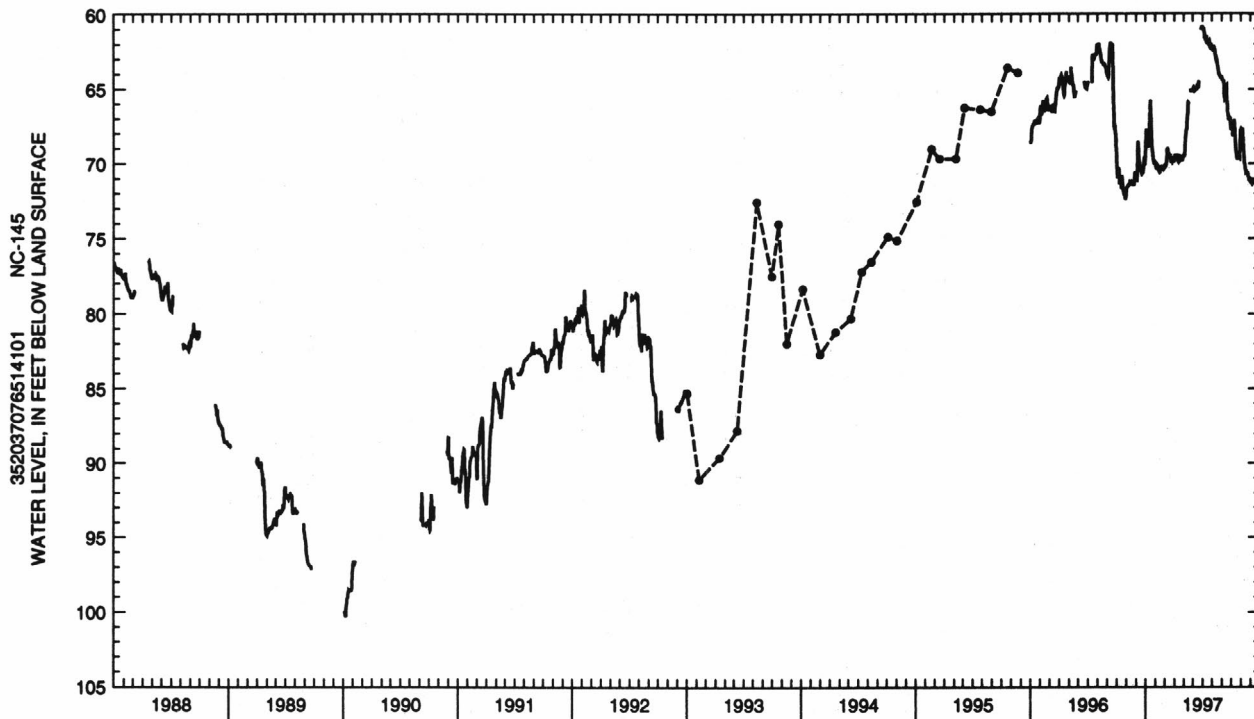
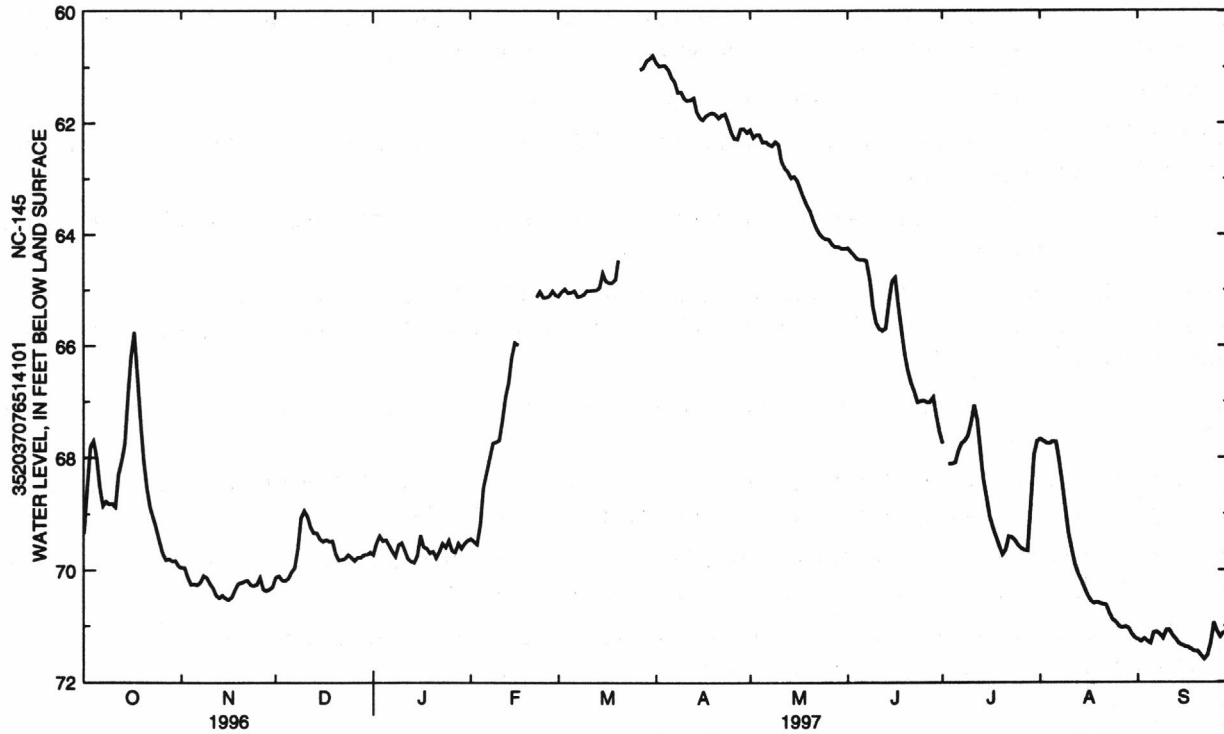
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 60.77 ft below land-surface datum, Mar. 29, 1997; lowest water level recorded, 100.32 ft below land-surface datum, Oct. 9 and 10, 1989.

REVISIONS.--Water-level mean values and extremes for period of record published in Water Resources Data, North Carolina, NC-85-1, NC-86-1, and NC-87-1, should be adjusted by -0.23 ft.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69.34	69.96	70.13	69.72	69.44	65.11	60.91	62.12	64.24	67.74	67.67	71.24
2	68.55	69.96	70.10	69.51	69.49	65.03	60.98	62.26	64.31	---	67.70	71.28
3	67.80	70.14	70.18	69.39	69.54	64.98	60.97	62.21	64.37	68.11	67.74	71.22
4	67.70	70.26	70.19	69.48	69.19	65.05	60.97	62.21	64.44	68.11	67.75	71.28
5	68.00	70.25	70.15	69.46	68.54	65.04	61.05	62.35	64.45	68.09	67.71	71.31
6	68.52	70.27	70.03	69.56	68.27	65.01	61.18	62.34	64.45	67.89	67.72	71.12
7	68.86	70.22	69.96	69.66	68.02	65.12	61.26	62.39	64.47	67.75	68.06	71.11
8	68.78	70.10	69.61	69.75	67.74	65.11	61.45	62.41	64.83	67.70	68.48	71.15
9	68.83	70.14	69.07	69.55	67.72	65.08	61.44	62.34	65.30	67.62	68.93	71.22
10	68.82	70.24	68.95	69.51	67.69	65.01	61.56	62.39	65.59	67.39	69.34	71.07
11	68.88	70.32	69.04	69.64	67.35	65.01	61.60	62.68	65.70	67.06	69.65	71.07
12	68.30	70.45	69.24	69.79	66.92	65.00	61.58	62.81	65.73	67.33	69.89	71.17
13	68.06	70.50	69.34	69.84	66.67	65.00	61.55	62.87	65.69	67.90	70.06	71.24
14	67.76	70.45	69.34	69.86	66.20	64.95	61.79	62.99	65.22	68.38	70.18	71.32
15	66.88	70.51	69.45	69.74	65.94	64.69	61.91	62.96	64.84	68.75	70.32	71.35
16	66.19	70.53	69.49	69.38	65.98	64.84	61.94	63.04	64.77	69.05	70.45	71.37
17	65.76	70.48	69.46	69.58	---	64.87	61.87	63.20	65.24	69.25	70.55	71.39
18	66.53	70.35	69.49	69.61	---	64.87	61.83	63.34	65.73	69.41	70.59	71.42
19	67.37	70.24	69.48	69.69	---	64.81	61.81	63.48	66.13	69.57	70.57	71.46
20	68.04	70.23	69.71	69.66	---	64.46	61.84	63.58	66.44	69.72	70.60	71.46
21	68.55	70.20	69.82	69.78	---	---	61.91	63.74	66.66	69.64	70.61	71.53
22	68.88	70.19	69.81	69.66	65.12	---	61.86	63.89	66.81	69.40	70.63	71.60
23	69.08	70.27	69.79	69.52	65.02	---	61.83	63.98	67.01	69.42	70.78	71.53
24	69.27	70.28	69.72	69.59	65.13	---	61.97	64.05	66.99	69.46	70.89	71.31
25	69.50	70.26	69.77	69.47	65.13	---	62.17	64.08	66.98	69.56	70.93	70.94
26	69.70	70.13	69.83	69.65	65.10	---	62.28	64.09	67.01	69.61	71.01	71.08
27	69.82	70.34	69.77	69.68	65.01	61.04	62.29	64.18	67.01	69.64	71.03	71.20
28	69.80	70.37	69.77	69.52	65.09	61.01	62.11	64.22	66.92	69.65	71.01	71.13
29	69.84	70.34	69.72	69.61	---	60.88	62.10	64.22	67.23	68.83	71.04	71.10
30	69.83	70.30	69.72	69.52	---	60.85	62.17	64.25	67.53	67.95	71.14	70.99
31	69.93	---	69.68	69.47	---	60.79	---	64.25	---	67.70	71.21	---
WTR YR 1997	MEAN 67.52		HIGH 60.79		LOW 71.60							



WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

BEAUFORT COUNTY--Continued

352037076514106. Local number, NC-162; DENR 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: DENR (North Carolina Department of Environment and Natural Resources).

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.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 37.09 ft above sea level (levels by DENR). Measuring point: Top of instrument shelf, 2.35 ft above land-surface datum; revised from 3.07 ft above land-surface datum, August 25, 1993.

REMARKS.--Water level is affected by nearby pumping associated with mining operations. Well is part of local-effects network.

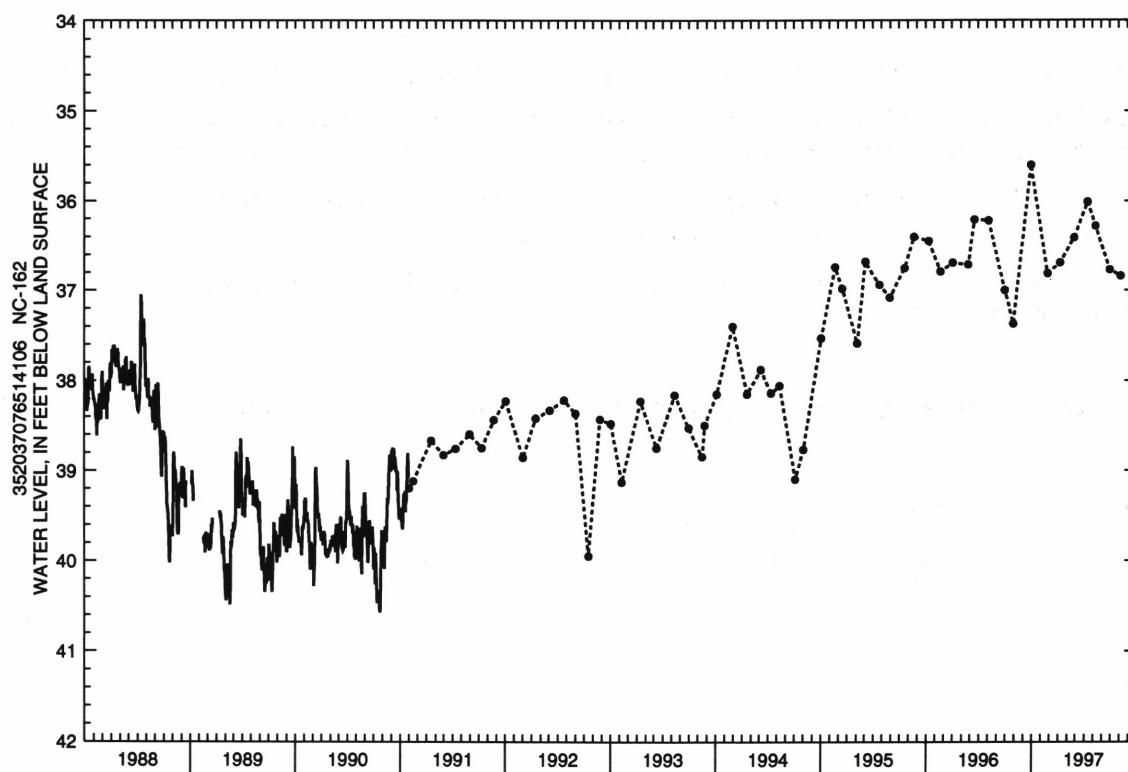
PERIOD OF RECORD.--June 1980 to current year. Continuous record December 1986 to November 1990. Records from June 1980 to July 1986 are unpublished and available in the files of the Groundwater Section, DENR.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 35.60 ft below land-surface datum, Oct. 10, 1996; lowest water level recorded, 40.58 ft below land-surface datum, July 21, 1990.

REVISIONS.--Water-level mean values and extremes for period of record published in Water Resources Data, North Carolina, NC-87-1, should be adjusted by -0.35 ft.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	35.60	JAN 10	36.69	APR 15	36.01	MAY 12	36.28	JUL 2	36.77	AUG 8	36.84
NOV 22	36.81	FEB 26	36.41								



BEAUFORT COUNTY--Continued

352224076570403. Local number, NC-163; DENR 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, and 0.25 mi north of State Highway 33 on Secondary Road 1100. Owner: DENR (North Carolina Department of Environment and Natural Resources).

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.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 25.38 ft above sea level (levels by DENR). Measuring point: Top of plastic sleeve on instrument shelf, 2.07 ft above land-surface datum (since July 1990).

REMARKS.--Well is part of areal-effects network.

PERIOD OF RECORD.--June 1967 to September 1997. Continuous record began November 1986. Records from June 1967 to November 1986 are unpublished and available in the files of the Groundwater Section, DENR.

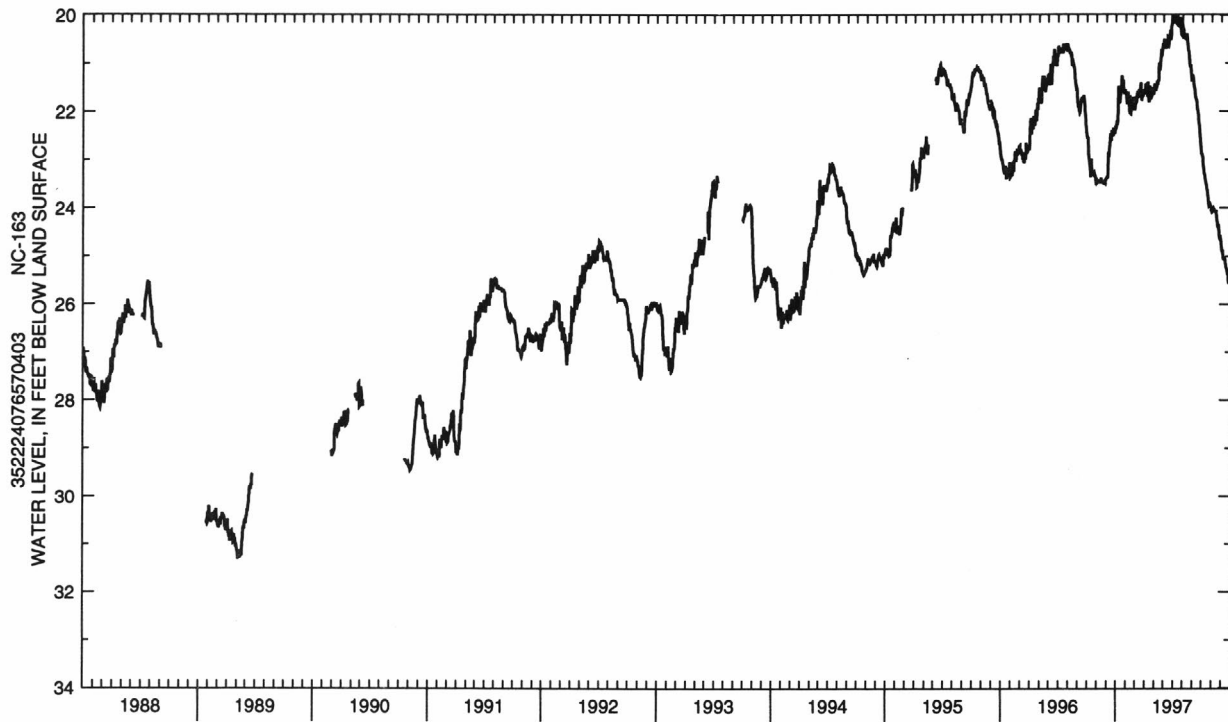
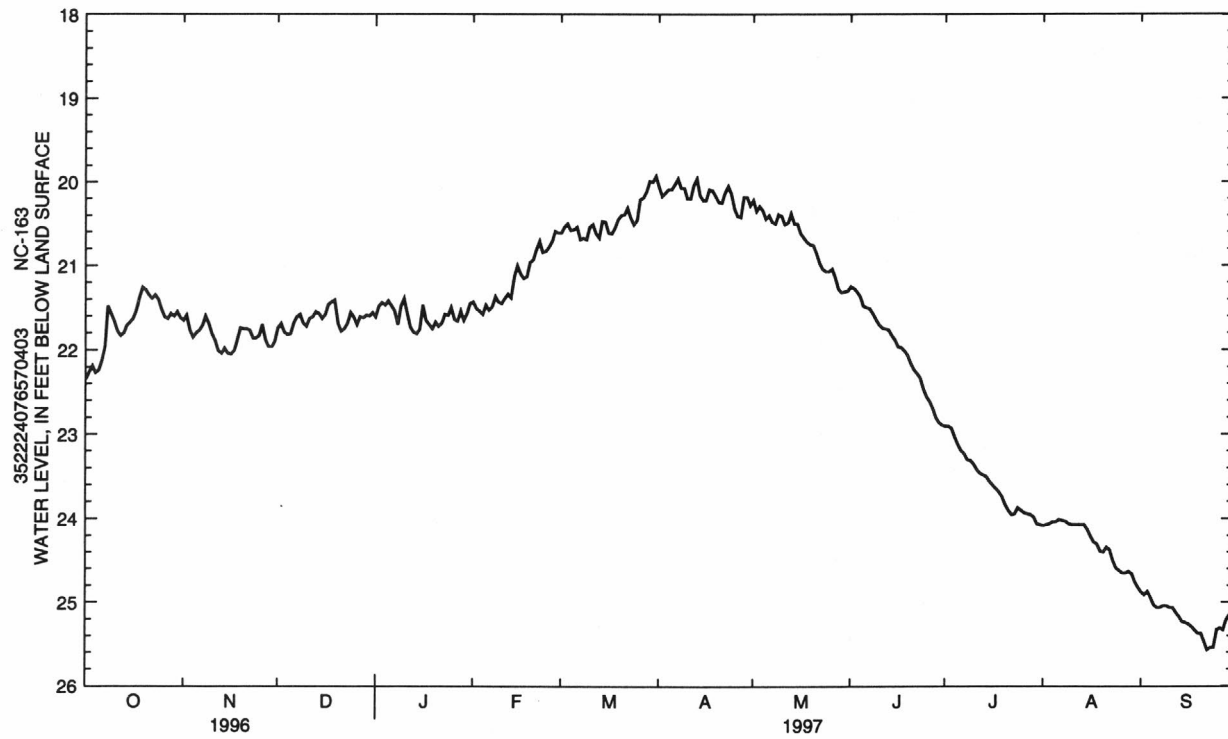
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 19.87 ft below land-surface datum, Mar. 31, 1997; lowest water level recorded, 31.36 ft below land-surface datum, Feb. 4 and 5, 1989.

REVISIONS.--Water-level mean values and extremes for period of record published in Water Resources Data, North Carolina, NC-87-1, should be adjusted by -0.1 ft.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.34	21.65	21.74	21.61	21.43	20.61	20.06	20.22	21.25	22.90	24.08	24.88
2	22.26	21.59	21.69	21.48	21.51	20.54	20.17	20.35	21.27	22.90	24.07	24.91
3	22.19	21.77	21.79	21.44	21.54	20.50	20.13	20.29	21.31	22.93	24.06	24.87
4	22.27	21.85	21.82	21.47	21.58	20.58	20.09	20.34	21.37	23.03	24.04	24.94
5	22.24	21.80	21.81	21.42	21.47	20.57	20.09	20.44	21.48	23.12	24.04	25.03
6	22.13	21.77	21.68	21.48	21.53	20.54	20.03	20.40	21.50	23.19	24.01	25.06
7	21.96	21.71	21.61	21.54	21.49	20.69	19.96	20.48	21.51	23.23	24.02	25.06
8	21.48	21.60	21.58	21.70	21.37	20.67	20.07	20.50	21.57	23.30	24.03	25.04
9	21.57	21.69	21.68	21.48	21.43	20.69	20.07	20.39	21.64	23.31	24.06	25.04
10	21.66	21.81	21.72	21.39	21.45	20.54	20.20	20.41	21.70	23.35	24.07	25.06
11	21.78	21.89	21.63	21.56	21.39	20.51	20.20	20.51	21.74	23.42	24.07	25.06
12	21.83	22.01	21.61	21.73	21.34	20.62	20.04	20.49	21.75	23.46	24.07	25.12
13	21.80	22.04	21.55	21.79	21.38	20.67	19.96	20.38	21.76	23.48	24.07	25.17
14	21.71	21.98	21.57	21.81	21.13	20.47	20.16	20.50	21.83	23.50	24.07	25.23
15	21.67	22.04	21.63	21.76	21.00	20.48	20.22	20.50	21.88	23.56	24.13	25.24
16	21.63	22.05	21.58	21.47	21.10	20.61	20.22	20.62	21.96	23.60	24.21	25.26
17	21.53	22.01	21.46	21.65	21.15	20.62	20.09	20.67	21.97	23.64	24.28	25.29
18	21.38	21.89	21.43	21.70	21.13	20.55	20.10	20.72	22.01	23.68	24.30	25.33
19	21.26	21.74	21.41	21.75	20.96	20.45	20.17	20.75	22.06	23.74	24.39	25.37
20	21.29	21.75	21.69	21.67	20.93	20.40	20.24	20.76	22.16	23.83	24.40	25.37
21	21.35	21.75	21.78	21.72	20.81	20.39	20.25	20.85	22.23	23.90	24.34	25.47
22	21.39	21.77	21.75	21.68	20.71	20.31	20.13	20.97	22.28	23.95	24.37	25.57
23	21.35	21.86	21.69	21.58	20.84	20.43	20.05	21.04	22.33	23.94	24.50	25.54
24	21.40	21.86	21.56	21.59	20.83	20.51	20.14	21.07	22.46	23.87	24.59	25.54
25	21.52	21.83	21.61	21.50	20.78	20.46	20.32	21.07	22.55	23.90	24.62	25.33
26	21.61	21.70	21.70	21.64	20.71	20.21	20.41	21.04	22.61	23.93	24.65	25.31
27	21.63	21.88	21.61	21.66	20.59	20.19	20.42	21.14	22.69	23.94	24.65	25.33
28	21.57	21.96	21.62	21.54	20.61	20.12	20.18	21.28	22.80	23.95	24.63	25.21
29	21.60	21.96	21.59	21.65	---	19.99	20.18	21.32	22.86	23.98	24.66	25.15
30	21.55	21.90	21.60	21.57	---	20.00	20.28	21.31	22.89	24.06	24.76	25.21
31	21.62	---	21.56	21.45	---	19.93	---	21.30	---	24.07	24.82	---
WTR YR 1997	MEAN 22.03		HIGH 19.93		LOW 25.57							



WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

BEAUFORT COUNTY--Continued

352252077050707. Local number, NC-164; DENR Wilmar Research Station well P21k7.

LOCATION.--Lat 35°22'53", long 77°05'17", Hydrologic Unit 03020202, 0.5 mi east of intersection of Secondary Roads 1129 and 1130 on logging road, and 3.5 mi southeast of Wilmar. Owner: DENR (North Carolina Department of Environment and Natural Resources).

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.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 40.56 ft above sea level (levels by DENR). Measuring point: Top of casing, 2.22 ft above land-surface datum; revised from 2.94 ft above land-surface datum, April 21, 1993.

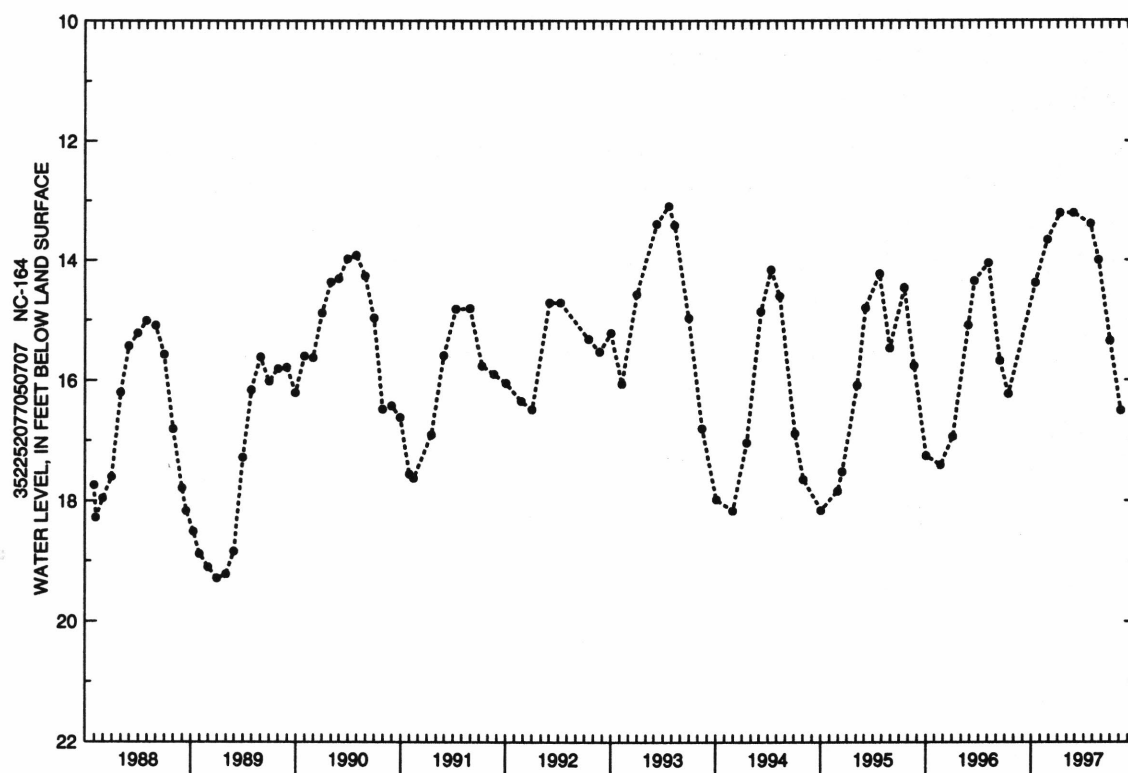
REMARKS.--Well is part of areal-effects network.

PERIOD OF RECORD.--March 1969 to current year. Continuous record December 1986 to November 1990. Records from March 1969 to July 1986 are unpublished and available in the files of the Groundwater Section, DENR.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 12.03 ft below land-surface datum, Apr. 27, 1973; lowest water level recorded, 19.40 ft below land-surface datum, Jan. 11 and 14, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	14.38	JAN 9	13.21	APR 24	13.39	MAY 23	14.00	JUL 2	15.35	AUG 8	16.51
NOV 26	13.66	FEB 24	13.21								



BEAUFORT COUNTY--Continued

352252077050709. Local number, NC-165; DENR Wilmar Research Station well P21k9.

LOCATION.--Lat 35°22'53", long 77°05'17", Hydrologic Unit 03020202, 0.5 mi east of intersection of Secondary Roads 1129 and 1130 on logging road, and 3.5 mi southeast of Wilmar. Owner: DENR (North Carolina Department of Environment and Natural Resources).

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.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 41.63 ft above sea level (levels by DENR). Measuring point: Top of casing, 1.98 ft above land-surface datum; revised from 2.74 ft above land-surface datum, April 21, 1993.

REMARKS.--Well is part of areal-effects network.

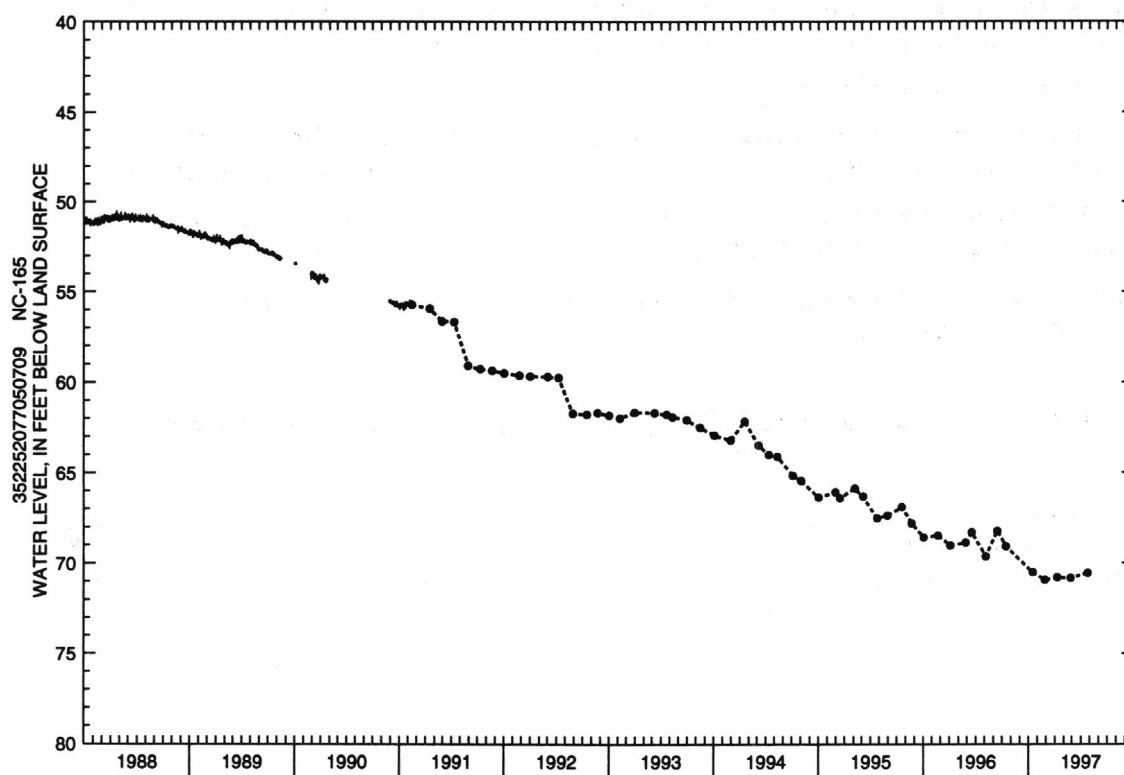
PERIOD OF RECORD.--March 1969 to current year. Continuous record December 1986 to November 1990. Records from March 1969 to July 1986 are unpublished and available in the files of the Groundwater Section, DENR.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 12.94 ft below land-surface datum, Mar. 11, 1969; lowest water level measured, 70.94 ft below land-surface datum, Nov. 26, 1996.

REVISIONS.--Water-level mean values and extremes for period of record published in Water Resources Data, North Carolina, NC-87-1, should be adjusted by +0.17 ft.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	70.52	NOV 26	70.94	JAN 9	70.81	FEB 24	70.84	APR 24	70.57



361002076562106. Local number, NC-153; DENR Cremo Research Station well G19b6.

AQUIFER.--Upper Cape Fear aquifer of Late Cretaceous age.

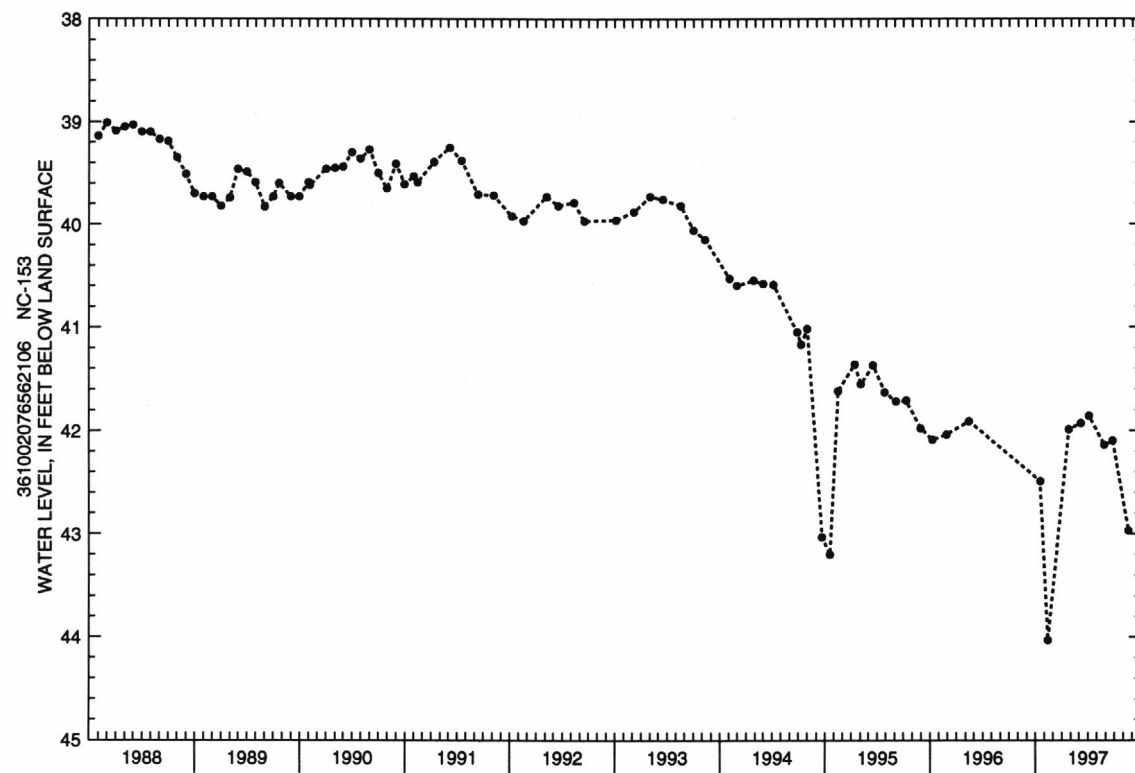
INSTRUMENTATION.--Measured periodically with steel tape.

REMARKS.--Well is part of areal-effects network.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 31.51 ft below land-surface datum, July 30, 1975; lowest water level measured, 44.03 ft below land-surface datum, Nov. 13, 1996.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	42.29	JAN 24	41.99	APR 4	41.86	MAY 27	42.14	JUN 25	42.10	AUG 19	42.97
NOV 13	44.03	MAR 7	41.93								



361420077111407. Local number, NC-154; DENR Roxobel Research Station well F22b7.

AQUIFER.--Surficial aquifer of post-Miocene age.

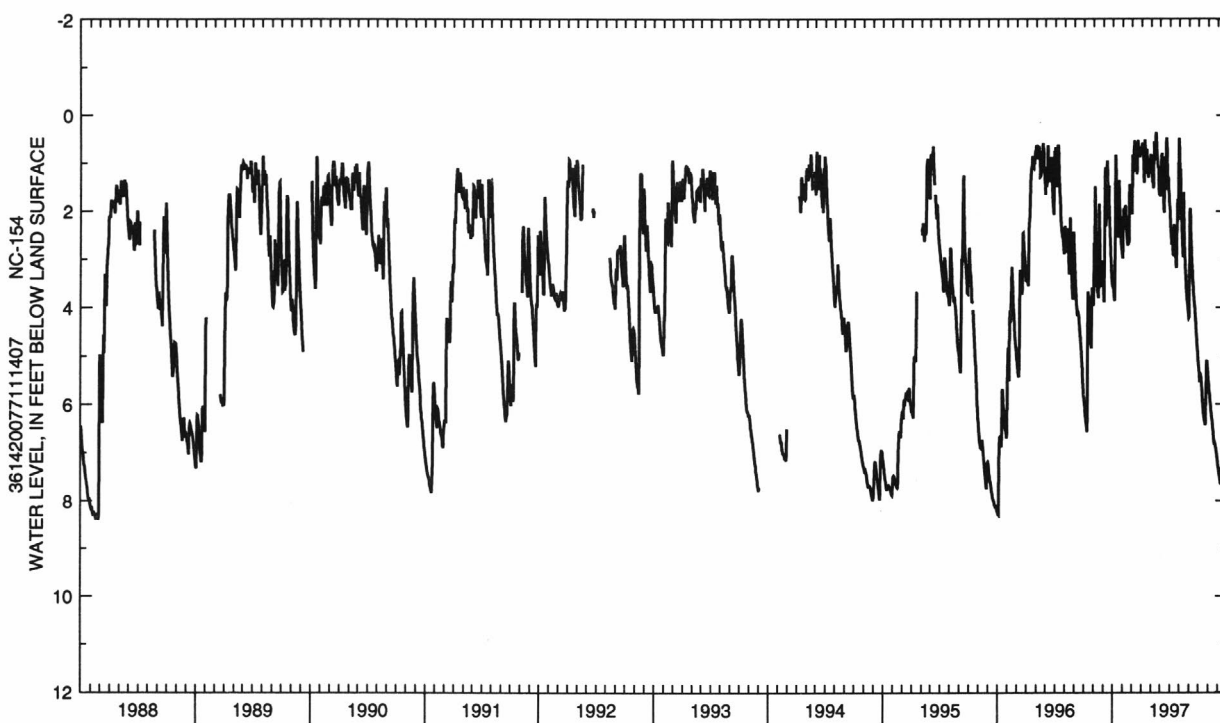
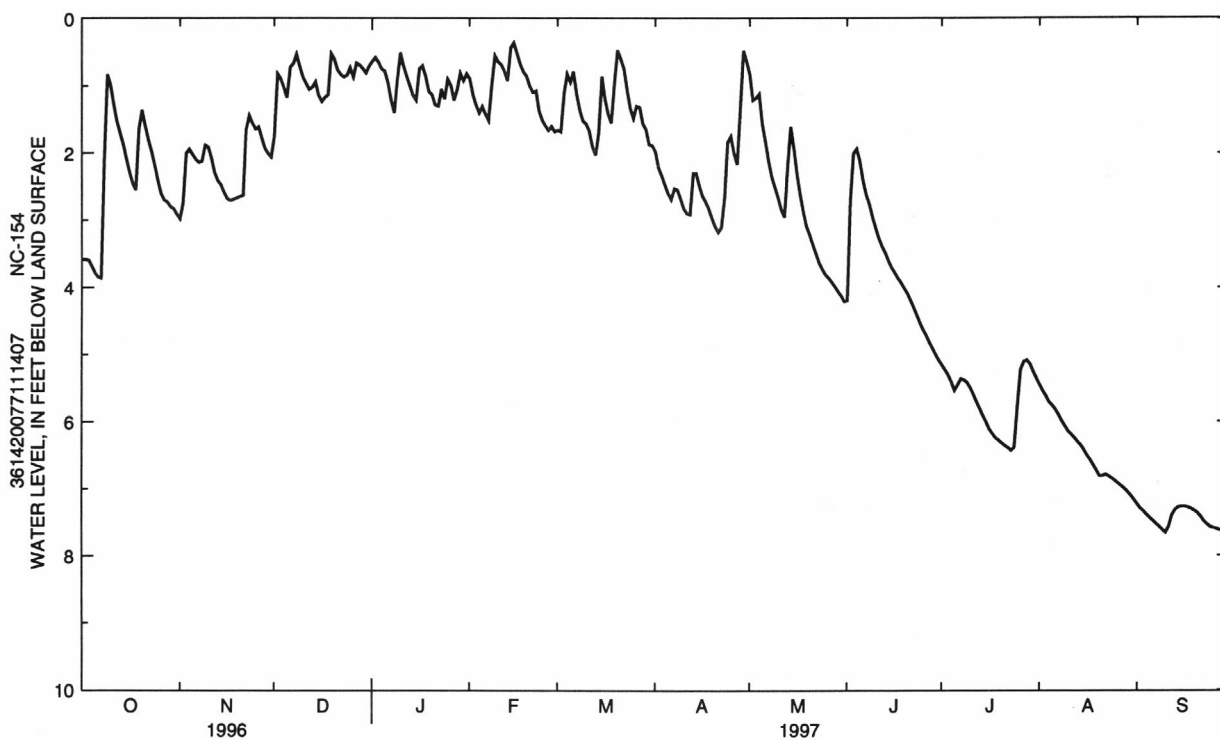
INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

REMARKS.--Well is part of climatic-effects network.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.31 ft below land-surface datum, Feb. 15, 1997; lowest water level recorded, 9.31 ft below land-surface datum, Sept. 5, 1987.

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.58	2.98	1.75	.64	.89	1.66	1.98	.83	4.20	5.16	5.45	7.24
2	3.58	2.75	.82	.58	1.13	1.68	2.22	1.21	2.69	5.23	5.54	7.30
3	3.59	2.00	.89	.65	1.28	1.11	2.34	1.18	2.01	5.31	5.62	7.34
4	3.68	1.94	1.03	.75	1.40	.82	2.47	1.12	1.94	5.41	5.71	7.39
5	3.78	2.02	1.17	.78	1.31	.94	2.60	1.56	2.12	5.54	5.76	7.44
6	3.84	2.09	.72	.96	1.42	.79	2.69	1.83	2.42	5.46	5.82	7.48
7	3.86	2.14	.67	1.21	1.51	1.13	2.53	2.12	2.62	5.37	5.90	7.53
8	2.14	2.12	.53	1.40	.97	1.36	2.55	2.36	2.77	5.38	5.99	7.57
9	.83	1.88	.70	.91	.55	1.52	2.69	2.51	2.95	5.42	6.07	7.62
10	.98	1.91	.87	.51	.64	1.56	2.83	2.67	3.12	5.50	6.14	7.66
11	1.28	2.08	.96	.70	.68	1.67	2.90	2.84	3.27	5.60	6.19	7.57
12	1.52	2.29	1.05	.86	.78	1.90	2.91	2.95	3.39	5.71	6.24	7.40
13	1.70	2.41	1.02	1.00	.92	2.03	2.30	2.23	3.48	5.81	6.30	7.32
14	1.86	2.47	.94	1.14	.43	1.70	2.30	1.61	3.60	5.91	6.35	7.28
15	2.08	2.59	1.14	1.21	.36	.86	2.49	1.92	3.70	6.01	6.42	7.27
16	2.28	2.68	1.23	.75	.52	1.19	2.64	2.32	3.78	6.11	6.50	7.27
17	2.45	2.71	1.17	.70	.67	1.42	2.73	2.62	3.86	6.18	6.57	7.28
18	2.55	2.69	1.13	.86	.79	1.55	2.83	2.88	3.93	6.24	6.65	7.30
19	1.63	2.67	.52	1.08	.85	.94	2.97	3.09	4.01	6.28	6.73	7.33
20	1.36	2.65	.60	1.13	1.00	.47	3.09	3.22	4.09	6.32	6.81	7.36
21	1.60	2.63	.76	1.28	1.09	.60	3.18	3.36	4.19	6.36	6.81	7.41
22	1.80	1.65	.83	1.30	1.07	.74	3.11	3.50	4.30	6.39	6.79	7.48
23	1.98	1.44	.87	1.05	1.37	1.06	2.66	3.63	4.41	6.43	6.82	7.53
24	2.18	1.55	.84	1.19	1.51	1.33	1.84	3.73	4.53	6.39	6.85	7.57
25	2.41	1.64	.73	.90	1.59	1.48	1.75	3.81	4.63	5.76	6.89	7.59
26	2.60	1.61	.87	.99	1.66	1.30	2.00	3.86	4.72	5.23	6.93	7.60
27	2.70	1.78	.66	1.21	1.60	1.32	2.17	3.92	4.82	5.11	6.97	7.62
28	2.73	1.93	.69	1.05	1.68	1.56	1.35	3.99	4.91	5.09	7.01	7.63
29	2.80	2.01	.74	.81	---	1.65	.48	4.06	5.00	5.15	7.06	7.62
30	2.83	2.06	.81	.92	---	1.87	.63	4.13	5.09	5.26	7.11	7.63
31	2.91	---	.71	.82	---	1.89	---	4.21	---	5.36	7.17	---
WTR YR 1997	MEAN 3.11		HIGH .36		LOW 7.66							



WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

BLADEN COUNTY

344119078354201. Local number, BI-57.

LOCATION.--Lat 34°41'20", long 78°35'42", Hydrologic Unit 03030005, 4.2 mi north of Elizabethtown on State Road 242 at Bladen Lakes State Forest Headquarters. Owner: North Carolina Division of Forest Resources.

AQUIFER.--Upper Cape Fear aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled domestic well, depth 334 ft, diameter 6 in., cased to 327 ft, screened interval from 327 to 334 ft.

INSTRUMENTATION.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 73 ft above sea level (from topographic map). Measuring point: Vent hole in top of sanitary seal, 0.7 ft above land-surface datum.

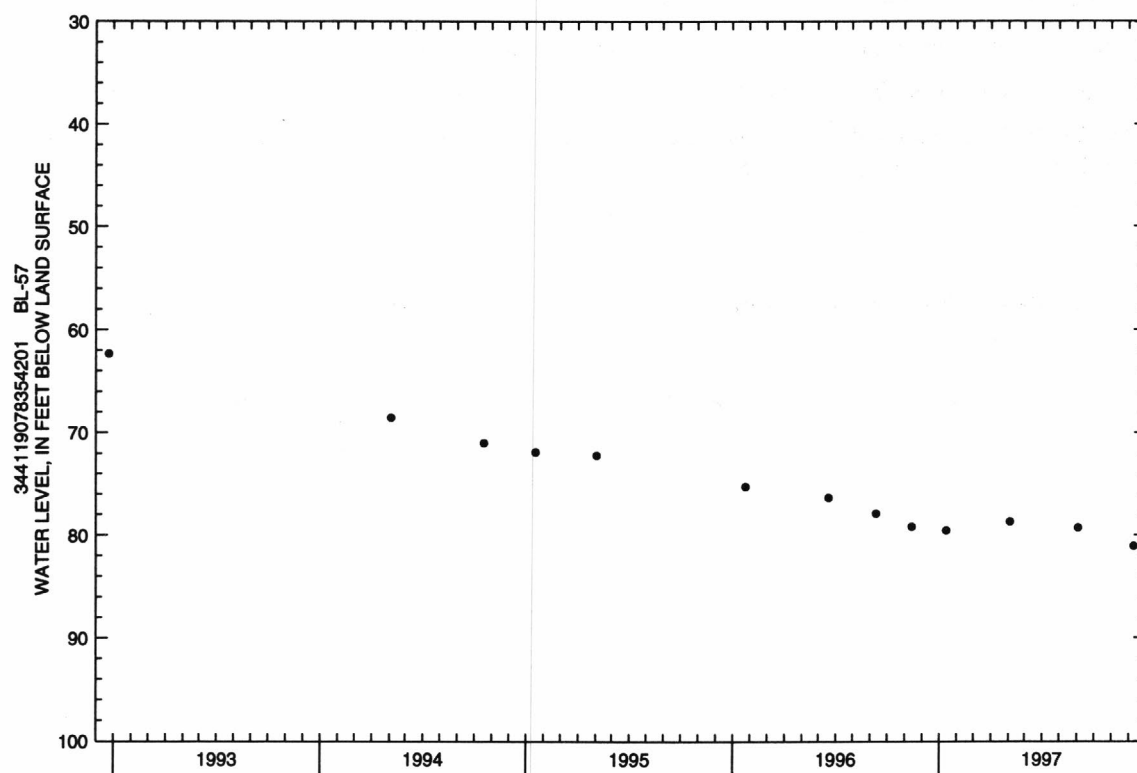
REMARKS.--Well is part of southern Coastal Plain ground-water level monitoring study.

PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 62.34 ft below land-surface datum, Sept. 23, 1992; lowest, 81.11 ft below land-surface datum, Sept. 9, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	79.56	FEB 3	78.70	JUN 3	79.28	SEP 9	81.11



BLADEN COUNTY--Continued

345005078493601. Local number, BI-72.

LOCATION.--Lat 34°50'05", long 78°49'33", Hydrologic Unit 03030005, at William O. Huske Lock, 100 ft east of Secondary Road 1355 and about 675 ft west of Cape Fear River. Owner: U.S. Army Corps of Engineers.

AQUIFER.--Upper Cape Fear aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled domestic well, depth 265 ft, diameter 6 in., screen depth unknown.

INSTRUMENTATION.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 74 ft above sea level (from topographic map). Measuring point: Vent hole in top of sanitary seal, 0.9 ft above land-surface datum.

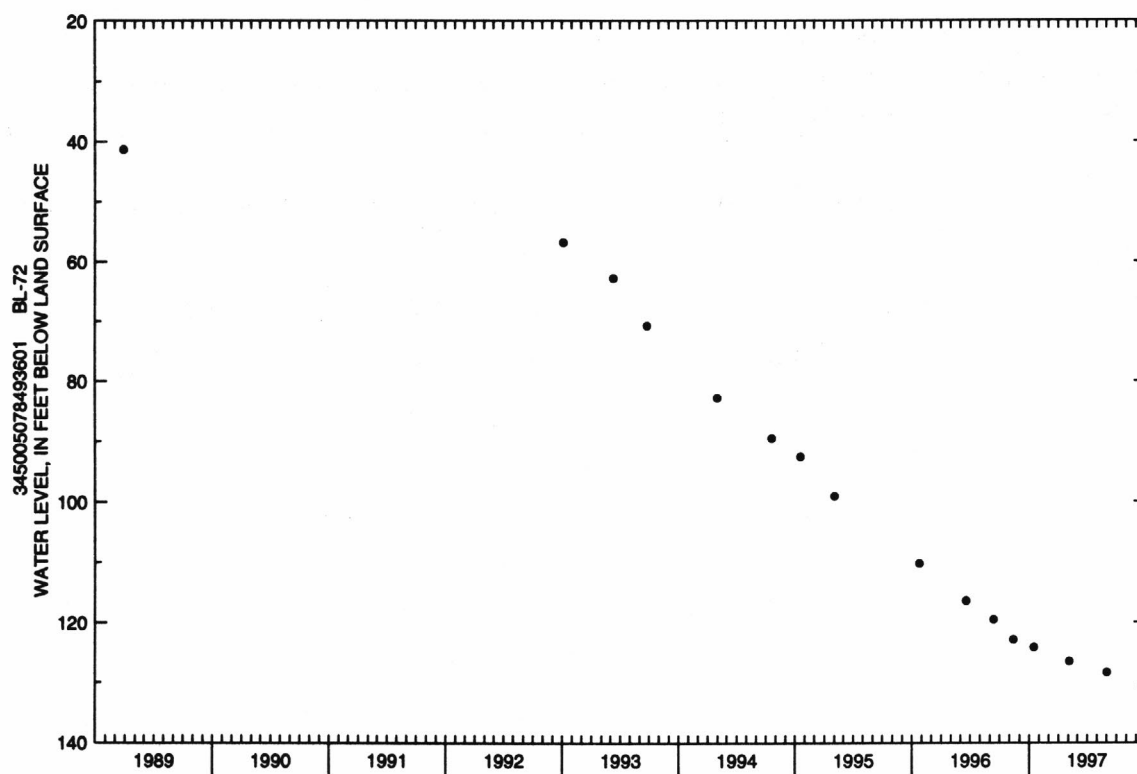
REMARKS.--Well is part of southern Coastal Plain ground-water level monitoring study.

PERIOD OF RECORD.--September 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 31.85 ft below land-surface datum, Sept. 8, 1981; lowest, 130.62 ft below land-surface datum, Sept. 19, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	124.23	FEB 4	126.60	JUN 2	128.37	SEP 19	130.62



WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

BLADEN COUNTY--Continued

345037078501807. Local number, Bl-86; E.I. du Pont de Nemours observation well P-5.

LOCATION.--Lat 34°50'39", long 78°50'13", Hydrologic Unit 03030005, at E.I. du Pont de Nemours and Company, Inc., Fayetteville Works plant, 1.1 miles east of State Highway 87. Owner: E.I. du Pont de Nemours and Company, Inc.

AQUIFER.--Upper Cape Fear aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation well, depth 330 ft, diameter 4 in., cased to 325 ft, screened interval from 325 to 330 ft.

INSTRUMENTATION.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 147.3 ft above sea level. Measuring point: Top of 4-inch casing, 2.35 ft above land-surface datum.

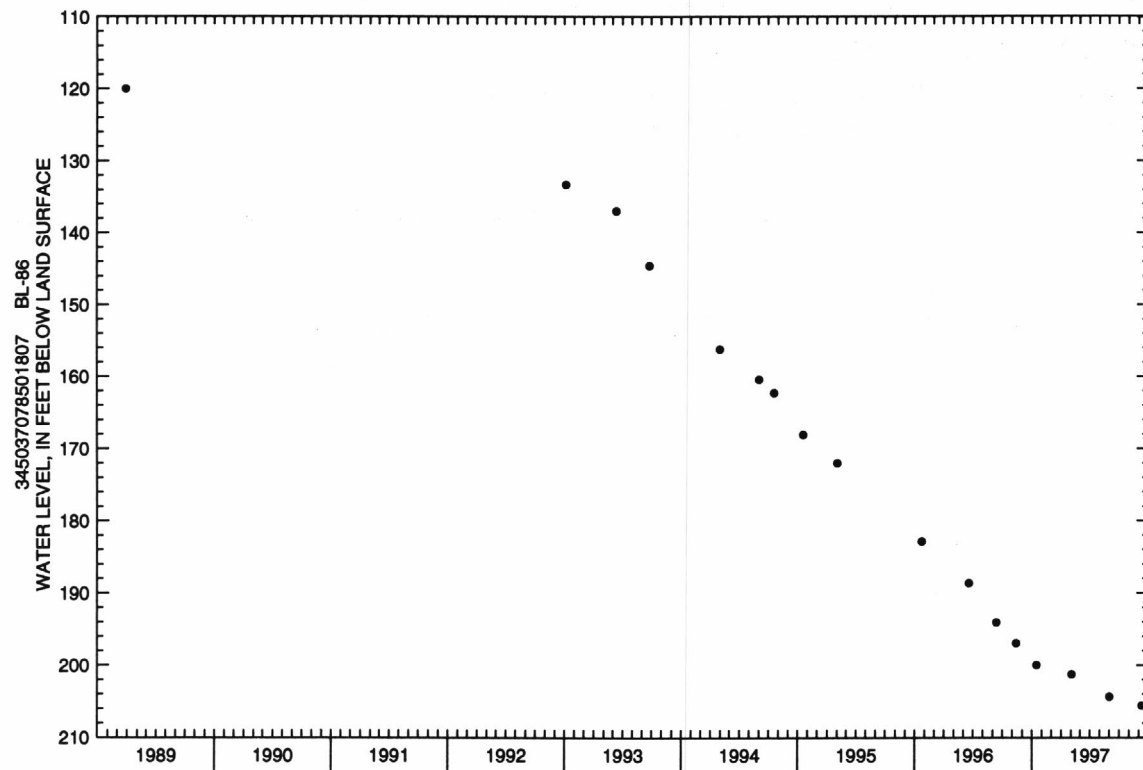
REMARKS.--Well is part of southern Coastal Plain ground-water level monitoring study.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 120.0 ft below land-surface datum, Dec. 27, 1988; lowest, 205.6 ft below land-surface datum, Sept. 10, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	200.0	FEB 3	201.3	JUN 2	204.4	SEP 10	205.6



WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

BLADEN COUNTY--Continued

343908078432003. Local number, B1-94; Dublin well 3.

LOCATION.--Lat 34°39'05", long 78°43'28", Hydrologic Unit 03030005, 0.4 mi southeast of Dublin on Secondary Road 1003. Owner: Town of Dublin.

AQUIFER.--Upper Cape Fear aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled supply well, depth 460 ft (reported by owner), screened intervals unknown.

INSTRUMENTATION.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 144 ft above sea level (from topographic map). Measuring point: Top of 1.5-inch vent pipe in pump pedestal, 1.55 ft above land-surface datum.

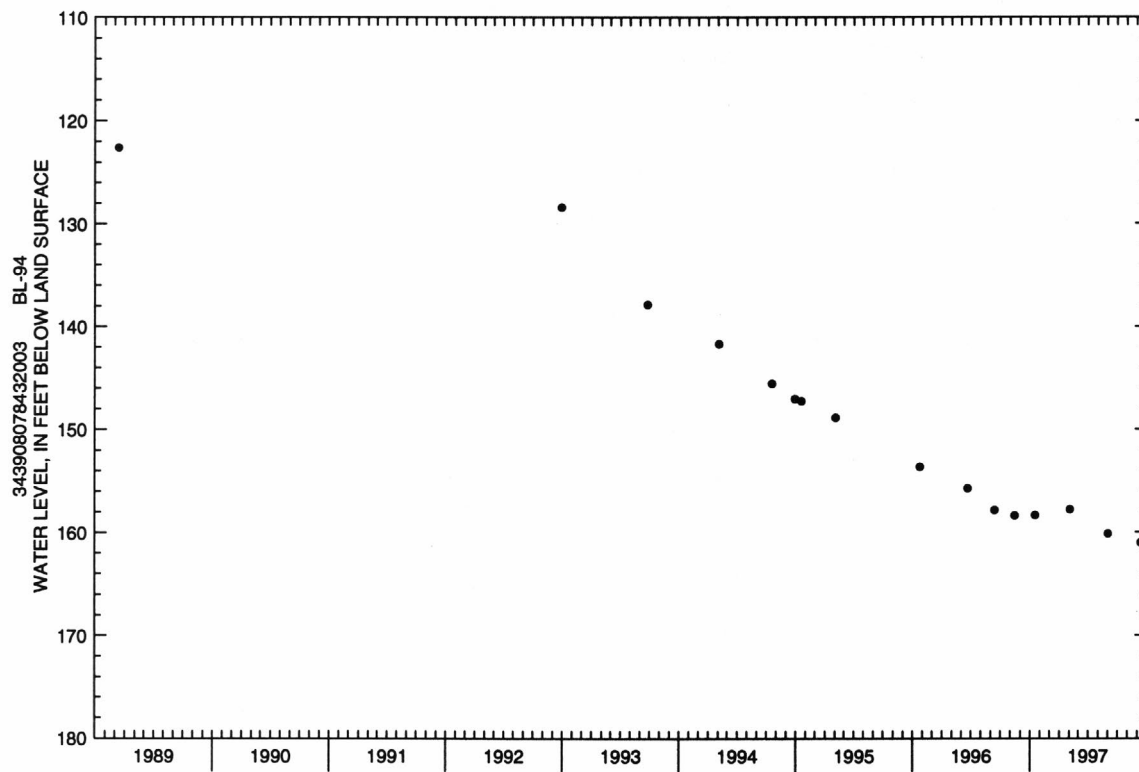
REMARKS.--Well is part of southern Coastal Plain ground-water level monitoring study.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 113.5 ft below land-surface datum, Nov. 26, 1984 (reported by driller); lowest, 161.03 ft below land-surface datum, Sept. 12, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	158.34	FEB 3	157.79	JUN 2	160.17	SEP 12	161.03



WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

BLADEN COUNTY--Continued

343027078451902. Local number, BI-100; DENR Bladenboro Research Station well Z41u2.

LOCATION.--Lat 34°30'24", long 78°45'17", Hydrologic Unit 03040206, 3 mi southeast of Bladenboro, south of State Highway 211 on Secondary Road 1172. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Upper Cape Fear aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation well, depth 480 ft, diameter 4 in., cased to 470 ft, screened interval from 470 to 480 ft.

INSTRUMENTATION.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 106 ft above sea level (from topographic map). Measuring point: Top of lower plug in 4-inch casing collar, 1.36 ft above land-surface datum.

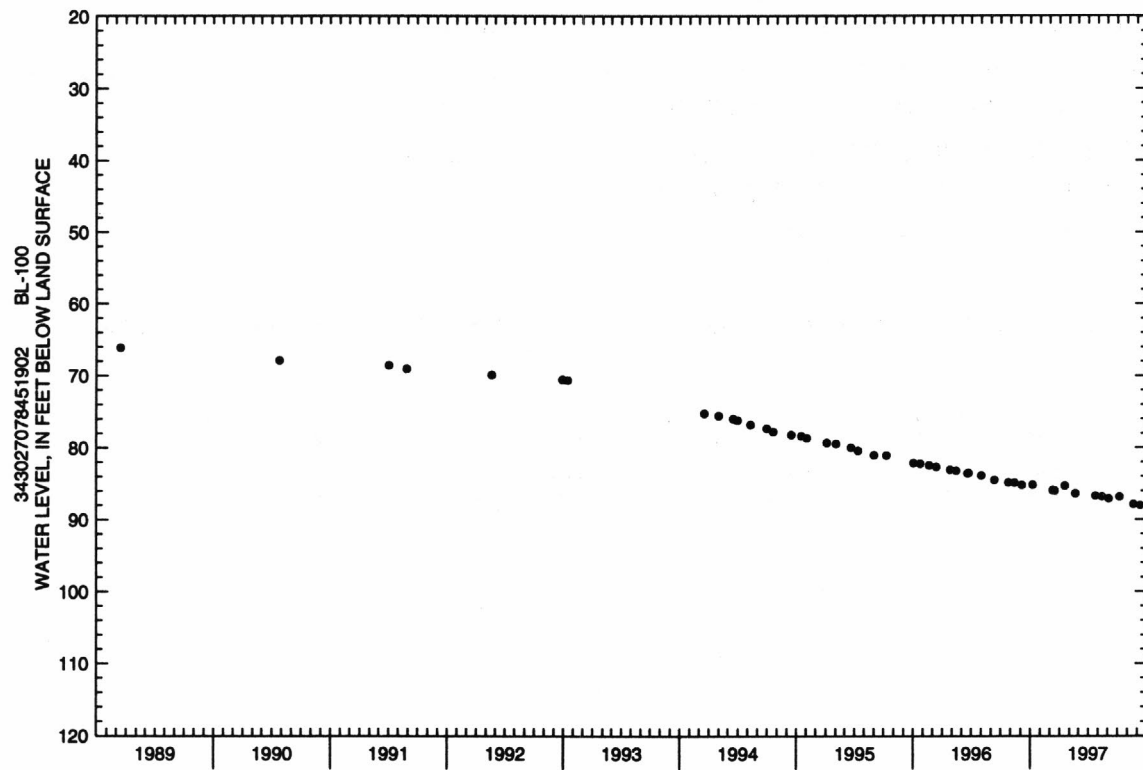
REMARKS.--Well is part of southern Coastal Plain ground-water level monitoring study.

PERIOD OF RECORD.--November 1975 to current year. Records from November 1975 to September 1986 are unpublished and available in the files of the Groundwater Section, DENR.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 49.32 ft below land-surface datum, Nov. 14, 1975; lowest, 88.08 ft below land-surface datum, Sept. 10, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 9	85.22	DEC 16	86.02	FEB 19	86.41	MAY 14	86.85	JUL 8	86.89	SEP 10	88.08
DEC 10	85.97	JAN 17	85.33	APR 22	86.75	JUN 3	87.12	AUG 20	87.95		



WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

BLADEN COUNTY--Continued

343726078360201. Local number, Bl-121; Elizabethtown well 1.

LOCATION.--Lat 34°37'26", long 78°36'02", Hydrologic Unit 03030005, 0.4 mi east of U.S. Highway 701 on East Swanzy Street. Owner: Town of Elizabethtown.

AQUIFER.--Black Creek, upper Cape Fear, and lower Cape Fear aquifers of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled supply well, depth 495 ft (reported by driller), diameter 10 in., screened at various intervals between 149 and 485 ft (reported by driller).

INSTRUMENTATION.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 120 ft above sea level (from topographic map). Measuring point: One-inch hole in base of pump mount, 1.2 ft above land-surface datum.

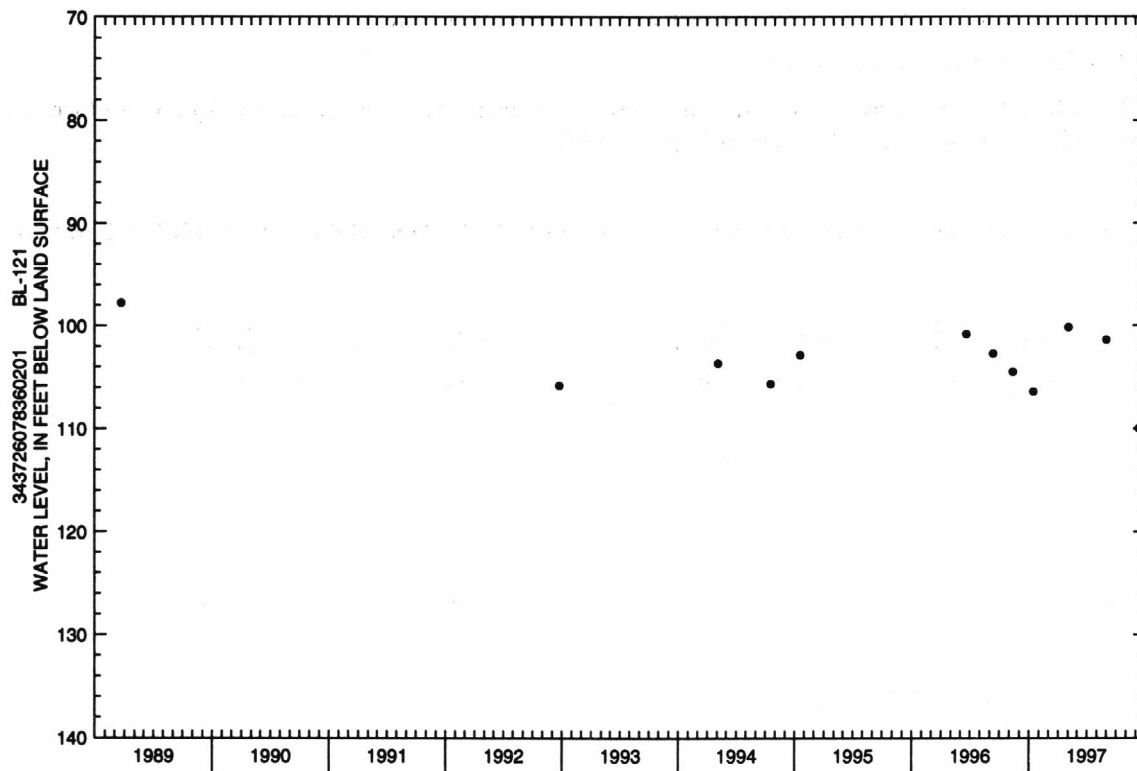
REMARKS.--Well is part of southern Coastal Plain ground-water level monitoring study.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 94.5 ft below land-surface datum, Apr. 3, 1984 (reported by driller); lowest, 110.0 ft below land-surface datum, Sept. 12, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	106.4	FEB 5	100.2	JUN 4	101.4	SEP 12	110.0



WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

BLADEN COUNTY--Continued

343900078383205. Local number, B1-131.

LOCATION.--Lat 34°39'00", long 78°38'36", Hydrologic Unit 03030005, north of Elizabethtown on State Highway 41 and 87 at Alamac Knits Fabrics, Inc. Owner: Alamac Knits Fabrics, Inc.

AQUIFER.--Black Creek, upper Cape Fear, and lower Cape Fear aquifers of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused supply well, depth 482 ft (reported), screened at various intervals between 200 and 482 ft (reported).

INSTRUMENTATION.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 115 ft above sea level (from topographic map). Measuring point: Top of well access pipe in pump pedestal, 2.8 ft above land-surface datum.

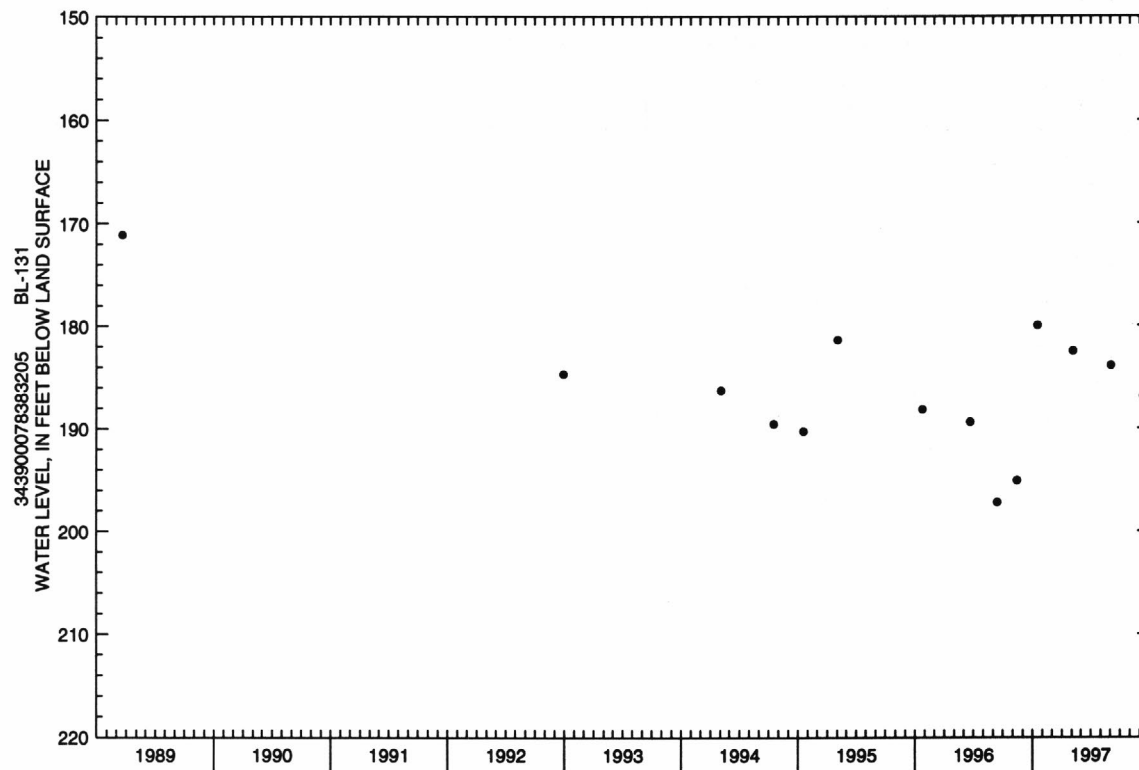
REMARKS.--Well is part of southern Coastal Plain ground-water level monitoring study.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 171.1 ft below land-surface datum, Dec. 20, 1988; lowest, 197.2 ft below land-surface datum, June 14, 1996.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	180.0	FEB 5	182.5	JUN 4	183.9	SEP 12	186.9



WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

BLADEN COUNTY--Continued

344441078482402. Local number, BI-142.

LOCATION.--Lat 34°44'42", long 78°48'24", Hydrologic Unit 03040203, 1 mi northwest of Tar Heel on State Highway 87 at Smithfield Packing Co., Inc., Tar Heel Division's plant. Owner: Smithfield Packing Co., Inc.

AQUIFER.--Upper Cape Fear aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation well, depth 375 ft, diameter 2 in., cased to 210 ft and from 220 to 245 ft, 250 to 315 ft, 320 to 345 ft, and 350 to 370 ft, screened intervals from 210 to 220 ft, 245 to 250 ft, 315 to 320 ft, 345 to 350 ft, and 370 to 375 ft.

INSTRUMENTATION.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 130 ft above sea level (from topographic map). Measuring point: Top of 6-inch steel protective casing, 2.3 ft above land-surface datum.

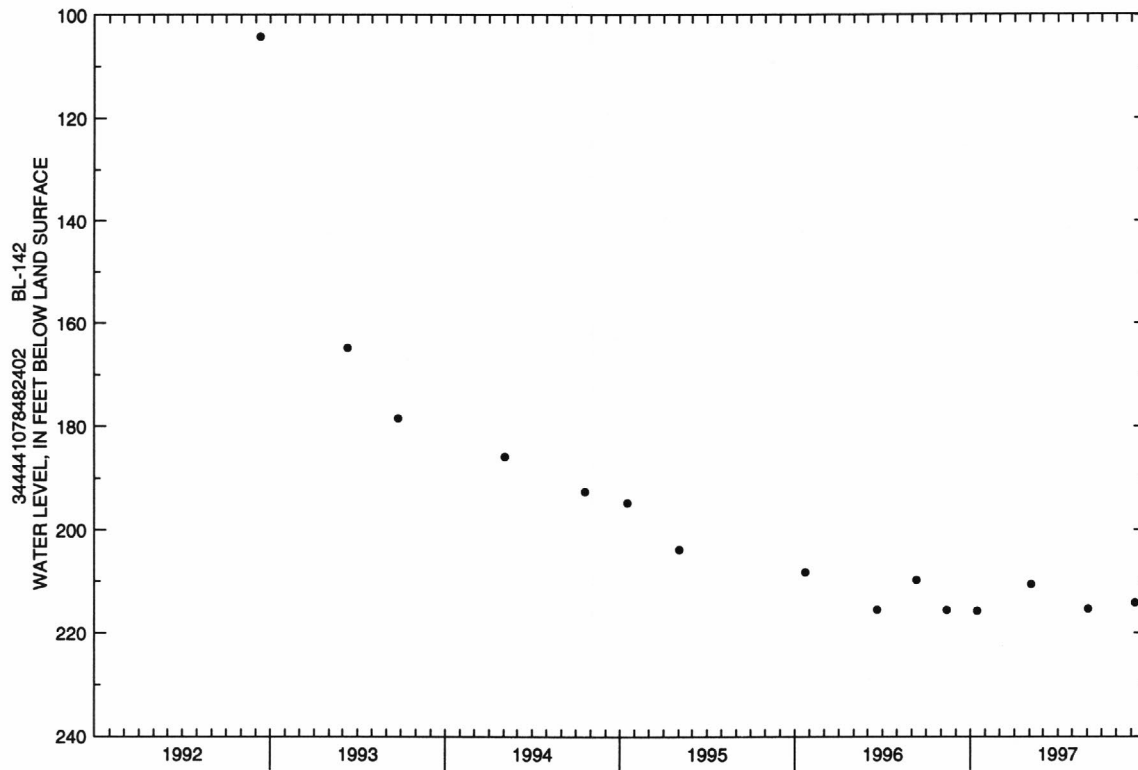
REMARKS.--Well is part of southern Coastal Plain ground-water level monitoring study.

PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 104.23 ft below land-surface datum, Sept. 10, 1992; lowest, 215.72 ft below land-surface datum, Oct. 15, 1996.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	215.72	FEB 4	210.66	JUN 3	215.36	SEP 9	214.22



WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

BLADEN COUNTY--Continued

344434078423201. Local number, Bl-147; Bladen County Water District White Oak well 1.

LOCATION.--Lat 34°44'35", long 78°42'31", Hydrologic Unit 03030005, in White Oak, 0.3 mi south of Secondary Road 1318 on State Highway 53. Owner: Bladen County Water District.

AQUIFER.--Upper Cape Fear aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused supply well, depth 311 ft, diameter 6 in., cased to 290 ft and from 295 to 306 ft, screened intervals from 290 to 295 ft and 306 to 311 ft.

INSTRUMENTATION.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 60 ft above sea level (from topographic map). Measuring point: Hole in top of sanitary seal, 0.8 ft above land-surface datum.

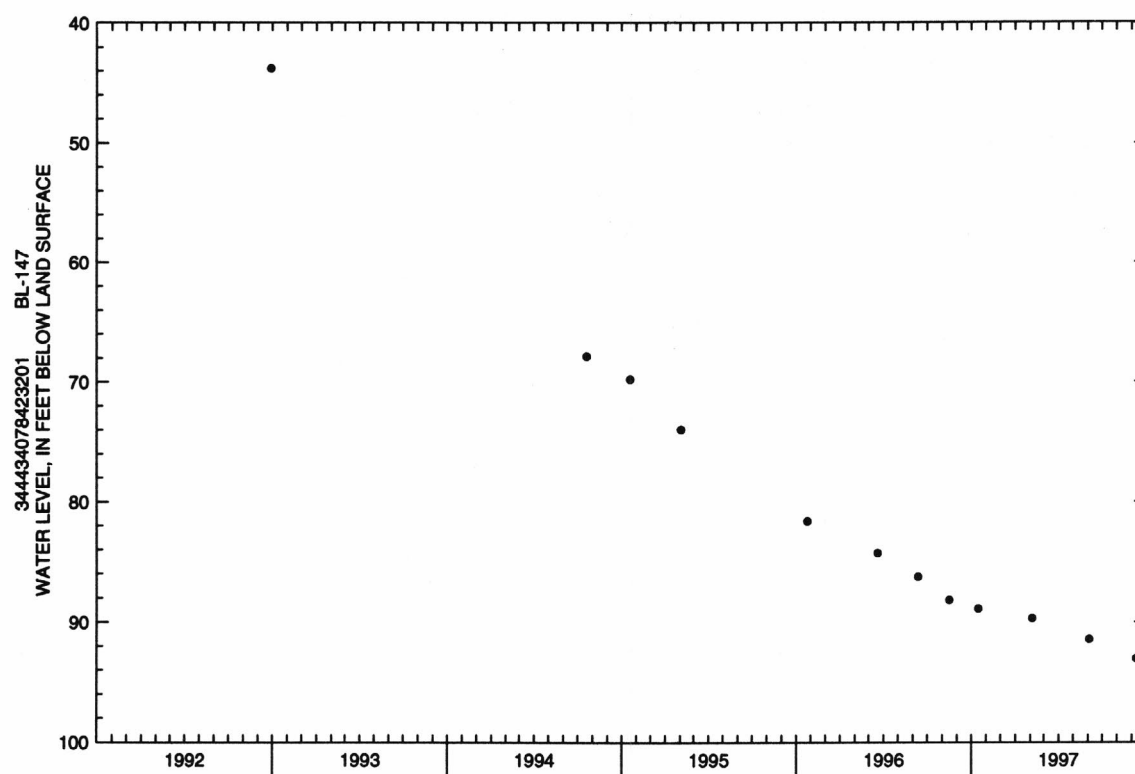
REMARKS.--Well is part of southern Coastal Plain ground-water level monitoring study.

PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 43.80 ft below land-surface datum, Sept. 28, 1992; lowest, 93.09 ft below land-surface datum, Sept. 10, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	88.89	FEB 5	89.70	JUN 4	91.46	SEP 10	93.09



BLADEN COUNTY--Continued

343027078451903. Local number, NC-178; DENR Bladenboro Research Station well Z41u3.

LOCATION.--Lat 34°30'24", long 78°45'17", Hydrologic Unit 03040206, 3 mi southeast of Bladenboro, south of State Highway 211 on Secondary Road 1172. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Pee Dee 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.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 116.45 ft above sea level (levels by DENR). Measuring point: Top of instrument shelf, 2.78 ft above land-surface datum; revised from 2.89 ft above land-surface datum, October 1987.

REMARKS.--Well is part of areal-effects network. Records prior to January 1987 are from Bladenboro Research Station well Z41u4 which was adjacent to and of similar construction to well Z41u3.

PERIOD OF RECORD.--March 1976 to current year. Continuous record began January 1987. Records for well Z41u4 from March 1976 to December 1986 are unpublished and available in the files of the Groundwater Section, DENR.

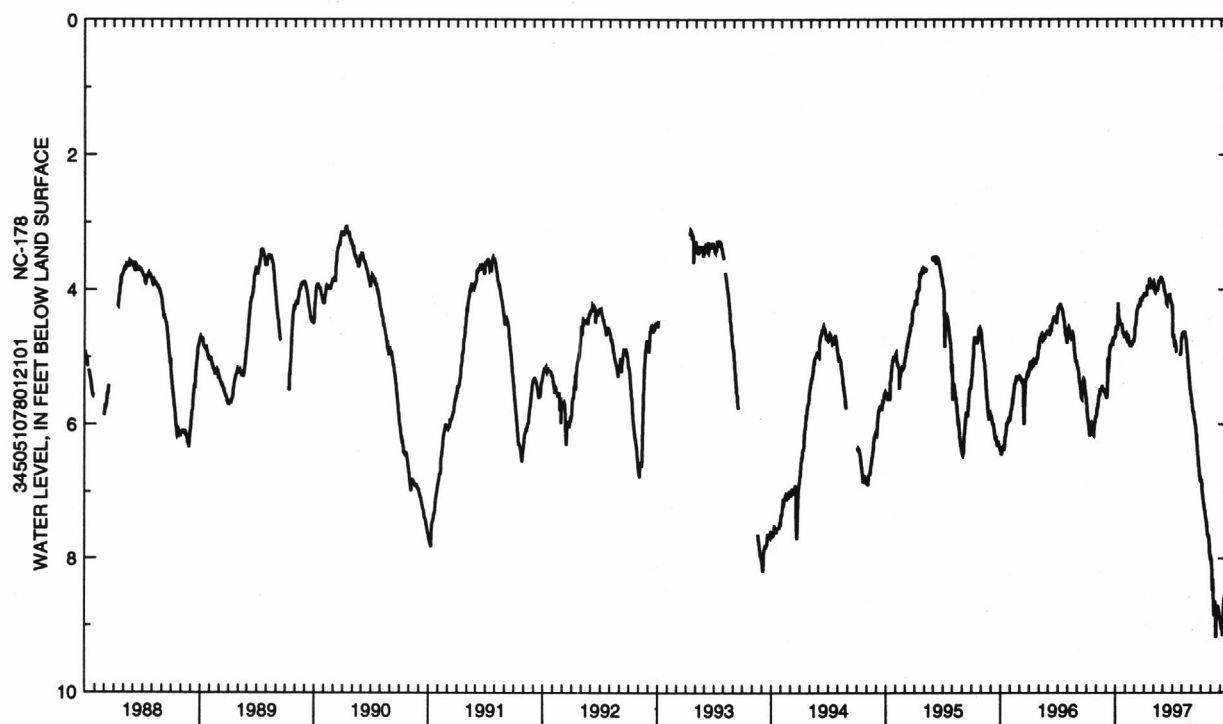
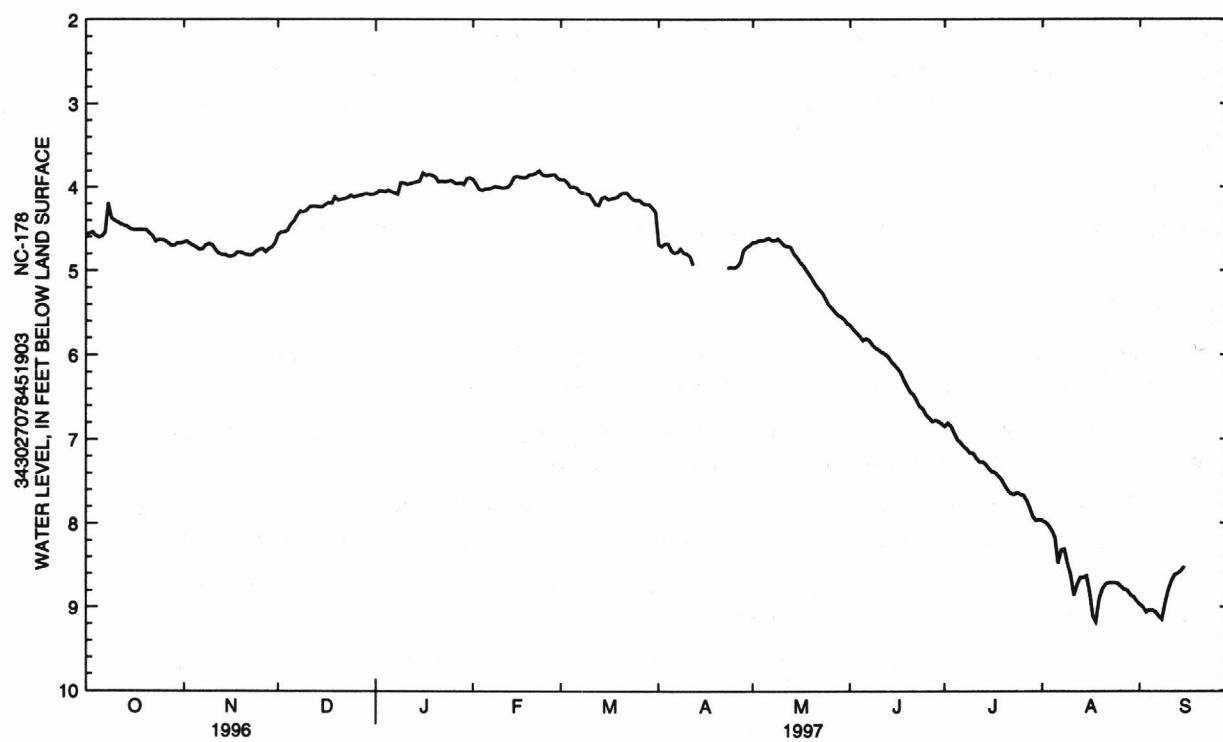
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 2.73 ft below land-surface datum, Apr. 19, 1978; lowest water level recorded, 9.25 ft below land-surface datum, Aug. 18, 1997.

REVISIONS.--Water-level mean values and extremes for period of record published in Water Resources Data, North Carolina, NC-87-1, should be adjusted by +0.11 ft.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.57	4.66	4.57	4.08	3.91	3.91	4.69	4.66	5.65	6.85	7.97	8.97
2	4.55	4.65	4.54	4.05	3.97	3.91	4.71	4.66	5.70	6.81	7.99	9.00
3	4.54	4.68	4.54	4.05	4.03	3.95	4.68	4.64	5.74	6.85	8.03	9.06
4	4.58	4.70	4.52	4.06	4.04	4.00	4.68	4.64	5.78	6.93	8.09	9.04
5	4.60	4.72	4.45	4.04	4.02	4.00	4.76	4.63	5.83	7.01	8.17	9.04
6	4.59	4.75	4.41	4.06	4.02	4.01	4.79	4.61	5.81	7.04	8.48	9.06
7	4.54	4.74	4.34	4.07	4.01	4.06	4.78	4.64	5.83	7.09	8.32	9.11
8	4.19	4.69	4.29	4.09	3.99	4.07	4.74	4.64	5.88	7.12	8.31	9.15
9	4.37	4.68	4.30	3.95	4.00	4.08	4.79	4.62	5.92	7.17	8.49	8.95
10	4.40	4.69	4.28	3.95	4.01	4.09	4.80	4.66	5.94	7.17	8.62	8.80
11	4.42	4.75	4.24	3.97	4.01	4.15	4.83	4.70	5.97	7.23	8.86	8.69
12	4.44	4.79	4.23	3.96	4.00	4.21	4.93	4.71	5.99	7.27	8.74	8.62
13	4.46	4.81	4.23	3.95	3.96	4.22	---	4.72	6.02	7.27	8.65	8.60
14	4.47	4.81	4.24	3.94	3.88	4.13	---	4.80	6.08	7.30	8.65	8.57
15	4.50	4.83	4.24	3.93	3.87	4.12	---	4.84	6.12	7.35	8.63	8.52
16	4.51	4.83	4.21	3.83	3.88	4.15	---	4.90	6.16	7.39	8.82	---
17	4.51	4.82	4.19	3.86	3.89	4.14	---	4.94	6.21	7.40	9.11	---
18	4.51	4.78	4.20	3.85	3.88	4.13	---	5.00	6.30	7.44	9.18	---
19	4.51	4.78	4.12	3.86	3.85	4.12	---	5.05	6.37	7.48	8.90	---
20	4.51	4.80	4.16	3.88	3.85	4.08	---	5.11	6.44	7.55	8.79	---
21	4.55	4.81	4.15	3.94	3.83	4.07	---	5.17	6.47	7.61	8.73	---
22	4.58	4.82	4.14	3.93	3.80	4.07	---	5.22	6.54	7.65	8.71	---
23	4.65	4.81	4.13	3.94	3.85	4.12	4.97	5.26	6.61	7.66	8.71	---
24	4.63	4.77	4.10	3.93	3.86	4.15	4.96	5.33	6.64	7.64	8.71	---
25	4.63	4.75	4.12	3.92	3.86	4.16	4.97	5.40	6.71	7.66	8.72	---
26	4.64	4.74	4.11	3.95	3.85	4.16	4.95	5.44	6.75	7.67	8.76	---
27	4.67	4.78	4.10	3.96	3.85	4.20	4.90	5.49	6.79	7.73	8.79	---
28	4.70	4.74	4.09	3.95	3.90	4.21	4.76	5.53	6.78	7.82	8.80	---
29	4.70	4.72	4.08	3.97	---	4.21	4.72	5.55	6.79	7.93	8.86	---
30	4.67	4.67	4.09	3.90	---	4.25	4.70	5.58	6.82	7.97	8.88	---
31	4.67	---	4.09	3.89	---	4.30	---	5.63	---	7.96	8.93	---
WTR YR 1997	MEAN 5.42			HIGH 3.80			LOW 9.18					



BRUNSWICK COUNTY

340416078084202. Local number, NC-180; DENR Bolivia Research Station well FF33d2.

LOCATION.--Lat 34°04'16", long 78°08'42", Hydrologic Unit 03040207, in Bolivia at Town Hall on U.S. Highway 17.
Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Peedee aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation well, drilled to 140 ft, diameter 4 in., cased to 92 ft, open hole to 140 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 40.97 ft above sea level (levels by DENR). Measuring point: Top of instrument shelf, 2.70 ft above land-surface datum.

REMARKS.--Well is part of areal-effects network.

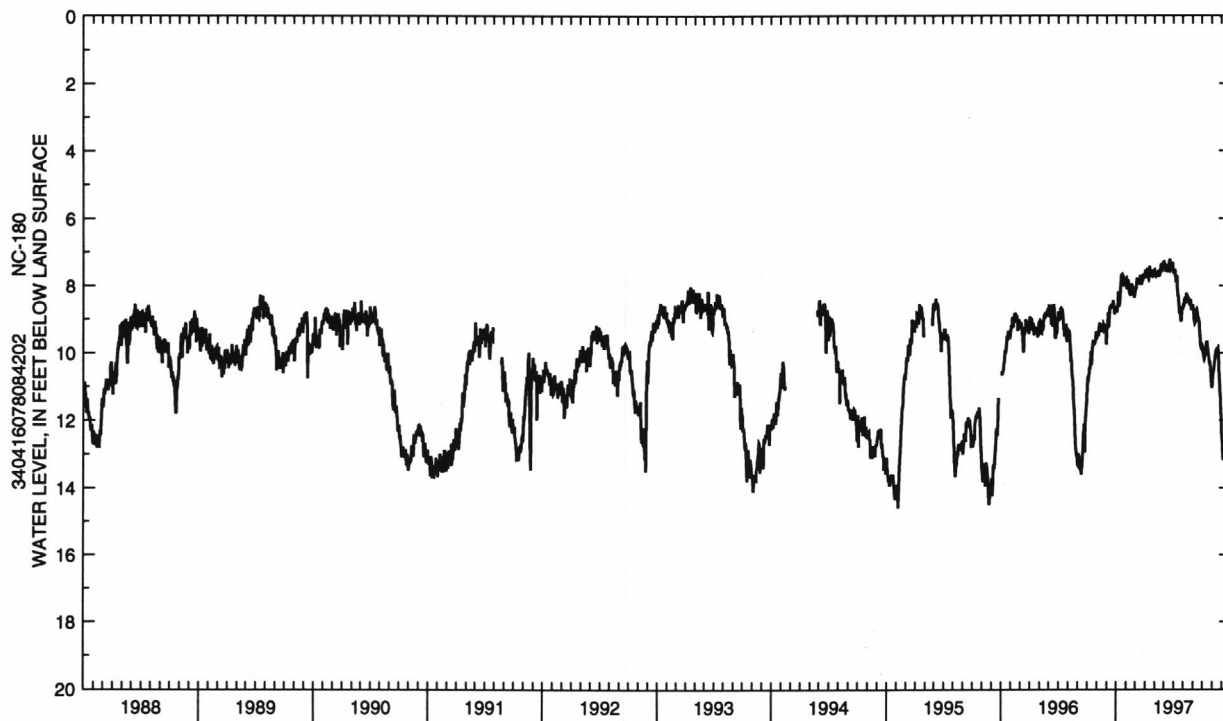
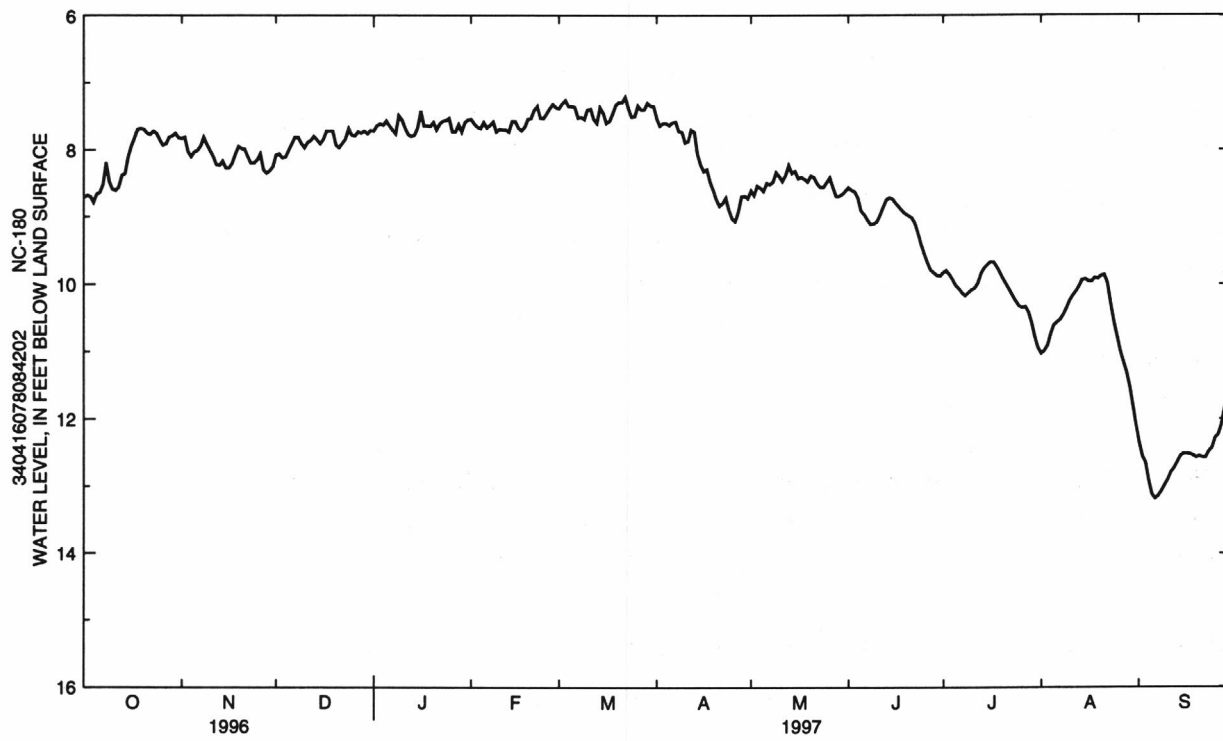
PERIOD OF RECORD.--April 1971 to September 1997 (discontinued). Continuous record began May 1987. Records from April 1971 to March 1987 are unpublished and available in the files of the Groundwater Section, DENR.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 5.52 ft below land-surface datum, Aug. 14, 1973; lowest water level recorded, 15.07 ft below land-surface datum, Sept. 4, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.71	7.83	8.08	7.72	7.54	7.38	7.53	8.61	8.57	9.84	11.03	12.35
2	8.68	7.81	8.06	7.64	7.61	7.31	7.64	8.68	8.61	9.81	10.99	12.55
3	8.70	8.03	8.12	7.61	7.66	7.26	7.60	8.54	8.63	9.87	10.91	12.65
4	8.79	8.10	8.11	7.63	7.68	7.35	7.60	8.57	8.73	9.94	10.75	12.91
5	8.66	8.03	8.01	7.57	7.59	7.35	7.63	8.62	8.92	10.03	10.61	13.12
6	8.64	8.01	7.91	7.64	7.67	7.36	7.59	8.50	8.97	10.07	10.57	13.18
7	8.52	7.94	7.81	7.70	7.63	7.52	7.58	8.52	9.05	10.14	10.53	13.14
8	8.19	7.81	7.81	7.76	7.58	7.51	7.72	8.48	9.12	10.18	10.46	13.07
9	8.48	7.92	7.90	7.49	7.73	7.54	7.73	8.34	9.11	10.13	10.36	12.98
10	8.59	8.01	7.97	7.55	7.69	7.40	7.89	8.40	9.08	10.09	10.25	12.90
11	8.61	8.10	7.89	7.67	7.70	7.39	7.87	8.47	8.98	10.06	10.17	12.79
12	8.56	8.22	7.86	7.77	7.70	7.54	7.70	8.38	8.86	9.99	10.11	12.73
13	8.38	8.23	7.80	7.80	7.73	7.60	7.73	8.23	8.75	9.85	10.03	12.64
14	8.36	8.17	7.85	7.78	7.57	7.37	8.06	8.35	8.72	9.77	9.94	12.55
15	8.10	8.27	7.91	7.67	7.57	7.45	8.22	8.32	8.74	9.72	9.93	12.51
16	7.94	8.27	7.84	7.42	7.67	7.60	8.32	8.43	8.81	9.68	9.96	12.51
17	7.82	8.20	7.72	7.64	7.71	7.57	8.29	8.41	8.86	9.68	9.96	12.52
18	7.69	8.07	7.72	7.64	7.66	7.46	8.47	8.44	8.92	9.75	9.91	12.54
19	7.68	7.95	7.72	7.65	7.54	7.33	8.60	8.48	8.96	9.84	9.92	12.57
20	7.69	7.98	7.93	7.59	7.53	7.29	8.74	8.39	8.99	9.93	9.88	12.55
21	7.75	7.99	7.97	7.70	7.41	7.29	8.84	8.41	9.02	10.01	9.87	12.57
22	7.77	8.10	7.90	7.61	7.35	7.21	8.80	8.51	9.10	10.09	9.99	12.57
23	7.72	8.20	7.84	7.57	7.52	7.38	8.72	8.56	9.25	10.18	10.30	12.48
24	7.75	8.20	7.68	7.56	7.53	7.51	8.90	8.56	9.42	10.26	10.56	12.43
25	7.85	8.15	7.78	7.53	7.46	7.50	9.03	8.49	9.56	10.33	10.78	12.28
26	7.93	8.06	7.79	7.73	7.38	7.34	9.07	8.42	9.69	10.35	10.99	12.23
27	7.91	8.30	7.73	7.73	7.32	7.40	8.92	8.56	9.80	10.34	11.16	12.08
28	7.81	8.35	7.75	7.62	7.37	7.40	8.70	8.70	9.84	10.42	11.31	11.84
29	7.79	8.31	7.72	7.73	---	7.30	8.69	8.70	9.88	10.58	11.53	11.71
30	7.75	8.25	7.76	7.59	---	7.34	8.73	8.67	9.89	10.79	11.81	11.59
31	7.82	---	7.71	7.55	---	7.35	---	8.62	---	10.95	12.09	---
WTR YR 1997	MEAN 8.81		HIGH 7.21		LOW 13.18							



WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

BRUNSWICK COUNTY--Continued

335629078115406. Local number, NC-181; DENR Sunset Harbor Research Station well GG34s6.

LOCATION.--Lat 33°56'29", long 78°11'54", Hydrologic Unit 03040207, 1 mi north of Sunset Harbor, and 4.3 mi south of State Highway 211 on Secondary Road 1112. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Castle Hayne aquifer of Oligocene and Eocene age.

WELL CHARACTERISTICS.--Drilled observation well, drilled to 102 ft, diameter 6 in., cased to 84 ft, open hole to 102 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 28.06 ft above sea level (levels by DENR). Measuring point: Top of instrument shelf, 2.02 ft above land-surface datum.

REMARKS.--Well is part of areal-effects network.

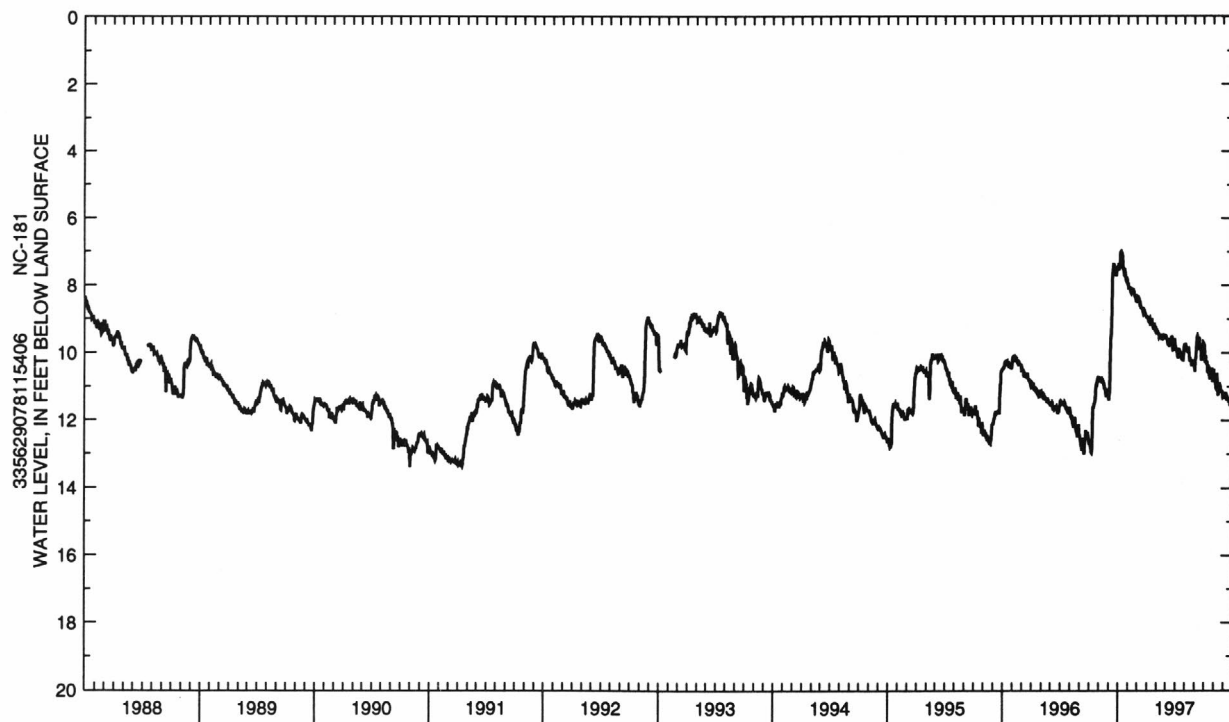
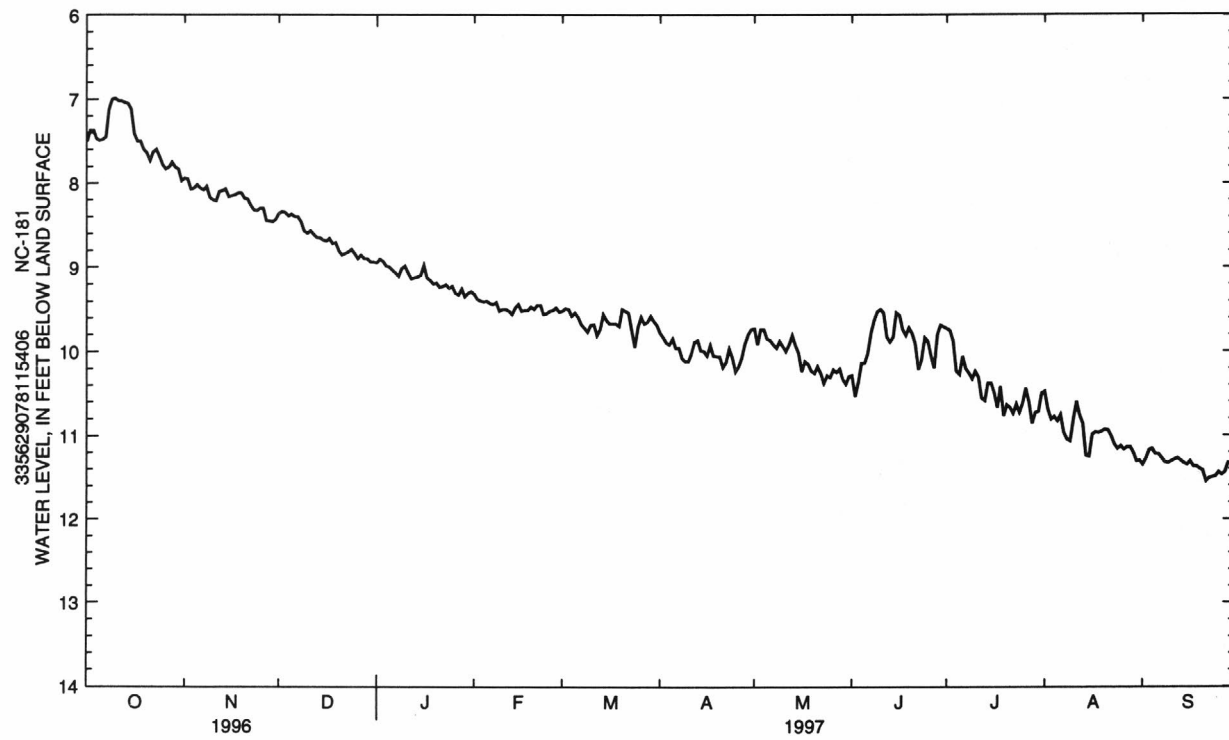
PERIOD OF RECORD.--September 1974 to current year. Records from September 1974 to March 1986 are unpublished and available in the files of the Groundwater Section, DENR. U.S. Geological Survey periodic water-level measurements began December 1986 and continuous record began March 1987.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 6.37 ft below land-surface datum, Mar. 13, 1987; lowest water level recorded, 13.53 ft below land-surface datum, Aug. 1, 1990.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.50	7.94	8.36	8.95	9.32	9.52	9.78	9.73	10.29	9.73	10.48	11.35
2	7.37	7.95	8.34	8.91	9.38	9.49	9.83	9.92	10.54	9.75	10.69	11.28
3	7.37	8.07	8.35	8.93	9.40	9.50	9.90	9.74	10.37	9.88	10.81	11.18
4	7.47	8.06	8.39	8.99	9.41	9.58	9.92	9.74	10.14	10.24	10.78	11.16
5	7.49	8.02	8.37	9.00	9.40	9.54	9.85	9.85	10.14	10.28	10.83	11.22
6	7.48	8.06	8.40	9.04	9.43	9.59	9.96	9.87	10.02	10.06	10.76	11.22
7	7.45	8.08	8.40	9.07	9.44	9.68	9.96	9.92	9.79	10.21	10.97	11.27
8	7.12	8.04	8.46	9.11	9.42	9.72	10.08	9.96	9.63	10.26	11.05	11.32
9	7.00	8.17	8.57	9.02	9.52	9.77	10.12	9.88	9.53	10.33	11.07	11.33
10	6.99	8.20	8.60	8.99	9.50	9.69	10.12	9.94	9.50	10.24	10.82	11.31
11	7.02	8.21	8.57	9.07	9.50	9.68	10.02	10.00	9.54	10.31	10.60	11.29
12	7.02	8.10	8.61	9.14	9.52	9.81	9.89	9.92	9.83	10.56	10.76	11.27
13	7.04	8.09	8.65	9.13	9.56	9.74	9.87	9.81	9.89	10.59	10.86	11.30
14	7.05	8.07	8.65	9.12	9.48	9.56	9.99	9.93	9.83	10.38	11.24	11.33
15	7.12	8.16	8.68	9.10	9.44	9.63	10.00	10.02	9.54	10.38	11.25	11.35
16	7.41	8.15	8.69	8.98	9.52	9.67	10.05	10.24	9.57	10.49	10.99	11.31
17	7.50	8.14	8.66	9.13	9.51	9.67	9.93	10.12	9.74	10.67	10.96	11.37
18	7.50	8.12	8.72	9.16	9.51	9.67	10.05	10.15	9.81	10.42	10.97	11.37
19	7.60	8.12	8.71	9.20	9.47	9.70	10.06	10.23	9.72	10.77	10.95	11.40
20	7.64	8.18	8.81	9.19	9.50	9.50	10.06	10.26	9.79	10.64	10.93	11.42
21	7.73	8.19	8.86	9.24	9.45	9.52	10.19	10.18	9.91	10.67	10.94	11.55
22	7.63	8.26	8.84	9.23	9.45	9.54	10.13	10.26	10.22	10.74	11.01	11.51
23	7.60	8.32	8.82	9.21	9.56	9.75	9.97	10.38	10.10	10.63	11.11	11.50
24	7.68	8.33	8.79	9.25	9.55	9.95	10.07	10.29	9.84	10.73	11.16	11.49
25	7.78	8.30	8.84	9.23	9.52	9.71	10.24	10.31	9.88	10.62	11.13	11.44
26	7.83	8.30	8.90	9.31	9.51	9.59	10.18	10.22	10.06	10.44	11.17	11.47
27	7.81	8.45	8.86	9.33	9.48	9.67	10.07	10.25	10.20	10.61	11.14	11.44
28	7.75	8.45	8.90	9.26	9.53	9.65	9.91	10.21	9.80	10.86	11.14	11.33
29	7.81	8.46	8.90	9.35	---	9.58	9.80	10.33	9.69	10.73	11.21	11.33
30	7.83	8.43	8.94	9.31	---	9.64	9.74	10.39	9.71	10.72	11.31	11.30
31	7.97	---	8.94	9.29	---	9.69	---	10.30	---	10.50	11.30	---
WTR YR 1997	MEAN 9.61		HIGH 6.99		LOW 11.55							



WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

BRUNSWICK COUNTY--Continued

335629078115407. Local number, NC-182; DENR Sunset Harbor Research Station well GG34s7.

LOCATION.--Lat 33°56'29", long 78°11'54", Hydrologic Unit 03040207, 1 mi north of Sunset Harbor, and 4.3 mi south of State Highway 211 on Secondary Road 1112. Owner: DENR (North Carolina Department of Environment and Natural Resources).

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.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 28.06 ft above sea level (levels by DENR). Measuring point: Top of collar on casing, 2.65 ft above land-surface datum.

REMARKS.--Well is part of climatic-effects network.

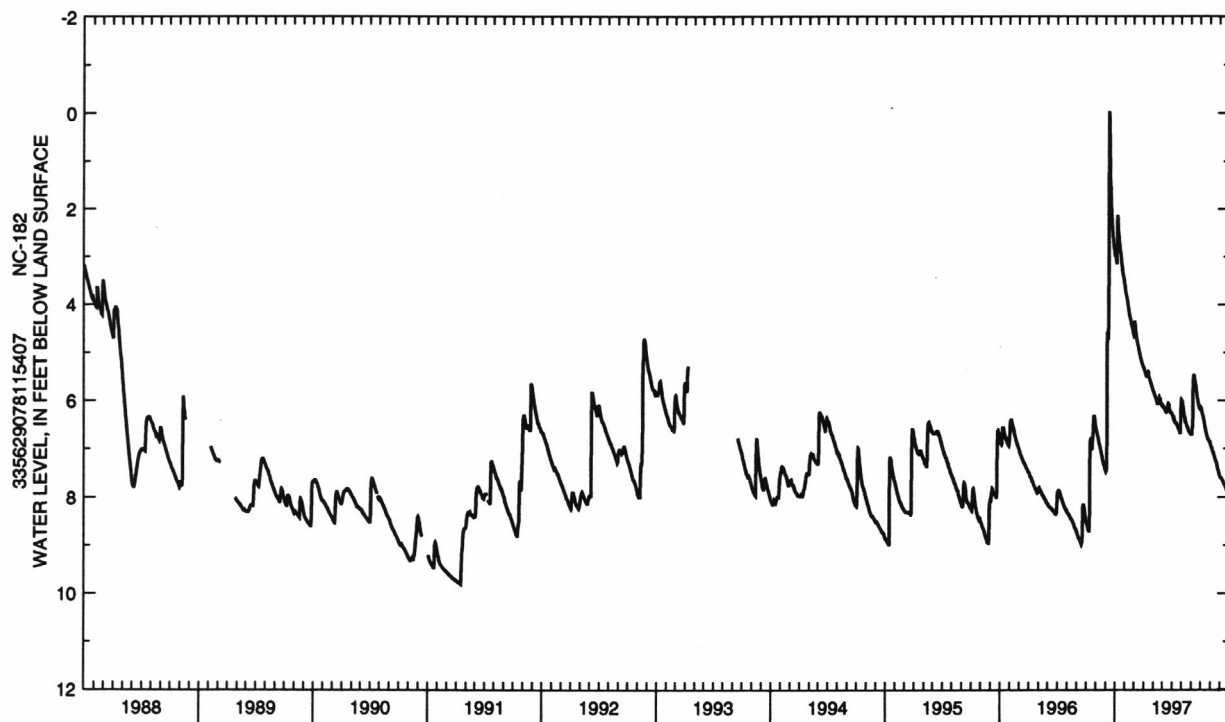
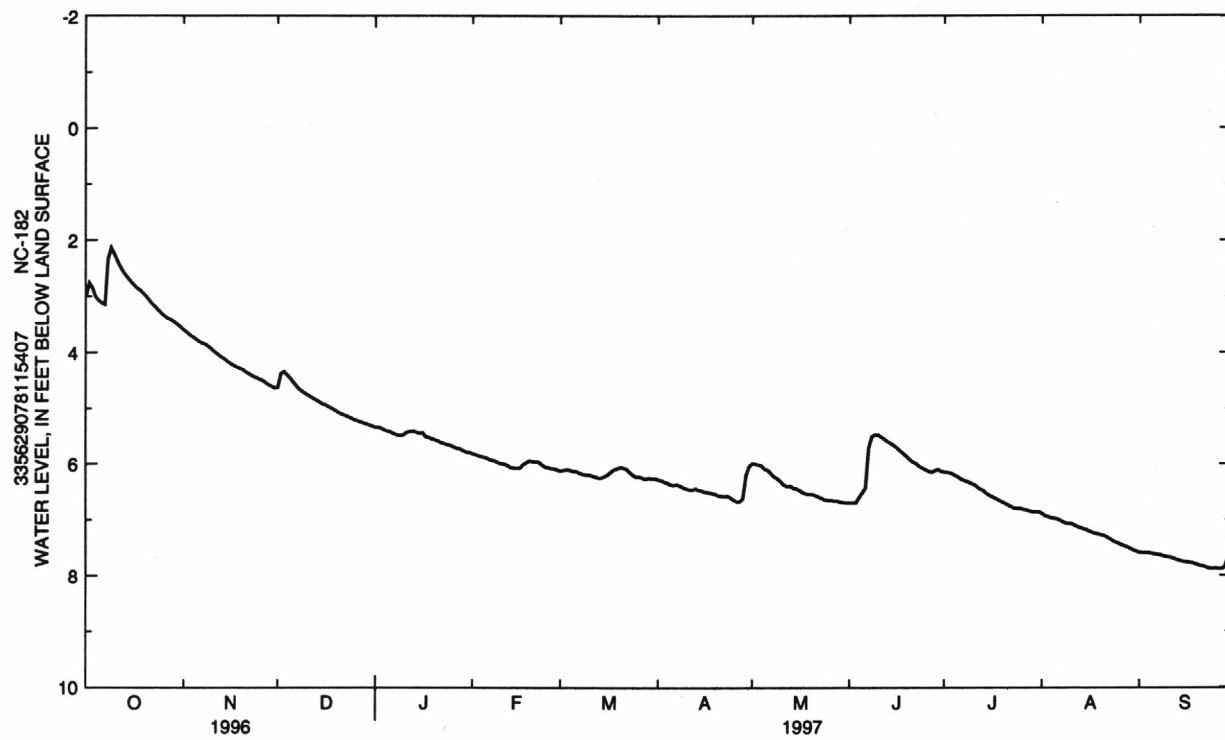
PERIOD OF RECORD.--January 1987 to September 1997 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.19 ft above land-surface datum, Sept. 12, 13, 1996; lowest water level recorded, 9.80 ft below land-surface datum, Jan. 15 and 16, 1991.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.99	3.59	4.62	5.33	5.81	6.12	6.28	5.99	6.70	6.15	6.89	7.59
2	2.76	3.63	4.37	5.33	5.83	6.11	6.29	6.00	6.70	6.15	6.93	7.60
3	2.84	3.68	4.34	5.35	5.85	6.10	6.32	6.01	6.70	6.16	6.95	7.60
4	3.00	3.72	4.40	5.38	5.87	6.11	6.34	6.03	6.60	6.19	6.97	7.60
5	3.07	3.76	4.46	5.40	5.88	6.13	6.37	6.09	6.52	6.22	6.98	7.61
6	3.11	3.80	4.53	5.42	5.91	6.13	6.38	6.11	6.43	6.26	6.99	7.62
7	3.14	3.83	4.60	5.45	5.93	6.16	6.37	6.17	5.72	6.29	7.02	7.63
8	2.34	3.85	4.66	5.47	5.94	6.18	6.39	6.23	5.50	6.31	7.05	7.64
9	2.13	3.89	4.70	5.48	5.97	6.19	6.42	6.26	5.47	6.33	7.07	7.66
10	2.24	3.94	4.74	5.47	5.99	6.19	6.44	6.31	5.47	6.36	7.07	7.67
11	2.37	3.99	4.77	5.42	6.00	6.21	6.46	6.37	5.51	6.39	7.09	7.68
12	2.48	4.03	4.81	5.41	6.02	6.23	6.46	6.40	5.55	6.44	7.12	7.70
13	2.58	4.08	4.84	5.40	6.06	6.25	6.44	6.39	5.59	6.47	7.14	7.72
14	2.65	4.11	4.87	5.42	6.07	6.25	6.47	6.43	5.63	6.51	7.16	7.74
15	2.72	4.16	4.91	5.44	6.07	6.22	6.48	6.44	5.66	6.55	7.18	7.75
16	2.78	4.20	4.93	5.43	6.07	6.19	6.50	6.47	5.71	6.58	7.21	7.76
17	2.84	4.23	4.96	5.50	6.01	6.14	6.51	6.51	5.76	6.61	7.23	7.77
18	2.88	4.26	4.99	5.52	5.97	6.10	6.52	6.53	5.81	6.64	7.25	7.78
19	2.93	4.28	5.02	5.54	5.94	6.08	6.53	6.54	5.86	6.67	7.26	7.80
20	2.99	4.31	5.06	5.56	5.95	6.06	6.56	6.54	5.92	6.70	7.28	7.82
21	3.06	4.35	5.09	5.58	5.96	6.07	6.57	6.56	5.96	6.73	7.29	7.83
22	3.13	4.38	5.11	5.61	5.96	6.09	6.58	6.59	5.99	6.76	7.33	7.85
23	3.18	4.42	5.14	5.63	6.01	6.15	6.57	6.61	6.04	6.79	7.36	7.87
24	3.24	4.44	5.16	5.65	6.05	6.20	6.60	6.64	6.07	6.80	7.40	7.88
25	3.30	4.47	5.19	5.66	6.06	6.23	6.64	6.65	6.10	6.80	7.42	7.87
26	3.35	4.49	5.21	5.69	6.08	6.23	6.67	6.65	6.13	6.81	7.45	7.88
27	3.39	4.53	5.23	5.71	6.08	6.25	6.67	6.66	6.15	6.83	7.47	7.88
28	3.41	4.57	5.25	5.72	6.11	6.27	6.62	6.66	6.12	6.85	7.49	7.85
29	3.45	4.60	5.27	5.76	---	6.25	6.20	6.68	6.10	6.86	7.52	7.69
30	3.49	4.63	5.29	5.78	---	6.26	6.04	6.69	6.13	6.86	7.55	7.55
31	3.54	---	5.31	5.79	---	6.26	---	6.70	---	6.86	7.57	---
WTR YR 1997	MEAN 5.83		HIGH 2.13		LOW 7.88							



CARTERET COUNTY

344323076451301. Local number, NC-139; DENR Camp Glenn Research Station well X17j5.

LOCATION.--Lat 34°43'23", long 76°45'13", Hydrologic Unit 03020106, on west edge of Morehead City, and south of U.S. Highway 70 at DENR Marine Fisheries Facility on north shore of Bogue Sound. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Castle Hayne aquifer of Oligocene and Eocene age.

WELL CHARACTERISTICS.--Drilled observation well, drilled to 238 ft, diameter 4 in., cased to 180 ft, open hole to 191 ft, hole collapsed from 191 to 238 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 30-minute intervals.

DATUM.--Land-surface datum is 8.72 ft above sea level (levels by DENR). 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, Dec. 7, 1976; lowest water level recorded, 14.22 ft below land-surface datum, Aug. 7, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

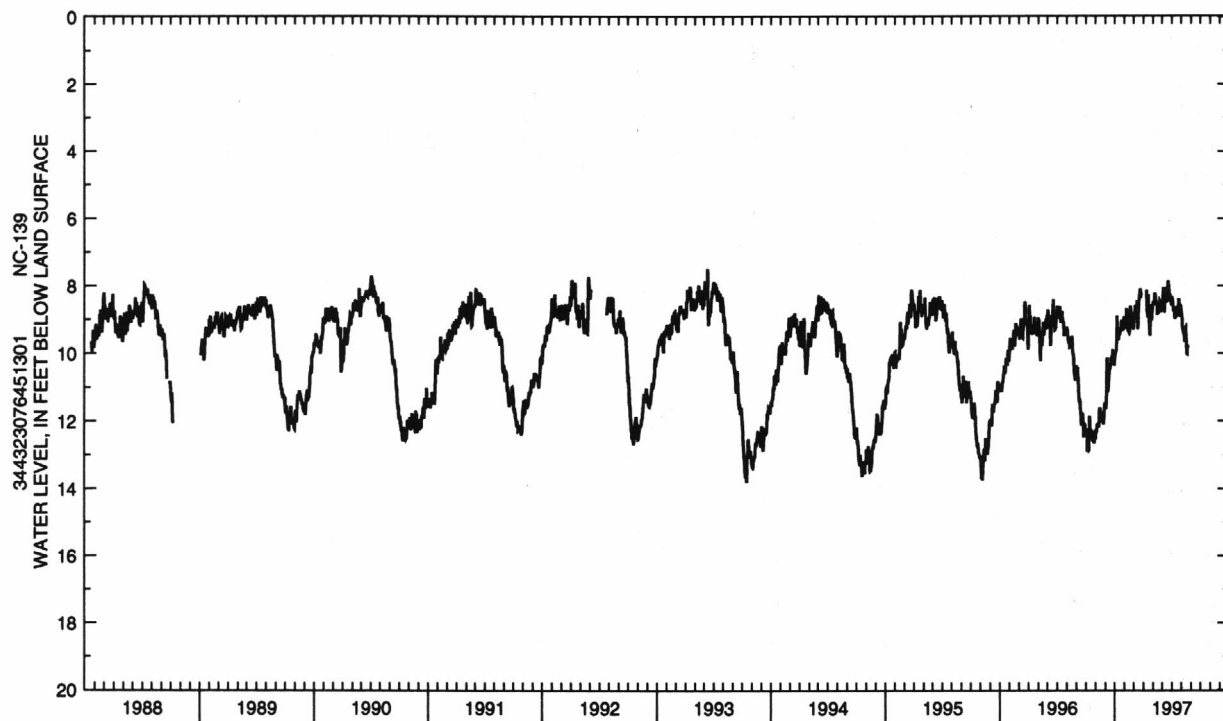
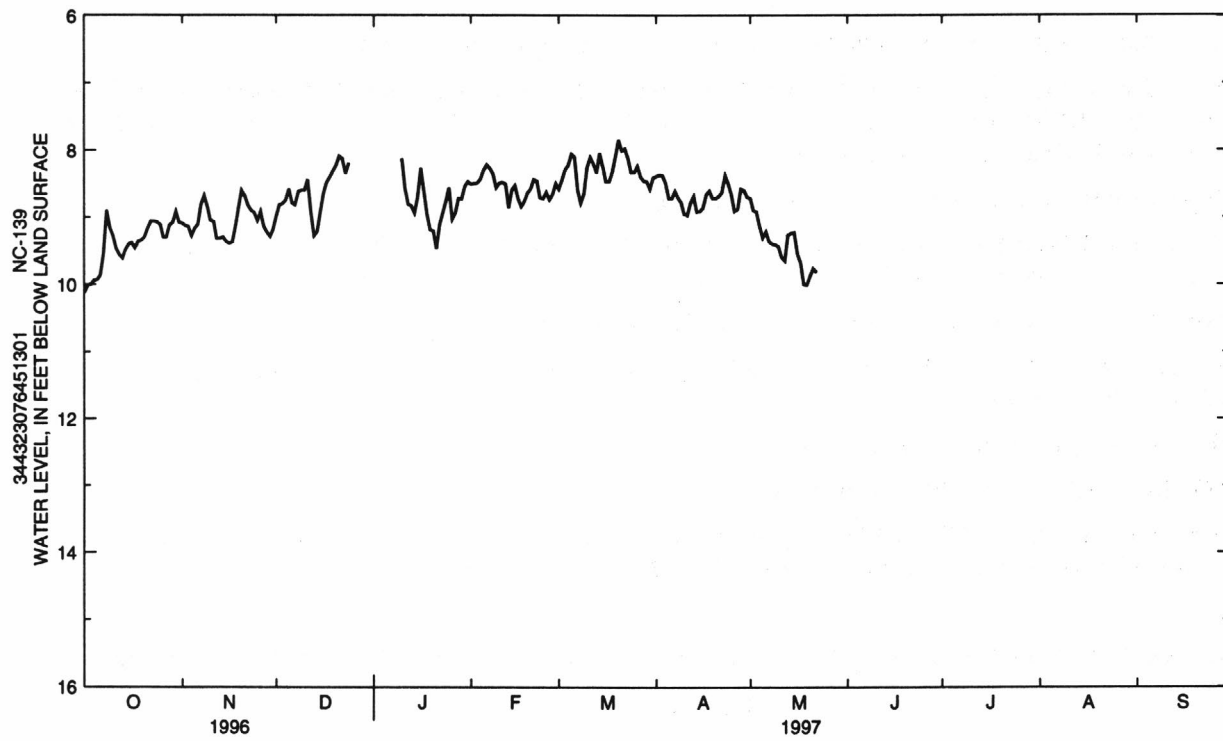
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.12	9.09	8.99	---	8.51	8.58	8.39	8.72	---	---	---	---
2	10.01	9.13	8.82	---	8.50	8.45	8.37	8.90	---	---	---	---
3	10.00	9.14	8.80	---	8.49	8.29	8.38	8.92	---	---	---	---
4	9.94	9.28	8.75	---	8.43	8.23	8.49	9.14	---	---	---	---
5	9.93	9.17	8.58	---	8.30	8.06	8.72	9.31	---	---	---	---
6	9.87	9.11	8.79	---	8.22	8.10	8.72	9.22	---	---	---	---
7	9.55	8.81	8.82	---	8.27	8.60	8.61	9.36	---	---	---	---
8	8.90	8.68	8.62	---	8.36	8.79	8.71	9.40	---	---	---	---
9	9.16	8.84	8.60	---	8.56	8.65	8.78	9.41	---	---	---	---
10	9.28	9.04	8.60	8.13	8.49	8.26	8.95	9.44	---	---	---	---
11	9.47	9.07	8.44	8.57	8.48	8.11	8.97	9.60	---	---	---	---
12	9.56	9.32	8.92	8.81	8.51	8.20	8.79	9.65	---	---	---	---
13	9.61	9.32	9.28	8.83	8.86	8.34	8.69	9.27	---	---	---	---
14	9.49	9.30	9.22	8.94	8.59	8.05	8.92	9.24	---	---	---	---
15	9.40	9.36	8.92	8.71	8.53	8.25	8.91	9.23	---	---	---	---
16	9.38	9.39	8.64	8.27	8.73	8.47	8.86	9.55	---	---	---	---
17	9.46	9.37	8.49	8.61	8.84	8.47	8.66	9.68	---	---	---	---
18	9.36	9.14	8.40	8.96	8.76	8.33	8.61	10.00	---	---	---	---
19	9.35	8.85	8.32	9.19	8.64	8.10	8.72	10.01	---	---	---	---
20	9.30	8.60	8.23	9.21	8.58	7.85	8.72	9.88	---	---	---	---
21	9.17	8.69	8.09	9.47	8.44	8.01	8.69	9.77	---	---	---	---
22	9.06	8.82	8.13	9.11	8.46	7.98	8.63	9.82	---	---	---	---
23	9.06	8.90	8.35	8.94	8.71	8.12	8.38	---	---	---	---	---
24	9.07	8.93	8.20	8.76	8.72	8.33	8.50	---	---	---	---	---
25	9.11	9.05	---	8.56	8.63	8.33	8.67	---	---	---	---	---
26	9.30	8.92	---	9.03	8.74	8.24	8.91	---	---	---	---	---
27	9.30	9.14	---	8.94	8.66	8.40	8.88	---	---	---	---	---
28	9.12	9.23	---	8.72	8.50	8.46	8.58	---	---	---	---	---
29	9.08	9.29	---	8.73	---	8.47	8.60	---	---	---	---	---
30	8.92	9.19	---	8.54	---	8.58	8.70	---	---	---	---	---
31	9.08	---	---	8.47	---	8.41	---	---	---	---	---	---

WTR YR 1997

MEAN 8.85

HIGH 7.85

LOW 10.12



CHEROKEE COUNTY

351117083545001. Local number, NC-191.

LOCATION.--Lat 35°11'17", long 83°54'50", Hydrologic Unit 06020002, 0.6 mi north of Marble, 100 ft west of Secondary Road 1377, in Marble. Owner: Coats American Company.

AQUIFER.--Saprolite derived from schist of Precambrian age.

WELL CHARACTERISTICS.--Drilled observation well, drilled to 108.5 ft, diameter 4 in., cased to 53 ft, screened interval from 53 to 83 ft, sand filter pack from 40 to 83 ft, backfilled with saprolite from 83 to 108.5 ft.

INSTRUMENTATION.--Digital recorder with a 60-minute punch interval. Digital recorder replaced with electronic data logger on Aug. 12, 1997.

DATUM.--Land-surface datum is 1,720 ft above sea level (from topographic map). Measuring point: Top of instrument shelf, 0.45 ft above land-surface datum; revised from 1.15 ft above land surface August 1995.

REMARKS.--Well is part of terrane-effects network. Water-level measured by personnel of North Carolina Department of Environment and Natural Resources Sept. 1985 to Sept. 1989.

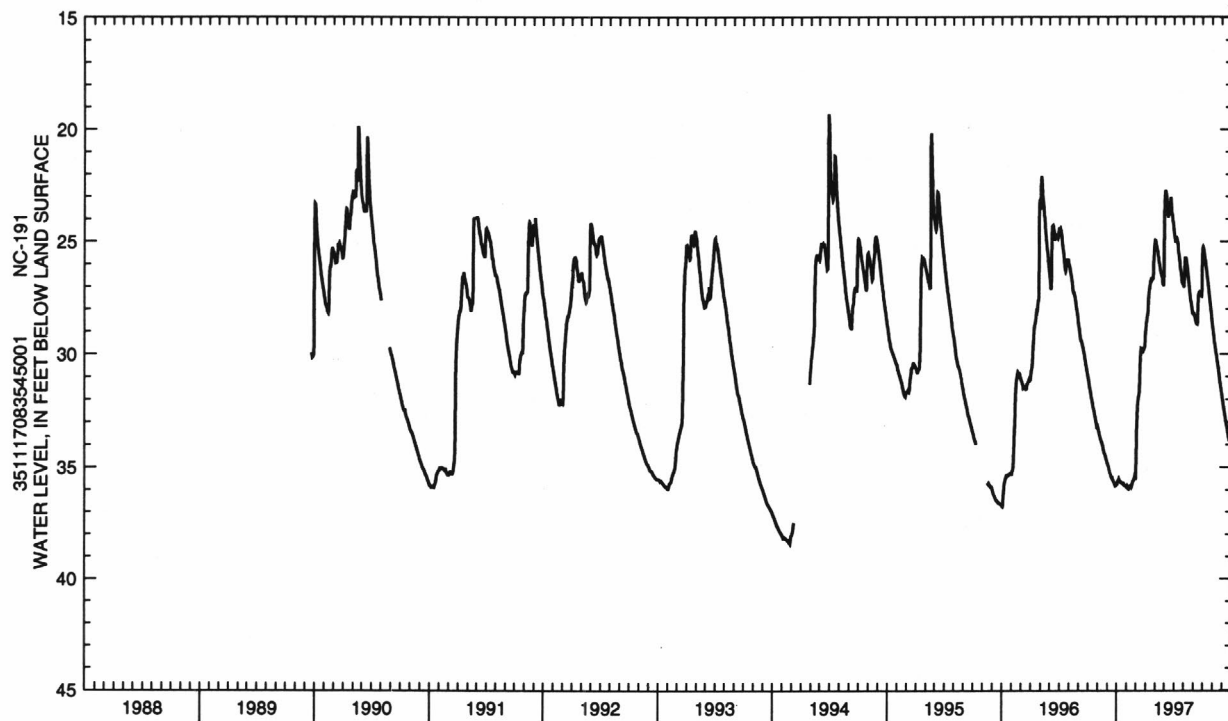
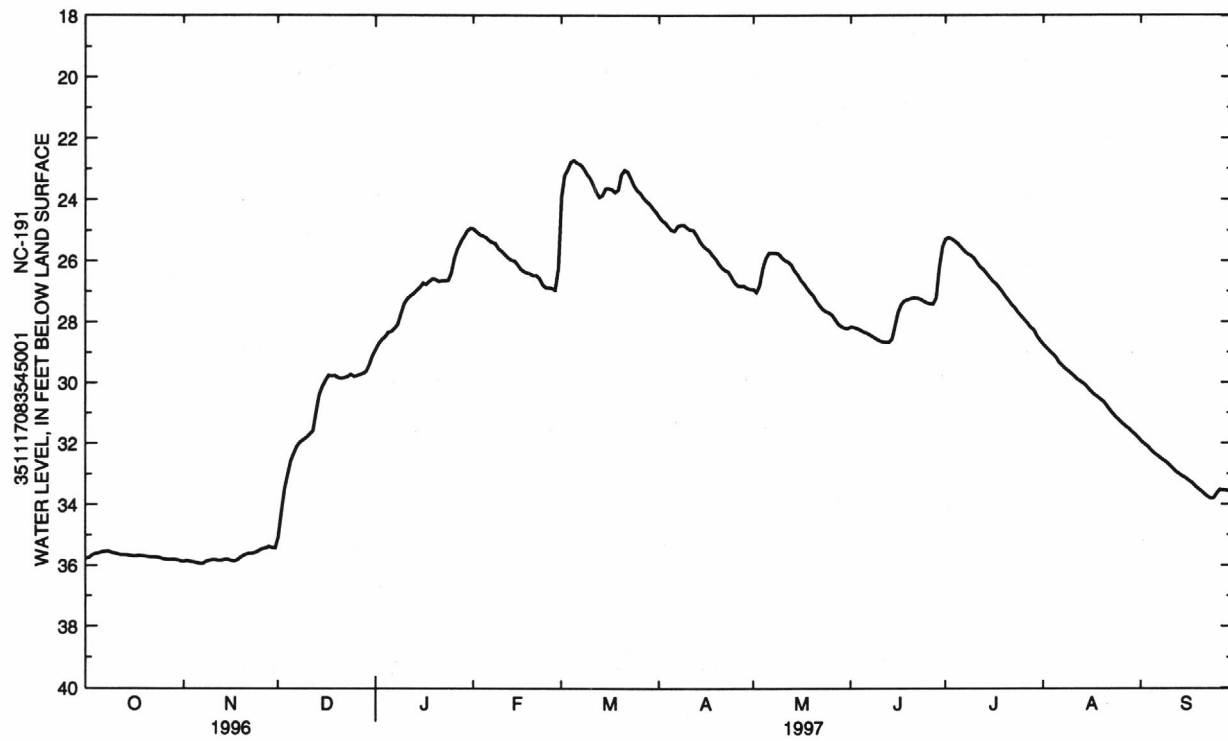
PERIOD OF RECORD.--October 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 19.26 ft below land-surface datum, Mar. 29, 1994; lowest water level recorded, 38.41 ft below land-surface datum, Nov. 25 and 26, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35.77	35.88	35.10	28.91	24.95	23.92	24.56	26.93	28.17	25.30	28.74	31.92
2	35.76	35.85	34.26	28.72	25.05	23.22	24.69	27.04	28.18	25.25	28.84	32.01
3	35.66	35.88	33.52	28.59	25.15	23.02	24.77	26.81	28.22	25.29	28.96	32.09
4	35.62	35.90	33.02	28.50	25.19	22.78	24.88	26.25	28.27	25.37	29.05	32.20
5	35.60	35.92	32.58	28.35	25.24	22.73	25.00	25.92	28.33	25.45	29.17	32.31
6	35.57	35.95	32.31	28.32	25.35	22.81	25.03	25.74	28.37	25.56	29.34	32.39
7	35.55	35.96	32.09	28.22	25.40	22.86	24.87	25.74	28.43	25.68	29.44	32.47
8	35.53	35.89	31.96	28.09	25.44	22.97	24.83	25.74	28.50	25.77	29.54	32.55
9	35.58	35.85	31.89	27.74	25.61	23.16	24.83	25.77	28.56	25.82	29.62	32.62
10	35.60	35.83	31.81	27.41	25.69	23.29	24.93	25.89	28.62	25.91	29.71	32.71
11	35.63	35.83	31.70	27.26	25.80	23.50	24.99	25.99	28.66	26.07	29.81	32.82
12	35.66	35.85	31.60	27.16	25.90	23.75	25.00	26.04	28.67	26.20	29.91	32.92
13	35.66	35.85	31.00	27.08	25.98	23.93	25.17	26.13	28.68	26.29	29.98	33.00
14	35.66	35.82	30.41	26.97	26.01	23.87	25.37	26.32	28.58	26.41	30.05	33.07
15	35.69	35.82	30.14	26.88	26.13	23.64	25.50	26.45	28.13	26.55	30.16	33.13
16	35.70	35.85	29.93	26.74	26.27	23.63	25.59	26.63	27.67	26.67	30.28	33.21
17	35.70	35.87	29.76	26.78	26.35	23.67	25.67	26.75	27.43	26.76	30.38	33.29
18	35.69	35.84	29.78	26.68	26.40	23.77	25.82	26.90	27.31	26.88	30.46	33.39
19	35.70	35.75	29.77	26.60	26.42	23.68	25.93	27.03	27.28	27.02	30.55	33.48
20	35.71	35.69	29.84	26.62	26.49	23.19	26.10	27.15	27.24	27.17	30.62	33.56
21	35.73	35.64	29.86	26.69	26.48	23.04	26.23	27.32	27.22	27.30	30.76	33.65
22	35.74	35.62	29.84	26.66	26.58	23.09	26.31	27.46	27.23	27.44	30.90	33.74
23	35.73	35.61	29.81	26.66	26.78	23.32	26.36	27.58	27.26	27.55	31.03	33.81
24	35.75	35.58	29.73	26.64	26.88	23.54	26.53	27.66	27.32	27.69	31.14	33.81
25	35.78	35.52	29.80	26.40	26.88	23.71	26.71	27.70	27.38	27.82	31.24	33.64
26	35.81	35.46	29.78	25.88	26.91	23.79	26.82	27.78	27.41	27.93	31.34	33.52
27	35.82	35.45	29.73	25.59	26.96	23.95	26.84	27.93	27.42	28.06	31.43	33.53
28	35.82	35.39	29.70	25.38	26.25	24.06	26.83	28.08	27.23	28.19	31.51	33.54
29	35.82	35.43	29.62	25.21	---	24.15	26.90	28.16	26.25	28.27	31.61	33.58
30	35.83	35.45	29.39	25.02	---	24.28	26.93	28.21	25.54	28.48	31.70	33.64
31	35.87	---	29.11	24.94	---	24.41	---	28.22	---	28.62	31.80	---
WTR YR 1997	MEAN 29.12		HIGH 22.73		LOW 35.96							



CHEROKEE COUNTY--Continued

351121083545002. Local number, NC-192.

LOCATION.--Lat 35°11'21", long 83°54'50", Hydrologic Unit 06020002, 0.7 mi north of Marble, 75 ft west of Secondary Road 1377, in Marble. Owner: Coats American Company.

AQUIFER.--Saprolite derived from schist of Precambrian age.

WELL CHARACTERISTICS.--Drilled observation well, drilled to 24 ft, diameter 4 in., cased to 14 ft, screened interval from 14 to 24 ft, sand filter pack from 6 to 24 ft.

INSTRUMENTATION.--Digital recorder with a 60-minute punch interval. Digital recorder replaced with electronic data logger on Aug. 12, 1997.

DATUM.--Land-surface datum is 1,710 ft above sea level (from topographic map). Measuring point: Three saw cuts in top of casing, 3.35 ft above land-surface datum.

REMARKS.--Well is part of climatic-effects network.

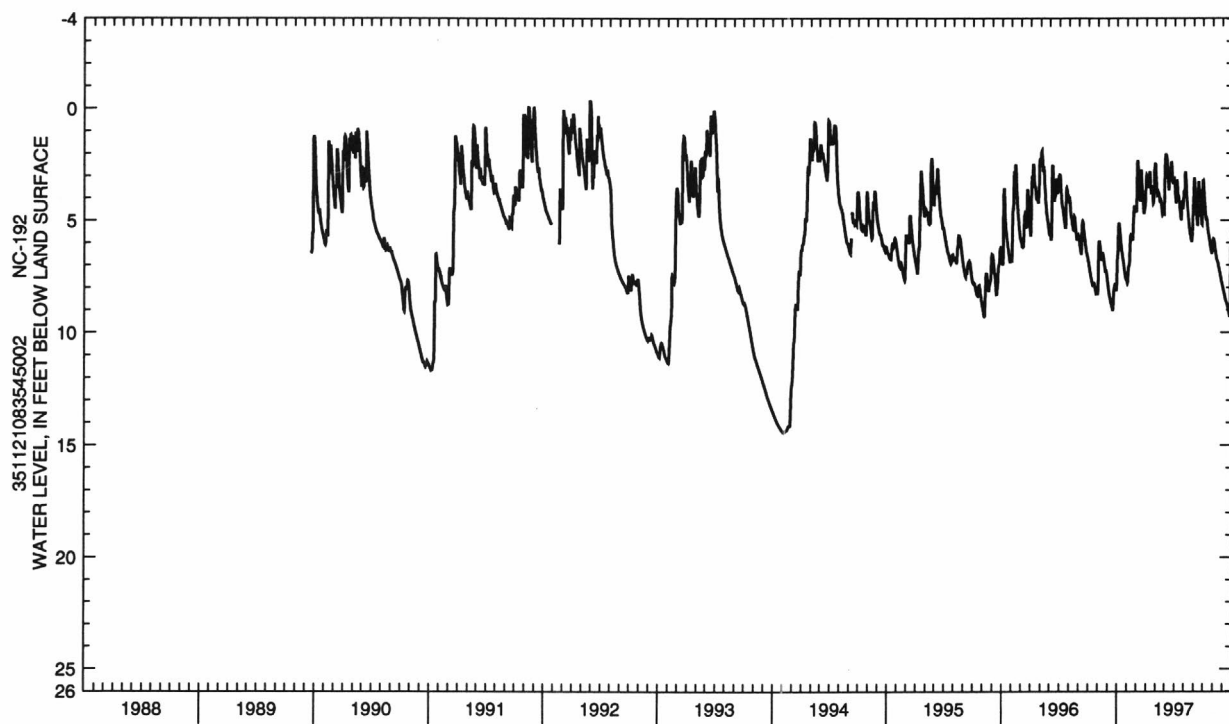
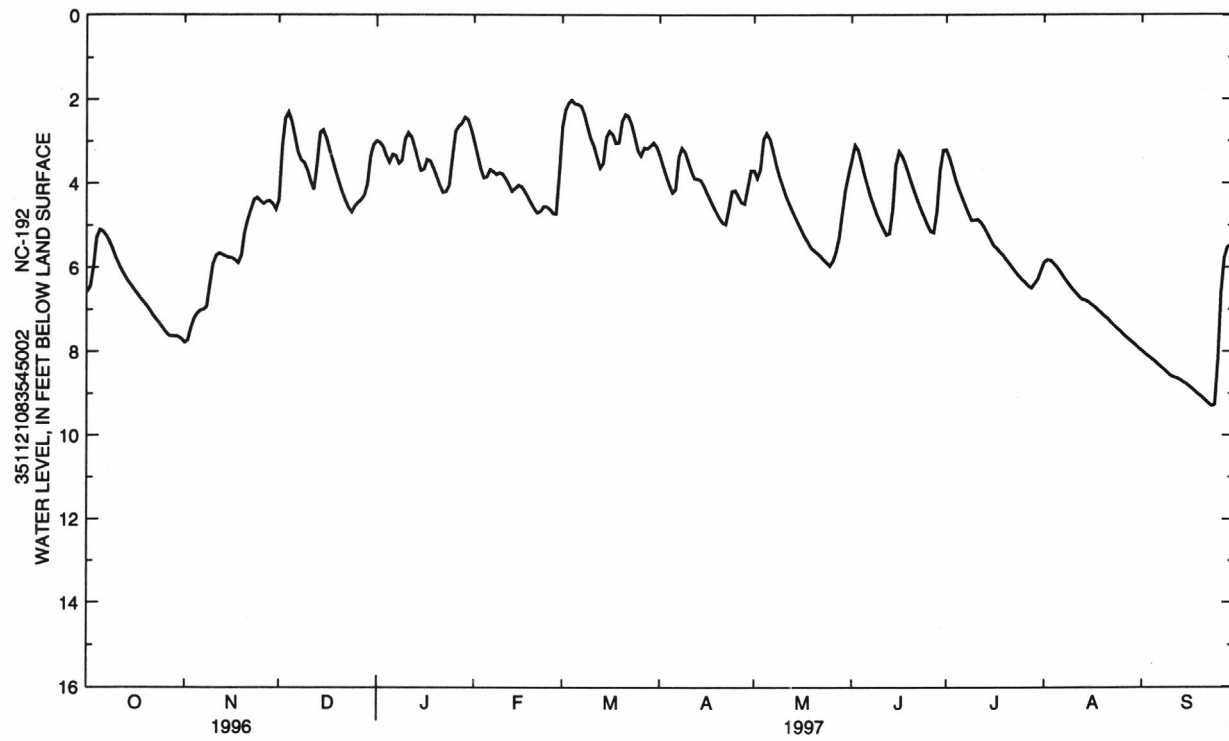
PERIOD OF RECORD.--October 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.09 ft above land-surface datum, Mar. 28, 1993; lowest recorded, 14.44 ft below land-surface datum, Nov. 4, 5, and 6, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.57	7.78	4.40	2.99	3.00	2.66	3.34	3.70	3.46	3.21	5.88	7.98
2	6.45	7.73	3.13	3.03	3.33	2.26	3.59	3.88	3.10	3.40	5.82	8.05
3	5.96	7.43	2.45	3.13	3.65	2.10	3.83	3.68	3.21	3.66	5.83	8.11
4	5.30	7.22	2.31	3.35	3.87	2.02	4.04	2.95	3.50	3.93	5.90	8.17
5	5.10	7.09	2.52	3.50	3.85	2.11	4.23	2.81	3.80	4.15	5.99	8.23
6	5.14	7.02	2.89	3.32	3.68	2.12	4.15	2.95	4.07	4.34	6.09	8.30
7	5.24	7.00	3.26	3.34	3.72	2.17	3.38	3.23	4.32	4.54	6.21	8.37
8	5.37	6.93	3.45	3.53	3.80	2.37	3.17	3.56	4.54	4.72	6.32	8.43
9	5.55	6.38	3.51	3.45	3.75	2.66	3.27	3.83	4.75	4.89	6.42	8.50
10	5.74	5.91	3.70	2.94	3.79	2.93	3.49	4.06	4.93	4.88	6.52	8.57
11	5.91	5.71	3.94	2.80	3.90	3.12	3.72	4.28	5.08	4.87	6.60	8.61
12	6.06	5.66	4.15	2.90	4.04	3.38	3.89	4.47	5.23	4.94	6.69	8.63
13	6.20	5.69	3.57	3.15	4.19	3.64	3.90	4.64	5.20	5.06	6.76	8.67
14	6.32	5.73	2.79	3.44	4.12	3.53	3.93	4.81	4.62	5.20	6.78	8.72
15	6.42	5.76	2.73	3.70	4.05	2.90	4.07	4.96	3.57	5.35	6.82	8.77
16	6.53	5.77	2.93	3.67	4.08	2.76	4.24	5.12	3.25	5.49	6.88	8.83
17	6.63	5.82	3.21	3.44	4.19	2.84	4.40	5.27	3.36	5.56	6.94	8.89
18	6.73	5.89	3.47	3.47	4.33	3.05	4.56	5.40	3.55	5.64	7.01	8.96
19	6.82	5.70	3.73	3.64	4.47	3.03	4.70	5.53	3.78	5.72	7.08	9.03
20	6.91	5.17	3.98	3.84	4.61	2.53	4.83	5.60	4.02	5.82	7.15	9.09
21	7.02	4.86	4.21	4.04	4.71	2.37	4.94	5.66	4.23	5.92	7.21	9.16
22	7.14	4.63	4.41	4.22	4.67	2.41	4.98	5.73	4.44	6.02	7.29	9.23
23	7.24	4.39	4.58	4.20	4.56	2.61	4.60	5.81	4.64	6.12	7.37	9.30
24	7.33	4.34	4.69	4.05	4.56	2.90	4.19	5.89	4.82	6.21	7.44	9.27
25	7.43	4.42	4.55	3.41	4.62	3.23	4.18	5.96	4.99	6.29	7.51	8.18
26	7.54	4.49	4.46	2.77	4.72	3.35	4.31	5.84	5.15	6.36	7.59	6.58
27	7.62	4.43	4.40	2.64	4.73	3.16	4.46	5.63	5.18	6.44	7.66	5.77
28	7.63	4.42	4.29	2.58	3.73	3.18	4.49	5.28	4.68	6.49	7.72	5.53
29	7.63	4.49	4.02	2.43	---	3.12	4.09	4.71	3.71	6.38	7.79	5.47
30	7.65	4.62	3.34	2.49	---	3.04	3.70	4.13	3.22	6.28	7.85	5.49
31	7.70	---	3.08	2.71	---	3.14	---	3.79	---	6.07	7.92	---
WTR YR 1997	MEAN 4.95		HIGH 2.02		LOW 9.30							



COLUMBUS COUNTY

342508078360802. Local number, NC-179; USGS well Co-89; DENR Carver Moore Research Station well AA39v2.

LOCATION.--Lat 34°25'07", long 78°36'10", Hydrologic Unit 03040206, 6.7 mi north of Hallsboro, east of Secondary Road 1001 at abandoned school on Secondary Road 1724. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Upper 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.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 105.53 ft above sea level (levels by DENR). Measuring point: Top of instrument shelf, 2.10 ft above land-surface datum.

REMARKS.--Well is part of areal-effects network.

PERIOD OF RECORD.--September 1975 to current year. Continuous record January 1987 to November 1990. Records from September 1975 to April 1986 are unpublished and available in the files of the Groundwater Section, DENR.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 39.11 ft below land-surface datum, July 20, 1976; lowest water level measured, 47.92 ft below land-surface datum, Sept. 10, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 8	46.45	JAN 17	47.08	APR 17	46.96	JUL 8	47.44	AUG 20	47.72	SEP 10	47.92
DEC 10	46.98	FEB 20	46.98	MAY 14	47.13						



CRAVEN COUNTY

351049077175501. Local number, NC-44.

LOCATION.--Lat 35°10'49", long 77°17'55", Hydrologic Unit 03020202, 1.4 mi southeast of Cove City on Secondary Road 1005. Owner: City of New Bern.

AQUIFER.--Black Creek and upper Cape Fear aquifers of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation well, drilled to 854 ft, diameter 2 in., cased to 705 ft, from 715 to 781 ft, and 786 to 828 ft; screened intervals from 705 to 715 ft, 781 to 786 ft, and 828 to 833 ft.

INSTRUMENTATION.--Beginning July 1988, measured periodically with steel tape.

DATUM.--Land-surface datum is 36.73 ft above sea level. Measuring point: Top of instrument shelf, 2.06 ft above land-surface datum.

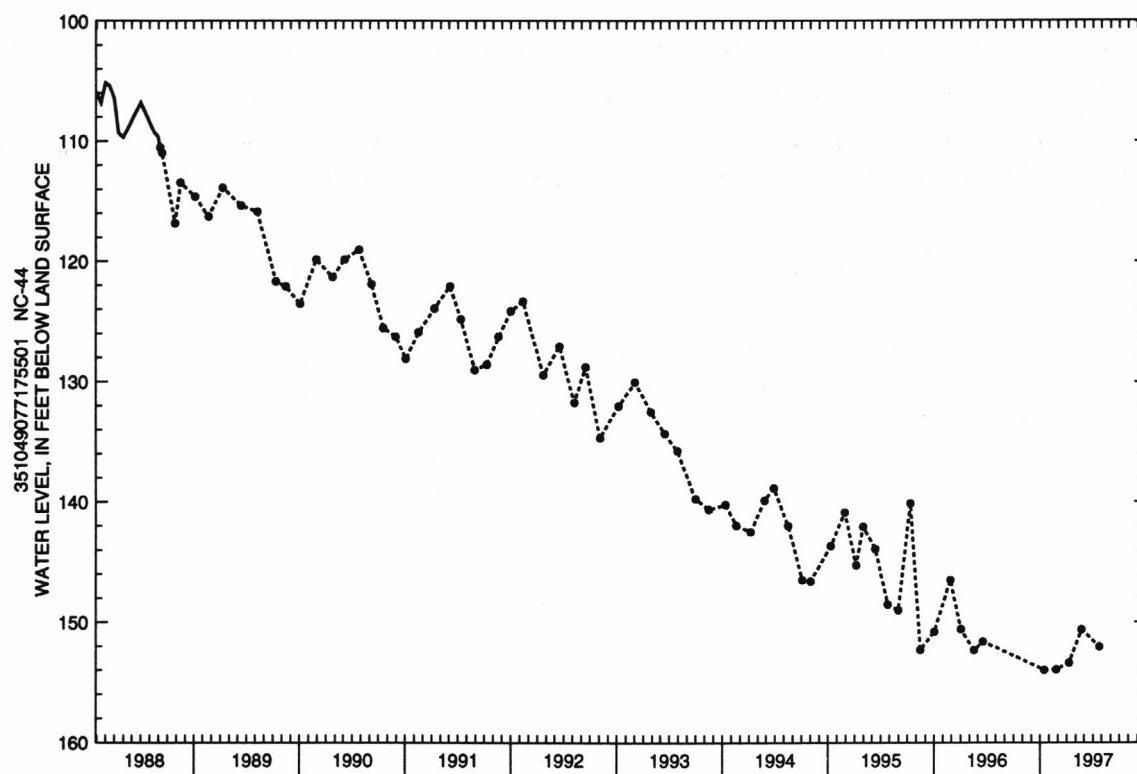
REMARKS.--Water levels affected by pumping at nearby City of New Bern well field. Well is part of local-effects network.

PERIOD OF RECORD.--March 1965 to April 1997. Continuous record from March 1965 to June 1988.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 6.01 ft below land-surface datum, Aug. 25 and 26, 1965; lowest water level measured, 154.00 ft below land-surface datum, Oct. 15, 1996.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO APRIL 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	154.00	NOV 25	153.98	JAN 8	153.43	FEB 21	150.64	APR 23	152.10



WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

CRAVEN COUNTY--Continued

351019077184103. Local number, NC-167; DENR Cove City Research Station well R23x3.

LOCATION.--Lat 35°10'19", long 77°18'41", Hydrologic Unit 03020202, 0.6 mi east of Secondary Road 1001 on Secondary Road 1232, and 1 mi southeast of Cove City. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Lower Cape Fear aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation well, drilled to 1,000 ft, diameter 4 in., cased to 990 ft, screened interval from 990 to 1,000 ft.

INSTRUMENTATION.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 46 ft above sea level (from topographic map). Measuring point: Top of instrument shelf, 2.24 ft above land-surface datum.

REMARKS.--Well is part of areal-effects network.

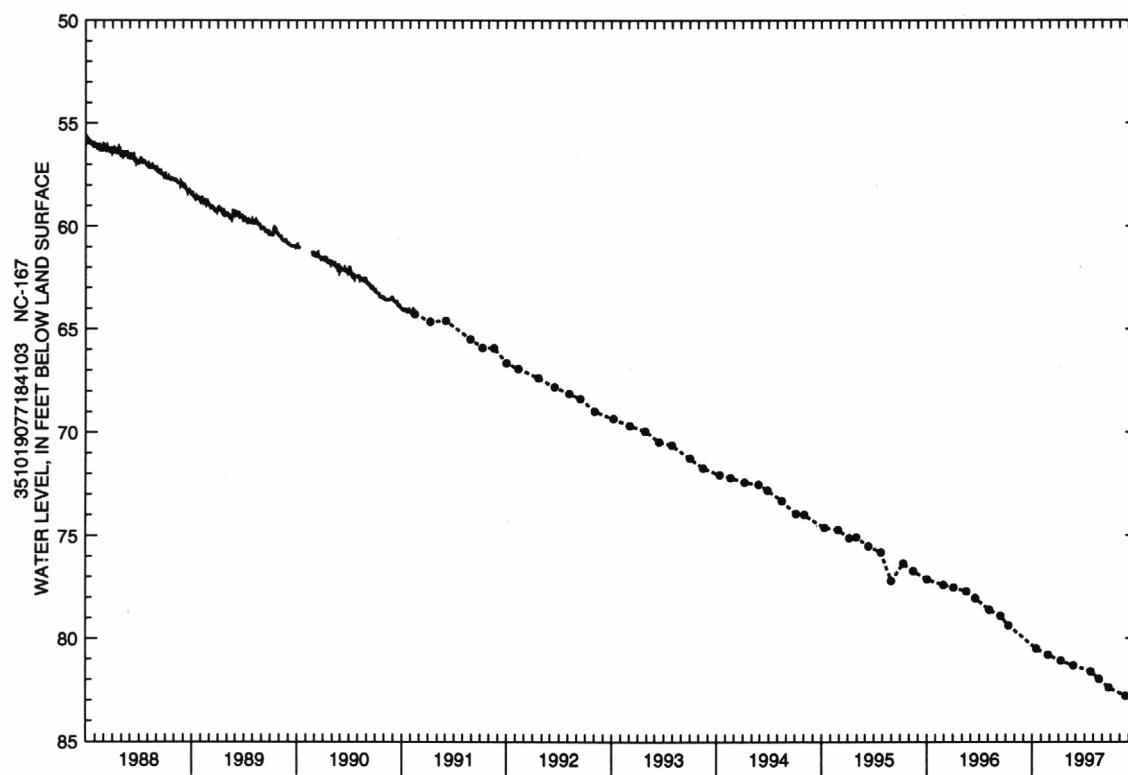
PERIOD OF RECORD.--July 1985 to current year. Continuous record July 1985 to November 1990.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 50.29 ft below land-surface datum, Sept. 27, 1985; lowest water level measured, 82.80 ft below land-surface datum, Aug. 21, 1997.

REVISIONS.--Water-level values for the 1993 water year published in Water Resources Data, North Carolina, NC-94-2 supersede those published in Water Resources Data, North Carolina, NC-93-2.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	80.49	JAN 8	81.09	APR 23	81.61	MAY 21	81.98	JUN 25	82.40	AUG 21	82.80
NOV 25	80.80	FEB 21	81.32								



CRAVEN COUNTY--Continued

350816077101810. Local number, NC-170; DENR Clarks Research Station well S22j10.

LOCATION:--Lat 35°08'16", long 77°10'18", Hydrologic Unit 03020202, 0.8 mi southwest of Clarks, south of U.S. Highway 70 on Secondary Road 1225 at North Carolina Department of Transportation Rest Area. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Black Creek aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation well, drilled to 730 ft, diameter 4 in., cased to 716 ft, screened interval from 716 to 726 ft.

INSTRUMENTATION.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 28.64 ft above sea level (levels by DENR). Measuring point: Top of instrument shelf, 1.70 ft above land-surface datum.

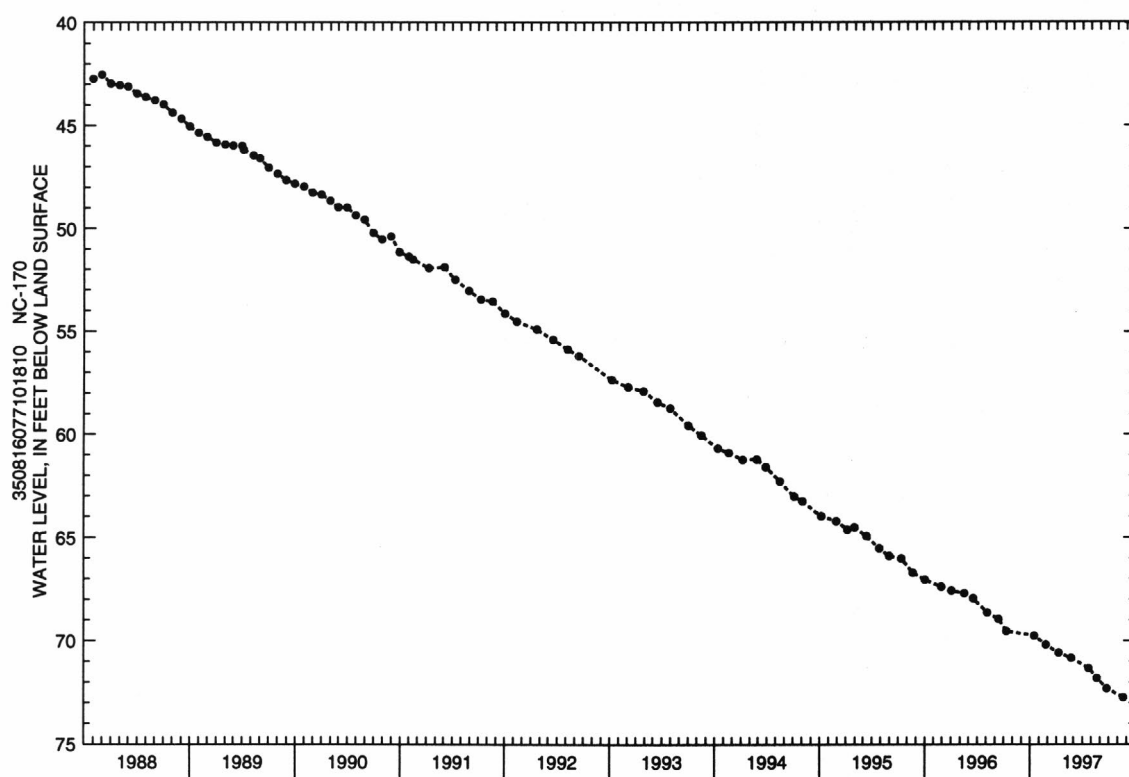
REMARKS.--Well is part of areal-effects network.

PERIOD OF RECORD.--July 1979 to current year. Continuous record April 1984 to November 1990. Records July 1979 to November 1983 are unpublished and available in the files of the Groundwater Section, DENR.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 25.14 ft below land-surface datum, July 18, 1979; lowest water level measured, 72.75 ft below land-surface datum, Aug. 21, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE		WATER LEVEL		DATE		WATER LEVEL		DATE		WATER LEVEL	
OCT 15	69.76	JAN 8	70.59	APR 23	71.33	MAY 21	71.82	JUN 25	72.31	AUG 21	72.75
NOV 25	70.20	FEB 21	70.84								



CUMBERLAND COUNTY

350847079012403. Local number, Cu-163; Fort Bragg Background Site 1 Well 3.

LOCATION.--Lat 34°09'04", long 79°00'39", Hydrologic Unit 03030004, from Bragg Boulevard going south, turn right onto Butner Road going west until it intersects with Reilly Road; turn left and follow Reilly Road heading south until it intersects with Longstreet Road; turn right and follow Longstreet Road approximately 2.0 mi; turn right, follow paved road heading north to radio tower. Background Site 1 well cluster is located within chain-link fence. Owner: U.S. Army.

AQUIFER.--Black Creek aquifer.

WELL CHARACTERISTICS.--Drilled observation well, depth 28.5 ft, diameter 4 in., cased to 18.0 ft, screened interval from 18.0 to 28.0 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 236.29 ft above sea level, (levels by USGS). Measuring point: Top of shelter floor, 2.73 ft above land-surface datum.

REMARKS.--Well is one of the background wells for Fort Bragg, North Carolina RCRA Facilities Investigation.

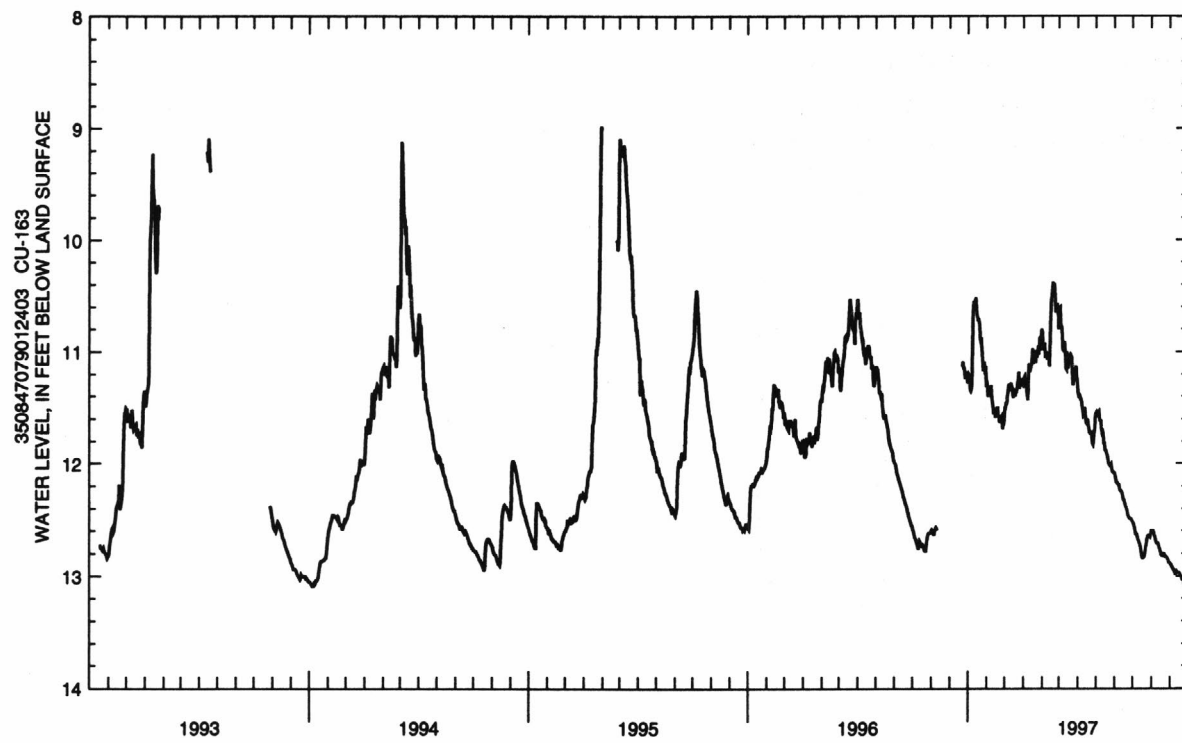
PERIOD OF RECORD.--October 1992 to September 1997.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 8.89 ft below land-surface datum, Jan. 31, 1995; lowest water level recorded, 13.10 ft below land-surface datum, Oct. 10, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.26	11.27	11.50	11.32	10.82	10.70	11.36	11.55	12.09	12.52	12.60	12.89
2	11.20	11.30	11.50	11.23	10.92	10.62	11.39	11.56	12.12	12.53	12.60	12.90
3	11.21	11.40	11.45	11.22	10.96	10.61	11.38	11.54	12.15	12.55	12.60	12.90
4	11.34	11.39	11.47	11.27	10.99	10.79	11.39	11.55	12.17	12.57	12.60	12.92
5	11.35	11.36	11.39	11.24	10.92	10.77	11.42	11.55	12.17	12.60	12.61	12.92
6	11.33	11.39	11.37	11.35	11.03	10.86	11.42	11.54	12.18	12.63	12.64	12.94
7	11.29	11.37	11.31	11.39	11.02	10.99	11.44	11.61	12.19	12.63	12.65	12.94
8	10.94	11.30	11.29	11.43	11.00	10.97	11.50	11.62	12.19	12.63	12.68	12.96
9	10.63	11.40	11.35	11.21	11.07	11.00	11.52	11.61	12.23	12.65	12.70	12.97
10	10.55	11.44	11.32	11.11	11.03	10.91	11.57	11.69	12.24	12.68	12.71	12.99
11	10.58	11.48	11.28	11.15	11.06	11.00	11.56	11.73	12.24	12.69	12.71	12.97
12	10.56	11.53	11.31	11.16	11.07	11.15	11.50	11.72	12.25	12.71	12.71	12.96
13	10.53	11.52	11.32	11.14	11.13	11.16	11.52	11.75	12.26	12.72	12.73	12.97
14	10.52	11.50	11.38	11.11	10.86	11.00	11.63	11.82	12.29	12.74	12.75	12.97
15	10.63	11.58	11.41	11.06	10.68	11.08	11.64	11.82	12.32	12.77	12.76	12.97
16	10.68	11.58	11.38	10.97	10.54	11.15	11.63	11.88	12.32	12.82	12.78	12.97
17	10.72	11.56	11.33	11.11	10.51	11.10	11.60	11.88	12.34	12.84	12.81	12.98
18	10.70	11.50	11.40	11.03	10.45	11.07	11.65	11.90	12.36	12.84	12.82	12.99
19	10.73	11.50	11.34	11.03	10.38	11.05	11.68	11.92	12.38	12.84	12.82	13.00
20	10.76	11.57	11.37	10.99	10.46	11.03	11.72	11.94	12.39	12.83	12.81	13.01
21	10.88	11.58	11.33	11.10	10.39	11.04	11.72	11.97	12.41	12.82	12.80	13.03
22	10.91	11.63	11.27	11.00	10.44	11.05	11.74	12.00	12.43	12.78	12.80	13.03
23	10.90	11.61	11.24	11.01	10.65	11.24	11.71	12.01	12.46	12.73	12.81	13.03
24	11.00	11.61	11.18	11.02	10.63	11.30	11.77	12.02	12.47	12.71	12.83	13.05
25	11.09	11.58	11.33	10.95	10.60	11.25	11.82	12.02	12.48	12.67	12.83	13.04
26	11.16	11.57	11.30	11.03	10.57	11.15	11.83	12.01	12.49	12.65	12.83	13.04
27	11.16	11.69	11.26	10.95	10.61	11.18	11.79	12.05	12.49	12.64	12.84	13.03
28	11.09	11.65	11.27	10.87	10.80	11.16	11.71	12.07	12.49	12.64	12.85	13.03
29	11.17	11.65	11.26	10.99	---	11.13	11.68	12.07	12.50	12.64	12.86	13.03
30	11.16	11.61	11.30	10.88	---	11.22	11.56	12.08	12.51	12.65	12.88	13.02
31	11.28	---	11.27	10.80	---	11.26	---	12.08	---	12.63	12.88	---
WTR YR 1997	MEAN		11.74	HIGH		10.38	LOW		13.05			



CUMBERLAND COUNTY--Continued

350847079012405. Local number, Cu-166; Fort Bragg Background Site 1 Well 6.

LOCATION.--Lat 35°09'04", long 79°00'39", Hydrologic Unit 03030004, from Bragg Boulevard going south, turn right onto Butner Road going west until it intersects with Reilly Road; turn left and follow Reilly Road heading south until it intersects with Longstreet Road; turn right and follow Longstreet Road approximately 2.0 mi; turn right, and follow paved road heading north to radio tower. Background Site 1 well cluster is located within chain-link fence. Owner: U.S. Army.

AQUIFER.--Upper Cape Fear aquifer.

WELL CHARACTERISTICS.--Drilled observation well, depth 45.0 ft, diameter 4 in., cased to 40.0 ft, screened interval from 40.0 to 45.0 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 235.68 ft above sea level, (levels by USGS). Measuring point: Top of shelter floor, 2.41 ft above land-surface datum.

REMARKS.--Well is one of the background wells for Fort Bragg, North Carolina RCRA Facilities Investigation.

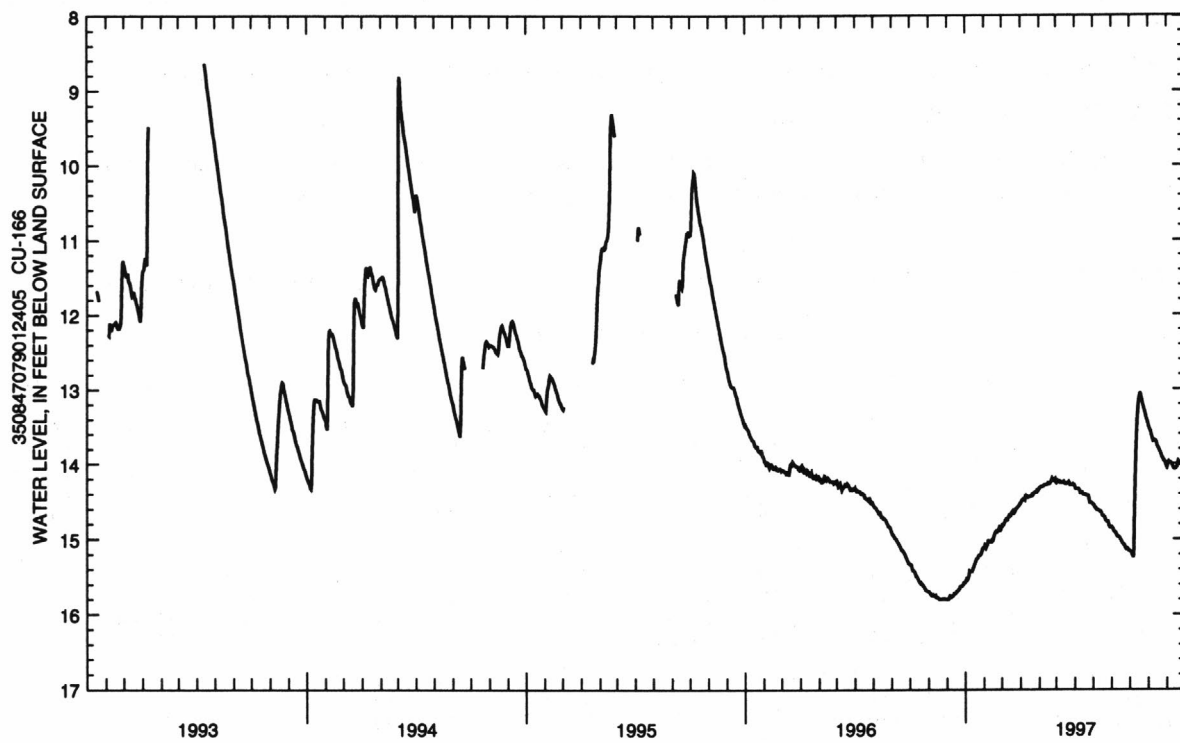
PERIOD OF RECORD.--October 1992 to September 1997.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 8.57 ft below land-surface datum, Apr. 13, 1993; lowest water level recorded, 15.80 ft below land-surface datum, Aug. 19-26, 28-31, Sept. 1-3, 1996.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.57	15.11	14.82	14.53	14.32	14.25	14.31	14.54	14.84	15.16	13.48	14.05
2	15.55	15.09	14.81	14.51	14.31	14.23	14.33	14.55	14.85	15.16	13.51	14.03
3	15.53	15.11	14.82	14.49	14.31	14.22	14.33	14.55	14.86	15.17	13.53	13.98
4	15.54	15.12	14.81	14.49	14.31	14.23	14.33	14.58	14.88	15.19	13.55	13.97
5	15.53	15.10	14.79	14.47	14.30	14.23	14.33	14.59	14.90	15.21	13.57	13.98
6	15.51	15.09	14.77	14.47	14.30	14.23	14.33	14.59	14.91	15.22	13.61	13.98
7	15.48	15.06	14.75	14.47	14.30	14.25	14.33	14.61	14.91	15.24	13.64	13.98
8	15.42	15.02	14.74	14.48	14.29	14.25	14.35	14.61	14.93	15.12	13.67	13.99
9	15.43	15.02	14.75	14.43	14.29	14.25	14.36	14.61	14.94	14.63	13.69	14.01
10	15.43	15.03	14.75	14.42	14.28	14.24	14.39	14.62	14.96	14.20	13.68	14.02
11	15.43	15.03	14.73	14.43	14.28	14.24	14.39	14.63	14.96	13.88	13.68	14.04
12	15.43	15.04	14.71	14.45	14.28	14.25	14.38	14.63	14.97	13.65	13.69	14.06
13	15.41	15.04	14.69	14.45	14.28	14.25	14.38	14.63	14.97	13.47	13.69	14.07
14	15.38	15.02	14.70	14.45	14.27	14.24	14.40	14.64	14.98	13.33	13.70	14.07
15	15.37	15.03	14.70	14.44	14.26	14.25	14.41	14.65	15.00	13.22	13.73	14.06
16	15.34	15.02	14.68	14.44	14.27	14.27	14.41	14.68	15.01	13.14	13.76	14.06
17	15.32	15.00	14.65	14.44	14.27	14.27	14.41	14.69	15.02	13.09	13.78	14.05
18	15.29	14.96	14.64	14.43	14.27	14.27	14.41	14.69	15.04	13.06	13.79	14.04
19	15.27	14.93	14.63	14.42	14.25	14.26	14.41	14.70	15.05	13.06	13.81	13.99
20	15.26	14.91	14.65	14.41	14.24	14.26	14.42	14.71	15.07	13.10	13.83	13.96
21	15.26	14.90	14.66	14.42	14.22	14.25	14.42	14.72	15.08	13.13	13.84	13.97
22	15.25	14.91	14.65	14.41	14.20	14.24	14.42	14.75	15.08	13.17	13.86	13.99
23	15.22	14.91	14.63	14.39	14.22	14.25	14.42	14.76	15.10	13.21	13.89	14.00
24	15.21	14.90	14.60	14.39	14.22	14.28	14.44	14.77	15.12	13.24	13.91	14.01
25	15.21	14.89	14.60	14.38	14.22	14.28	14.49	14.77	15.13	13.27	13.93	14.01
26	15.21	14.86	14.59	14.38	14.21	14.28	14.52	14.77	15.12	13.30	13.94	14.00
27	15.20	14.89	14.58	14.38	14.20	14.28	14.52	14.80	15.13	13.33	13.96	14.00
28	15.17	14.89	14.57	14.36	14.24	14.28	14.52	14.83	15.13	13.36	13.96	14.00
29	15.15	14.88	14.56	14.37	---	14.27	14.52	14.84	15.15	13.40	13.98	14.01
30	15.12	14.86	14.55	14.36	---	14.28	14.53	14.85	15.16	13.42	14.00	14.02
31	15.12	---	14.53	14.34	---	14.28	---	14.85	---	13.45	14.03	---
WTR YR 1997	MEAN 14.47		HIGH 13.06		LOW 15.57							



CUMBERLAND COUNTY--Continued

350847079012502. Local number, Cu-168; Fort Bragg Background Site 1 Well 8.

LOCATION.--Lat 35°09'04", long 79°00'39", Hydrologic Unit 03030004, from Bragg Boulevard going south, turn right onto Butner Road going west until it intersects with Reilly Rd.; turn left and follow Reilly Road heading south until it intersects with Longstreet Road; turn right and follow Longstreet Road approximately 2.0 mi; turn right, follow paved road heading north to radio tower. Background Site 1 well cluster is located within chain-link fence. Owner: U.S. Army.

AQUIFER.--Upper Cape Fear aquifer.

WELL CHARACTERISTICS.--Drilled observation well, depth 58.5 ft, diameter 4 in., cased to 53.0 ft, screened interval from 48.0 to 53.0 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 235.73 ft above sea level, (levels by USGS). Measuring point: Top of shelter floor, 2.68 ft above land-surface datum.

REMARKS.--Well is one of the background wells for Fort Bragg, North Carolina RCRA Facilities Investigation.

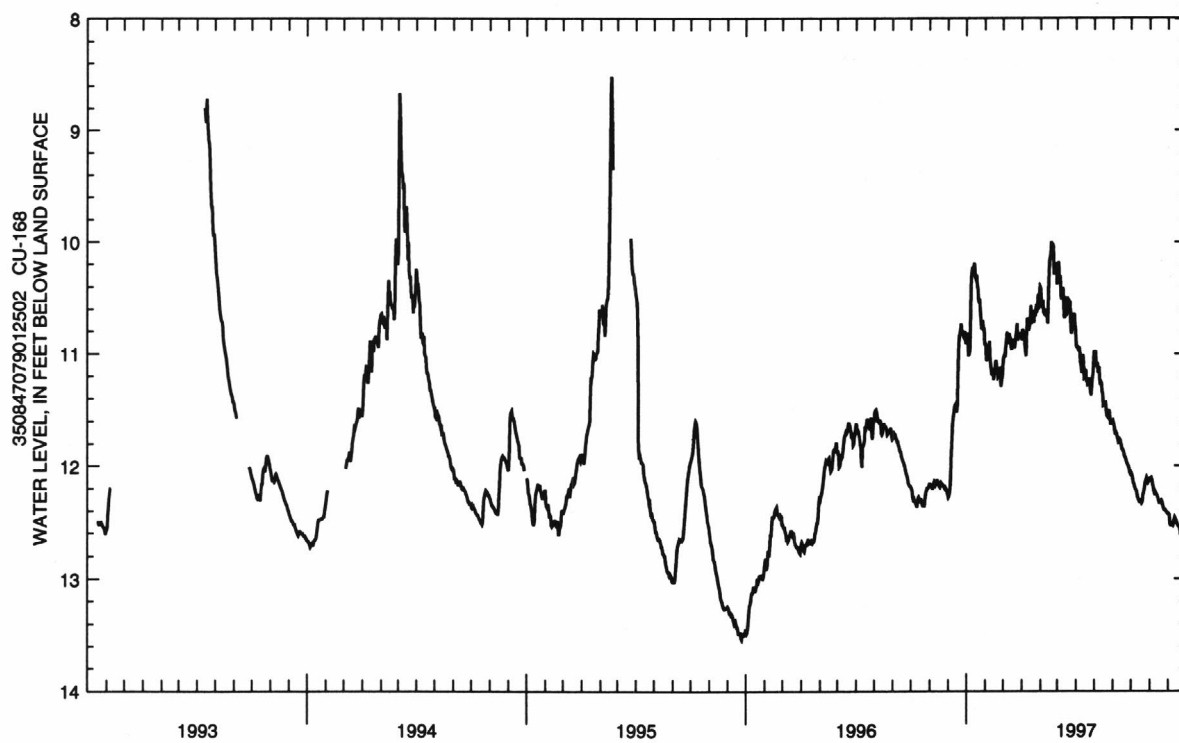
PERIOD OF RECORD.--October 1992 to September 1997.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 8.49 ft below land-surface datum, Feb. 19, 1995; lowest water level recorded, 13.55 ft below land-surface datum, Sept. 23-24, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.88	10.91	11.06	10.88	10.41	10.30	10.93	10.97	11.60	12.06	12.11	12.43
2	10.82	10.92	11.03	10.78	10.50	10.19	10.95	11.07	11.62	12.07	12.11	12.43
3	10.82	11.06	11.01	10.79	10.56	10.18	10.93	10.97	11.64	12.09	12.12	12.44
4	11.01	11.05	11.03	10.84	10.59	10.34	10.95	11.08	11.68	12.12	12.11	12.52
5	11.01	10.99	10.93	10.81	10.52	10.30	10.97	11.11	11.72	12.15	12.13	12.53
6	10.99	11.00	10.90	10.93	10.63	10.37	10.94	11.08	11.70	12.16	12.17	12.53
7	10.93	10.97	10.82	10.97	10.64	10.51	10.97	11.16	11.71	12.18	12.19	12.53
8	10.60	10.89	10.81	11.02	10.60	10.48	11.08	11.16	11.73	12.20	12.22	12.52
9	10.32	11.04	10.91	10.79	10.66	10.51	11.10	11.12	11.76	12.21	12.24	12.53
10	10.26	11.09	10.88	10.68	10.63	10.41	11.17	11.23	11.78	12.22	12.23	12.51
11	10.27	11.14	10.82	10.76	10.65	10.51	11.13	11.28	11.77	12.25	12.24	12.48
12	10.25	11.19	10.85	10.79	10.67	10.67	11.01	11.25	11.76	12.28	12.25	12.46
13	10.22	11.17	10.86	10.77	10.73	10.67	11.05	11.26	11.77	12.29	12.26	12.47
14	10.19	11.14	10.92	10.74	10.44	10.49	11.21	11.34	11.80	12.31	12.27	12.49
15	10.27	11.23	10.96	10.69	10.26	10.58	11.20	11.35	11.82	12.32	12.29	12.50
16	10.32	11.18	10.92	10.57	10.15	10.66	11.20	11.45	11.85	12.32	12.31	12.52
17	10.34	11.15	10.87	10.73	10.14	10.62	11.14	11.44	11.85	12.31	12.33	12.53
18	10.33	11.08	10.95	10.68	10.09	10.56	11.24	11.46	11.86	12.31	12.33	12.54
19	10.40	11.06	10.87	10.68	10.00	10.52	11.24	11.46	11.88	12.33	12.33	12.54
20	10.42	11.12	10.95	10.62	10.08	10.53	11.27	11.45	11.91	12.32	12.32	12.54
21	10.52	11.14	10.91	10.72	10.02	10.54	11.26	11.51	11.92	12.26	12.31	12.60
22	10.54	11.21	10.84	10.62	10.05	10.54	11.25	11.55	11.93	12.24	12.32	12.62
23	10.51	11.20	10.80	10.62	10.29	10.76	11.22	11.56	11.95	12.21	12.35	12.60
24	10.63	11.18	10.73	10.63	10.26	10.82	11.30	11.57	11.97	12.17	12.37	12.59
25	10.71	11.14	10.88	10.56	10.21	10.76	11.34	11.52	11.98	12.14	12.39	12.54
26	10.77	11.12	10.86	10.63	10.19	10.64	11.37	11.50	12.00	12.13	12.39	12.54
27	10.77	11.29	10.82	10.56	10.23	10.71	11.29	11.57	12.01	12.11	12.39	12.53
28	10.70	11.25	10.82	10.47	10.38	10.67	11.21	11.62	12.03	12.13	12.40	12.50
29	10.79	11.22	10.82	10.60	---	10.64	11.16	11.62	12.06	12.15	12.41	12.53
30	10.77	11.18	10.86	10.49	---	10.74	11.05	11.61	12.07	12.14	12.42	12.57
31	10.91	---	10.83	10.40	---	10.79	---	11.61	---	12.12	12.42	---
WTR YR 1997	MEAN 11.30		HIGH 10.00		LOW 12.62							



CUMBERLAND COUNTY

350739078563401. Local number, Cu-358; Fort Bragg SAFMW14S.

LOCATION.--Lat 35°07'39", long 078°56'34", Hydrologic Unit 03030004, from Murchison Road and Fort Bragg boundary at Bonnie Doone residential area, go 2,000 ft northwest on Murchison Road then 150 ft northeast to well. Owner: U.S. Army.

AQUIFER.-- Black Creek aquifer.

WELL CHARACTERISTICS.--Drilled observation well, depth 25.0 ft, diameter 2 in., cased -2.51 to 15.0 ft, screened interval from 15.0 to 25.0 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land surface datum is 238.08 ft above sea level, (levels by USGS). Measuring point: Top of shelter floor, 2.84 ft above land-surface datum.

REMARKS.--Well is one of the water quality wells for Simmons Army Airfield Natural Attenuation Study, Fort Bragg, North Carolina.

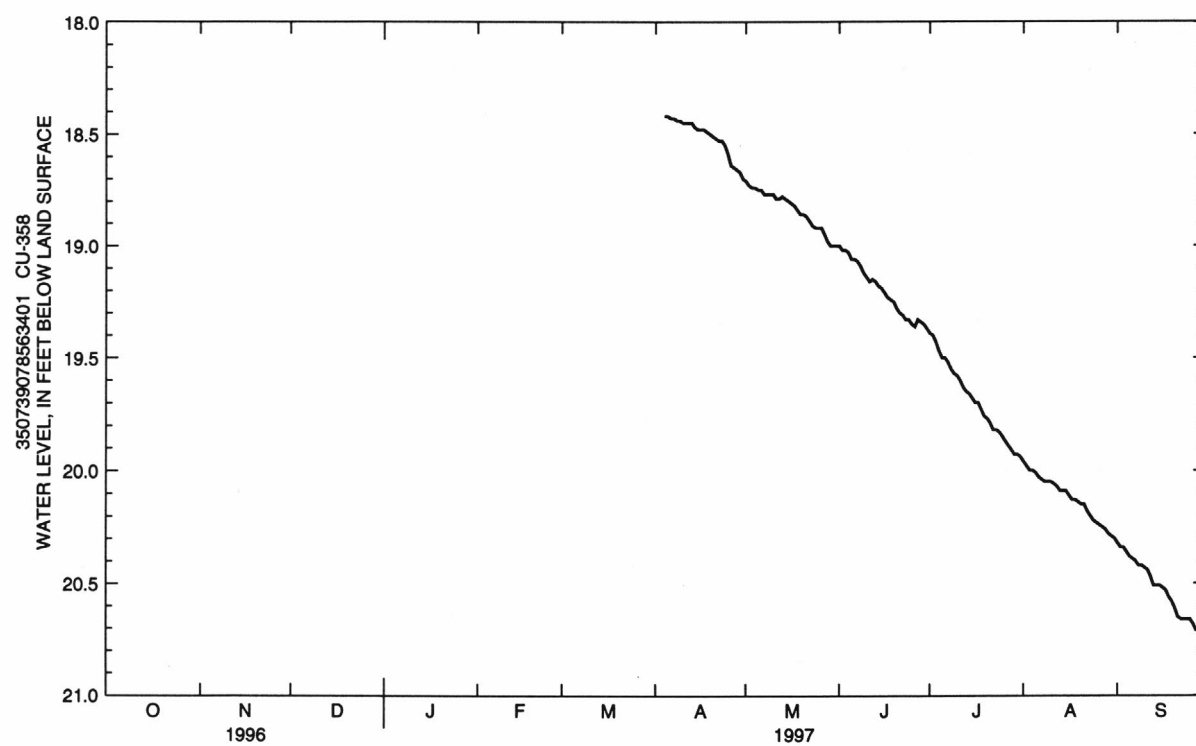
PERIOD OF RECORD.-- April 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 18.41 ft below land-surface datum, Apr. 3, 1997; lowest water level recorded, 20.80 ft below land-surface datum, Sept. 30, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	18.71	19.00	19.39	19.96	20.32
2	---	---	---	---	---	---	---	18.73	19.02	19.40	19.98	20.34
3	---	---	---	---	---	---	---	18.74	19.02	19.43	20.00	20.34
4	---	---	---	---	---	---	18.42	18.74	19.03	19.47	20.00	20.36
5	---	---	---	---	---	---	18.42	18.75	19.06	19.50	20.01	20.38
6	---	---	---	---	---	---	18.43	18.75	19.06	19.50	20.03	20.39
7	---	---	---	---	---	---	18.43	18.77	19.07	19.52	20.04	20.40
8	---	---	---	---	---	---	18.44	18.77	19.09	19.55	20.05	20.42
9	---	---	---	---	---	---	18.44	18.77	19.12	19.57	20.05	20.42
10	---	---	---	---	---	---	18.45	18.77	19.14	19.58	20.05	20.43
11	---	---	---	---	---	---	18.45	18.79	19.16	19.60	20.06	20.44
12	---	---	---	---	---	---	18.45	18.79	19.15	19.63	20.07	20.47
13	---	---	---	---	---	---	18.45	18.78	19.16	19.65	20.09	20.51
14	---	---	---	---	---	---	18.47	18.79	19.18	19.66	20.09	20.51
15	---	---	---	---	---	---	18.48	18.80	19.19	19.68	20.09	20.51
16	---	---	---	---	---	---	18.48	18.81	19.21	19.70	20.11	20.52
17	---	---	---	---	---	---	18.48	18.82	19.23	19.70	20.13	20.53
18	---	---	---	---	---	---	18.49	18.84	19.24	19.73	20.13	20.56
19	---	---	---	---	---	---	18.50	18.86	19.25	19.76	20.14	20.58
20	---	---	---	---	---	---	18.51	18.86	19.28	19.77	20.15	20.61
21	---	---	---	---	---	---	18.52	18.87	19.30	19.79	20.15	20.65
22	---	---	---	---	---	---	18.53	18.89	19.31	19.82	20.18	20.66
23	---	---	---	---	---	---	18.53	18.91	19.33	19.82	20.20	20.66
24	---	---	---	---	---	---	18.55	18.92	19.33	19.83	20.22	20.66
25	---	---	---	---	---	---	18.59	18.92	19.35	19.85	20.23	20.66
26	---	---	---	---	---	---	18.64	18.92	19.36	19.87	20.24	20.68
27	---	---	---	---	---	---	18.65	18.95	19.33	19.89	20.25	20.71
28	---	---	---	---	---	---	18.66	18.98	19.34	19.91	20.26	20.71
29	---	---	---	---	---	---	18.67	19.00	19.35	19.93	20.28	20.73
30	---	---	---	---	---	---	18.70	19.00	19.37	19.93	20.29	20.77
31	---	---	---	---	---	---	---	19.00	---	19.94	20.30	---
WTR YR 1997	MEAN 19.50		HIGH 18.42		LOW 20.77							



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.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 835 ft above sea level (from topographic map). Measuring point: Top of casing, 1.00 ft above land-surface datum.

REMARKS.--In October 1982, well replaced nearby NC-110. Well is part of terrane-effects network.

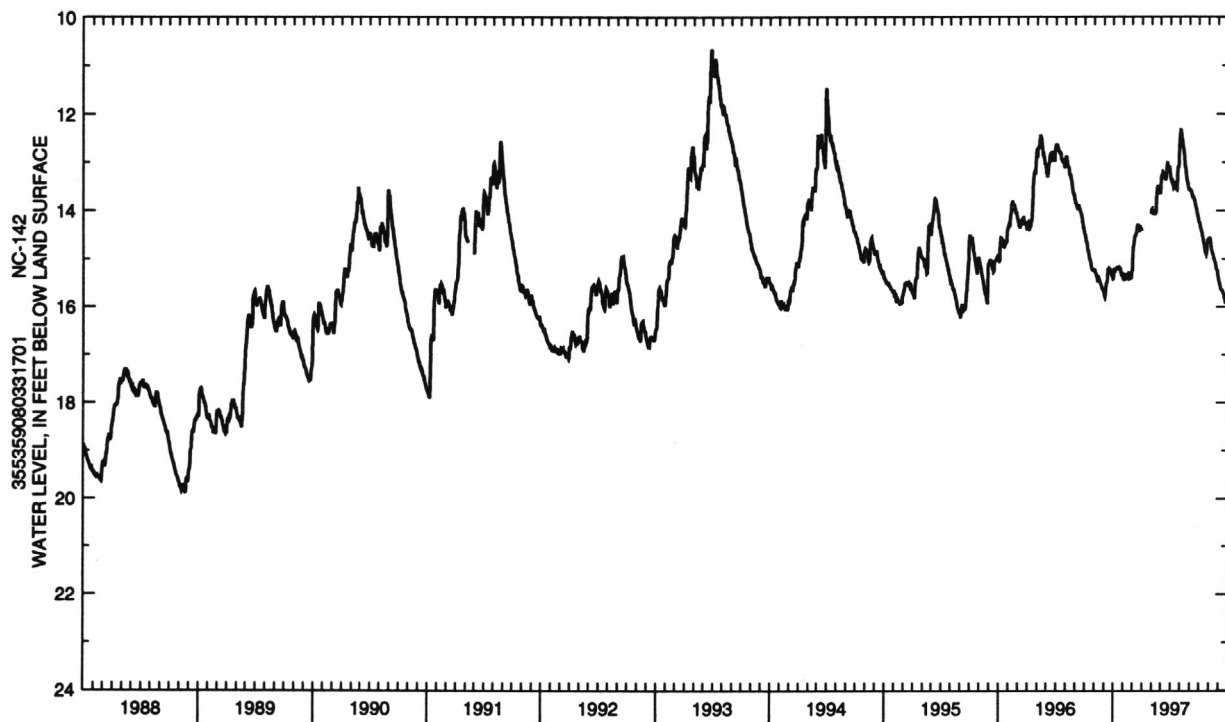
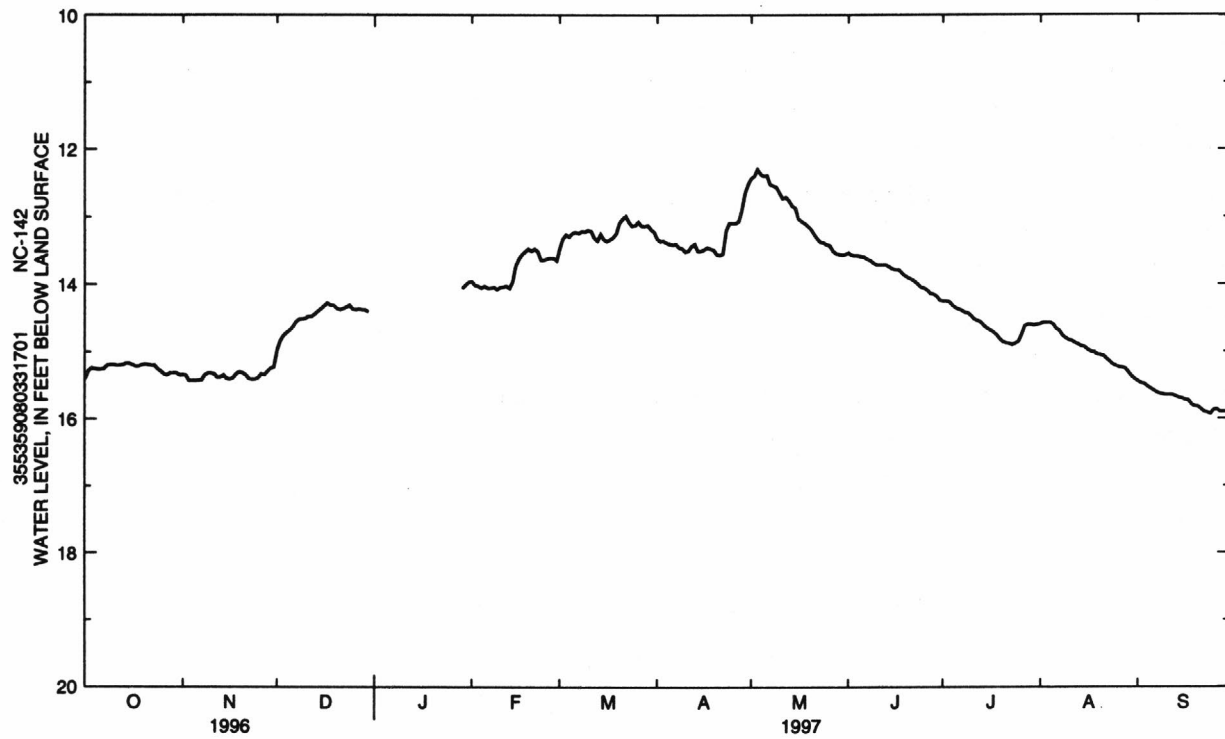
PERIOD OF RECORD.--October 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 10.64 ft below land-surface datum, Mar. 28, 1993; lowest water level recorded, 20.98 ft below land-surface datum, Oct. 24, 25, and 26, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.40	15.34	14.99	---	13.96	13.47	13.33	12.43	13.54	14.25	14.59	15.44
2	15.28	15.35	14.84	---	14.02	13.33	13.37	12.40	13.57	14.25	14.57	15.47
3	15.24	15.43	14.76	---	14.03	13.27	13.36	12.30	13.58	14.26	14.57	15.48
4	15.25	15.43	14.72	---	14.06	13.30	13.39	12.37	13.58	14.31	14.57	15.52
5	15.26	15.43	14.68	---	14.03	13.25	13.41	12.40	13.59	14.35	14.59	15.55
6	15.26	15.43	14.63	---	14.06	13.23	13.42	12.39	13.60	14.37	14.66	15.58
7	15.25	15.42	14.56	---	14.06	13.25	13.41	12.52	13.63	14.39	14.69	15.61
8	15.20	15.34	14.52	---	14.05	13.22	13.46	12.54	13.65	14.42	14.76	15.63
9	15.19	15.32	14.52	---	14.08	13.23	13.47	12.56	13.69	14.43	14.80	15.64
10	15.19	15.32	14.51	---	14.05	13.20	13.52	12.65	13.72	14.47	14.83	15.65
11	15.20	15.33	14.48	---	14.04	13.22	13.51	12.73	13.72	14.52	14.84	15.65
12	15.20	15.38	14.48	---	14.03	13.32	13.44	12.71	13.72	14.54	14.87	15.65
13	15.19	15.38	14.44	---	14.06	13.36	13.41	12.76	13.72	14.56	14.89	15.67
14	15.17	15.35	14.40	---	13.96	13.26	13.51	12.84	13.75	14.61	14.92	15.69
15	15.17	15.40	14.36	---	13.73	13.34	13.51	12.87	13.78	14.65	14.93	15.70
16	15.19	15.41	14.32	---	13.62	13.37	13.49	13.03	13.79	14.68	14.97	15.72
17	15.21	15.39	14.28	---	13.56	13.34	13.46	13.07	13.79	14.71	15.00	15.73
18	15.21	15.33	14.31	---	13.52	13.31	13.48	13.10	13.84	14.75	15.01	15.79
19	15.19	15.30	14.31	---	13.48	13.25	13.49	13.14	13.88	14.81	15.04	15.82
20	15.18	15.31	14.36	---	13.51	13.09	13.56	13.19	13.91	14.85	15.05	15.82
21	15.19	15.34	14.38	---	13.48	13.03	13.57	13.26	13.93	14.87	15.06	15.86
22	15.20	15.40	14.36	---	13.52	12.99	13.55	13.33	13.96	14.88	15.11	15.90
23	15.20	15.41	14.34	---	13.64	13.08	13.21	13.38	14.00	14.90	15.15	15.91
24	15.25	15.41	14.31	---	13.64	13.14	13.10	13.39	14.05	14.88	15.19	15.93
25	15.29	15.39	14.37	---	13.62	13.13	13.10	13.42	14.06	14.85	15.21	15.87
26	15.33	15.33	14.38	---	13.61	13.08	13.10	13.43	14.09	14.75	15.23	15.86
27	15.35	15.34	14.37	---	13.61	13.14	13.07	13.51	14.14	14.62	15.24	15.90
28	15.31	15.29	14.38	---	13.65	13.14	12.90	13.55	14.15	14.60	15.25	15.90
29	15.31	15.24	14.38	14.06	---	13.13	12.65	13.56	14.18	14.60	15.31	15.90
30	15.31	15.23	14.41	14.01	---	13.19	12.52	13.57	14.24	14.61	15.37	15.91
31	15.35	---	---	13.97	---	13.23	---	13.56	---	14.60	15.41	---
WTR YR 1997	MEAN 14.32		HIGH 12.30		LOW 15.93							



DUPLIN COUNTY

345051078012101. Local number, NC-174; DENR 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: DENR (North Carolina Department of Environment and Natural Resources).

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.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 85.89 ft above sea level (levels by DENR). Measuring point: Top of instrument shelf, 1.75 ft above land-surface datum.

REMARKS.--Well is part of areal-effects network.

PERIOD OF RECORD.--March 1982 to current year. Continuous record began January 1987.

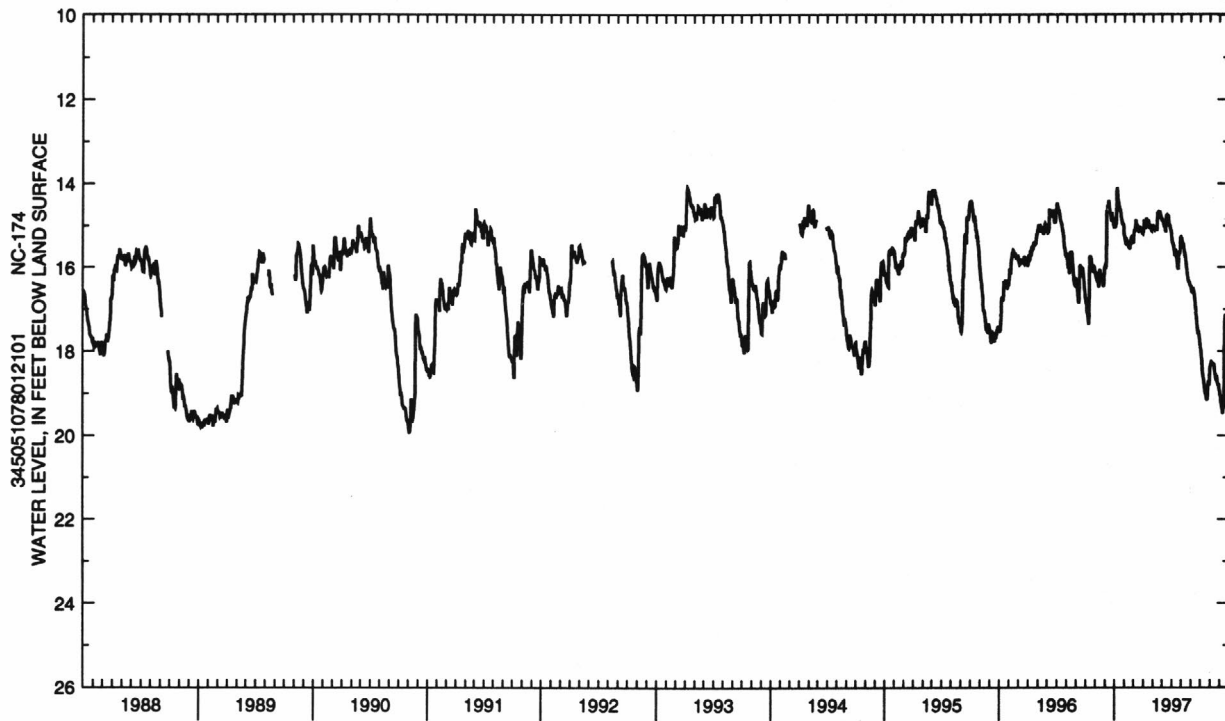
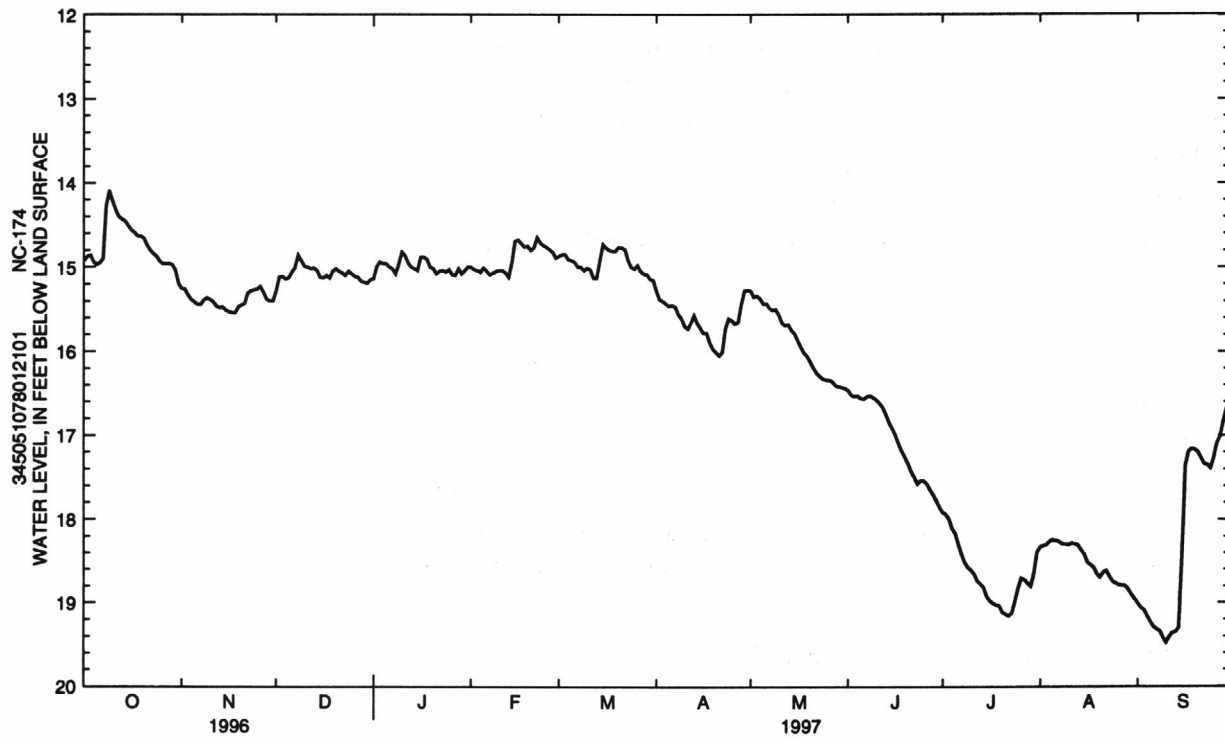
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 14.00 ft below land-surface datum, Oct. 8, 1996; lowest water level recorded, 19.93 ft below land-surface datum, Aug. 4 and 5, 1990.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.92	15.25	15.29	15.14	15.00	14.87	15.28	15.28	16.46	17.92	18.34	19.01
2	14.87	15.26	15.12	14.99	15.03	14.85	15.38	15.35	16.52	17.94	18.32	19.06
3	14.86	15.33	15.11	14.94	15.04	14.85	15.40	15.34	16.54	18.00	18.31	19.09
4	14.94	15.38	15.14	14.96	15.06	14.91	15.43	15.37	16.53	18.11	18.27	19.16
5	14.97	15.41	15.13	14.96	15.01	14.92	15.46	15.43	16.56	18.17	18.25	19.23
6	14.95	15.44	15.06	15.00	15.05	14.94	15.45	15.43	16.57	18.30	18.26	19.29
7	14.90	15.44	15.01	15.02	15.09	15.00	15.47	15.48	16.54	18.42	18.27	19.32
8	14.27	15.39	14.86	15.08	15.07	15.00	15.56	15.51	16.53	18.52	18.30	19.34
9	14.09	15.36	14.92	14.97	15.05	15.04	15.61	15.50	16.55	18.58	18.30	19.42
10	14.21	15.38	14.99	14.82	15.04	15.01	15.70	15.57	16.58	18.61	18.31	19.48
11	14.32	15.41	15.00	14.86	15.04	15.03	15.73	15.66	16.62	18.66	18.29	19.41
12	14.40	15.46	15.02	14.95	15.07	15.13	15.66	15.69	16.67	18.74	18.30	19.36
13	14.43	15.48	15.01	15.00	15.12	15.13	15.57	15.68	16.75	18.78	18.31	19.35
14	14.45	15.47	15.04	15.02	14.94	14.93	15.66	15.75	16.85	18.82	18.37	19.30
15	14.51	15.51	15.12	15.04	14.69	14.73	15.72	15.79	16.92	18.93	18.42	18.36
16	14.56	15.53	15.13	14.88	14.68	14.77	15.78	15.87	17.00	18.98	18.52	17.36
17	14.59	15.54	15.10	14.88	14.72	14.80	15.78	15.95	17.10	19.01	18.55	17.19
18	14.63	15.54	15.13	14.91	14.76	14.81	15.89	16.02	17.19	19.03	18.58	17.16
19	14.63	15.47	15.05	15.00	14.75	14.81	15.97	16.06	17.26	19.04	18.66	17.17
20	14.66	15.45	15.02	15.02	14.80	14.76	16.01	16.13	17.34	19.12	18.70	17.20
21	14.74	15.43	15.05	15.08	14.77	14.77	16.05	16.20	17.43	19.14	18.64	17.27
22	14.80	15.31	15.07	15.05	14.65	14.79	16.01	16.26	17.50	19.16	18.62	17.34
23	14.84	15.28	15.10	15.04	14.71	14.92	15.72	16.30	17.58	19.13	18.69	17.35
24	14.87	15.27	15.05	15.06	14.74	15.00	15.61	16.33	17.54	18.99	18.75	17.39
25	14.93	15.26	15.08	15.03	14.76	15.02	15.63	16.34	17.54	18.83	18.77	17.26
26	14.96	15.23	15.11	15.09	14.79	14.98	15.67	16.34	17.58	18.71	18.79	17.09
27	14.96	15.30	15.12	15.10	14.82	15.05	15.65	16.36	17.65	18.73	18.80	17.01
28	14.96	15.38	15.17	15.02	14.89	15.08	15.45	16.41	17.71	18.77	18.80	16.84
29	14.97	15.40	15.18	15.08	---	15.09	15.28	16.42	17.78	18.81	18.85	16.68
30	15.04	15.40	15.19	15.04	---	15.14	15.27	16.43	17.86	18.66	18.91	16.70
31	15.20	---	15.15	15.00	---	15.16	---	16.44	---	18.40	18.96	---

WTR YR 1997 MEAN 16.17 HIGH 14.09 LOW 19.48



GATES COUNTY

362646076361405. Local number, NC-149; DENR Sunbury Research Station well C15s5.

LOCATION.--Lat 36°26'46", long 76°36'14", Hydrologic Unit 03010203, in northeast section of Sunbury, east of State Highway 32 on Secondary Road 1338. Owner: DENR (North Carolina Department of Environment and Natural Resources).

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.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 37.44 ft above sea level (levels by DENR). **Measuring point:** Top of instrument shelf, 3.58 ft above land-surface datum; revised from 3.04 ft above land-surface datum, October 1987.

REMARKS.--Well is part of areal-effects network.

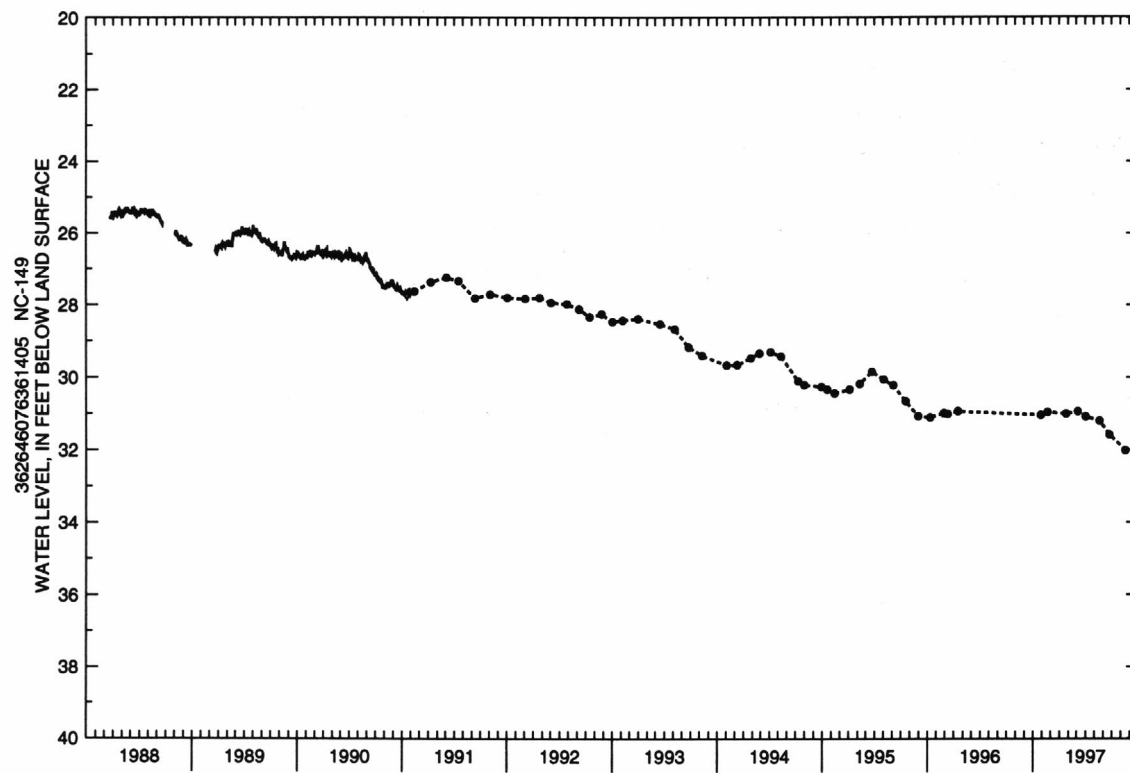
PERIOD OF RECORD.--October 1967 to current year. Continuous record November 1986 to November 1990. Records from October 1967 to September 1986 are unpublished and available in the files of the Groundwater Section, DENR.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 13.37 ft below land-surface datum, Dec. 30, 1968; lowest water level measured, 32.02 ft below land-surface datum, Aug. 18, 1997.

REVISIONS.--Water-level mean values and extremes for period of record published in Water Resources Data, North Carolina, NC-87-1, should be adjusted by -0.54 ft.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29	31.04	JAN 24	31.01	APR 3	31.09	MAY 20	31.20	JUN 24	31.59	AUG 18	32.02
NOV 21	30.96	MAR 6	30.95								



HAYWOOD COUNTY

352315082484401. Local number, NC-40.

LOCATION.--Lat 35°23'15", long 82°48'44", Hydrologic Unit 06010106, 2 mi south of Cruso on U.S. Highway 276 at Camp Hope. Owner: Champion International Corporation.

AQUIFER.--Unconfined saprolite derived from muscovite-biotite gneiss of Precambrian age.

WELL CHARACTERISTICS.--Dug observation well, depth 18.5 ft, diameter 12 in., cased to 18.5 ft, open end, backfilled with gravel from 4 to 18.5 ft.

INSTRUMENTATION.--Digital recorder with a 60-minute punch interval. Digital recorder replaced with electronic data logger on July 14, 1997.

DATUM.--Land-surface datum is 3,148.26 ft above sea level. Measuring point: Top of casing, 1.00 ft above land-surface datum.

REMARKS.--Well is part of climatic-effects network.

PERIOD OF RECORD.--December 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.24 ft below land-surface datum, Mar. 12, 1977; lowest water level recorded, 6.90 ft below land-surface datum, Oct. 7, 8, and 9, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

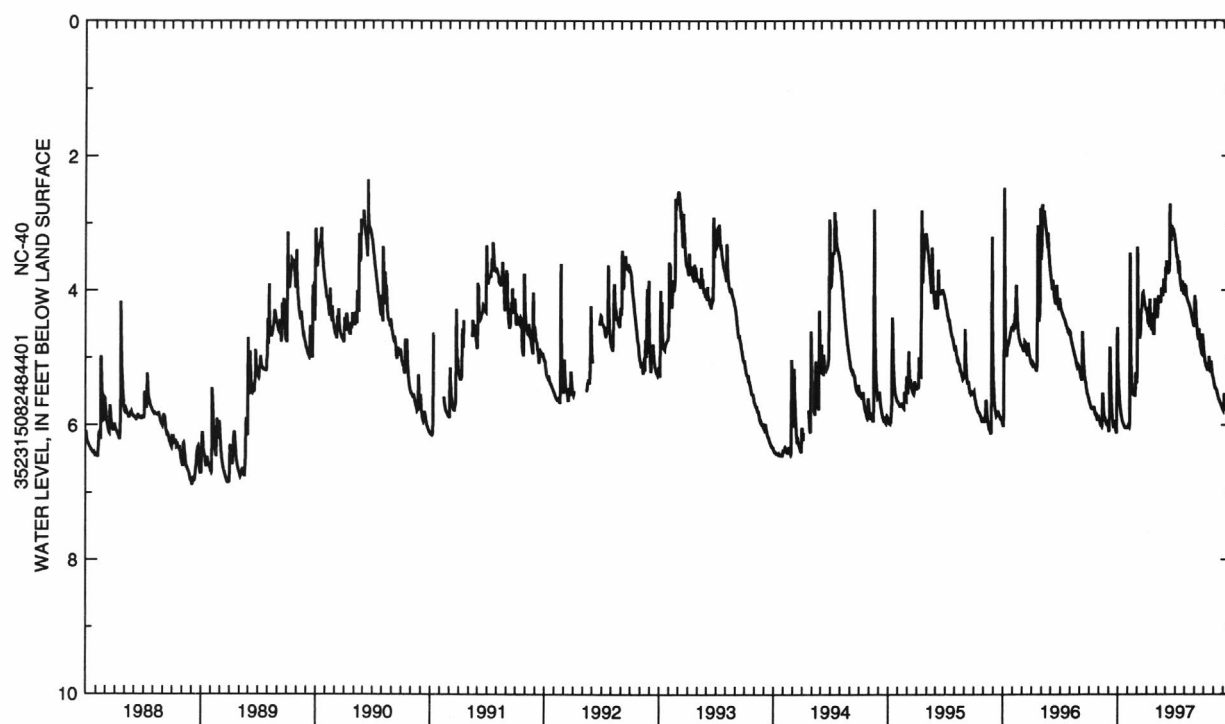
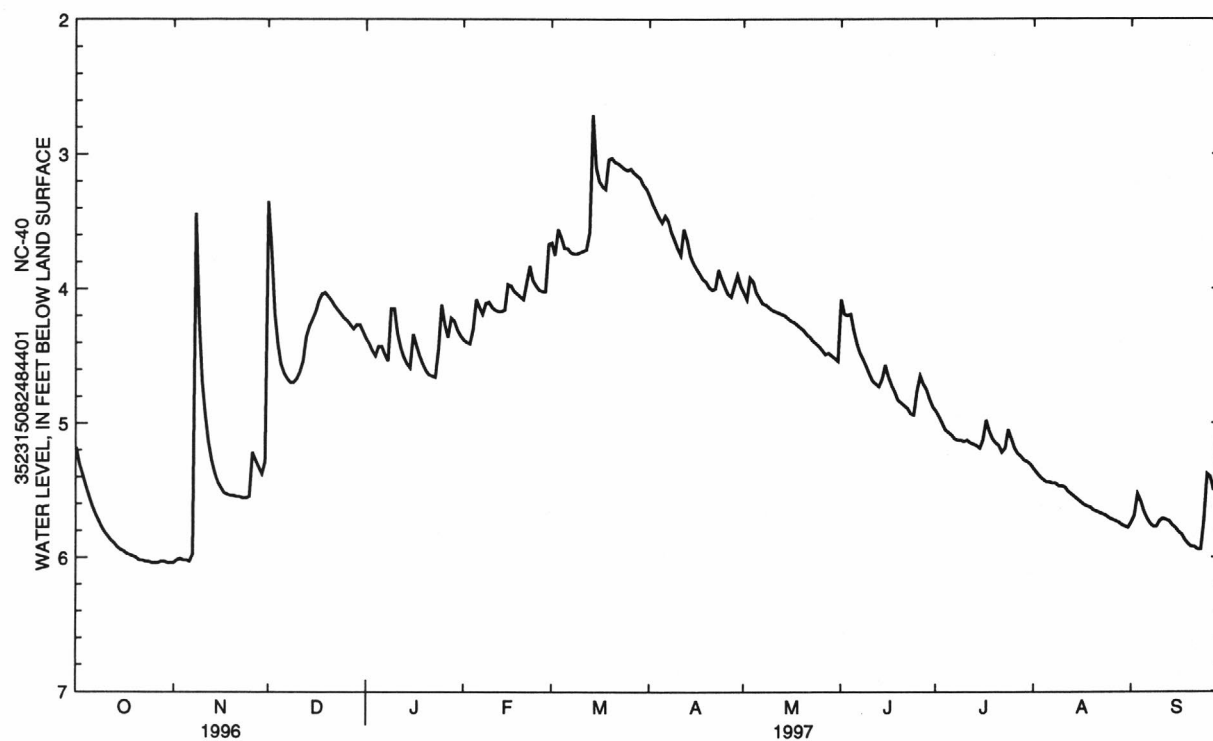
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.18	6.04	3.35	4.37	4.38	3.66	3.31	4.03	4.08	4.91	5.34	5.74
2	5.30	6.02	3.71	4.41	4.40	3.75	3.37	4.08	4.19	4.95	5.37	5.69
3	5.38	6.01	4.17	4.46	4.41	3.56	3.42	3.92	4.20	5.00	5.40	5.53
4	5.46	6.02	4.41	4.50	4.30	3.62	3.47	3.95	4.19	5.05	5.42	5.58
5	5.54	6.02	4.56	4.43	4.08	3.70	3.51	4.03	4.31	5.07	5.44	5.66
6	5.61	6.03	4.63	4.43	4.14	3.70	3.46	4.07	4.41	5.09	5.44	5.71
7	5.67	5.98	4.67	4.49	4.19	3.73	3.50	4.11	4.48	5.12	5.45	5.75
8	5.72	3.44	4.70	4.54	4.11	3.74	3.58	4.12	4.53	5.13	5.45	5.77
9	5.77	4.24	4.70	4.15	4.10	3.74	3.64	4.14	4.58	5.13	5.47	5.77
10	5.81	4.69	4.67	4.15	4.14	3.73	3.70	4.16	4.64	5.14	5.47	5.73
11	5.84	4.95	4.62	4.33	4.16	3.72	3.75	4.17	4.69	5.13	5.48	5.71
12	5.87	5.14	4.54	4.44	4.17	3.71	3.56	4.18	4.71	5.15	5.51	5.72
13	5.89	5.28	4.36	4.51	4.17	3.58	3.64	4.19	4.73	5.16	5.53	5.73
14	5.92	5.37	4.28	4.56	4.16	2.71	3.75	4.20	4.67	5.17	5.55	5.76
15	5.94	5.44	4.23	4.59	3.97	3.10	3.81	4.22	4.57	5.19	5.57	5.78
16	5.95	5.48	4.17	4.34	3.98	3.20	3.85	4.24	4.66	5.13	5.59	5.81
17	5.97	5.52	4.09	4.42	4.02	3.24	3.89	4.25	4.72	4.98	5.61	5.83
18	5.98	5.53	4.04	4.50	4.04	3.26	3.93	4.27	4.77	5.06	5.62	5.87
19	5.99	5.54	4.03	4.56	4.06	3.04	3.95	4.29	4.83	5.12	5.63	5.90
20	6.00	5.54	4.06	4.61	4.08	3.03	3.99	4.31	4.85	5.15	5.65	5.92
21	6.02	5.55	4.09	4.64	3.96	3.06	4.01	4.34	4.87	5.17	5.66	5.92
22	6.02	5.55	4.13	4.65	3.83	3.07	4.00	4.36	4.89	5.22	5.67	5.94
23	6.03	5.56	4.16	4.66	3.94	3.09	3.86	4.39	4.93	5.19	5.68	5.94
24	6.03	5.56	4.19	4.45	3.98	3.11	3.93	4.41	4.94	5.05	5.69	5.73
25	6.04	5.55	4.22	4.12	4.01	3.12	3.99	4.43	4.77	5.12	5.71	5.38
26	6.04	5.22	4.24	4.27	4.02	3.11	4.04	4.46	4.65	5.19	5.72	5.40
27	6.04	5.28	4.27	4.36	4.02	3.14	4.06	4.49	4.71	5.23	5.73	5.50
28	6.03	5.33	4.30	4.22	3.67	3.16	3.98	4.48	4.75	5.25	5.74	5.32
29	6.03	5.38	4.27	4.24	---	3.18	3.90	4.50	4.82	5.28	5.76	4.99
30	6.04	5.29	4.27	4.31	---	3.23	3.98	4.52	4.88	5.29	5.77	5.28
31	6.04	---	4.32	4.35	---	3.26	---	4.54	---	5.31	5.78	---

WTR YR 1997

MEAN 4.71

HIGH 2.71

LOW 6.04



WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

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 of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation well, depth 340 ft, diameter 2 in, screen depth unknown.

INSTRUMENTATION.--Measured annually with steel tape.

DATUM.--Land-surface datum is 28.40 ft above sea level. Measuring point: Top of instrument shelf, 2.79 ft above land-surface datum (since December 1975).

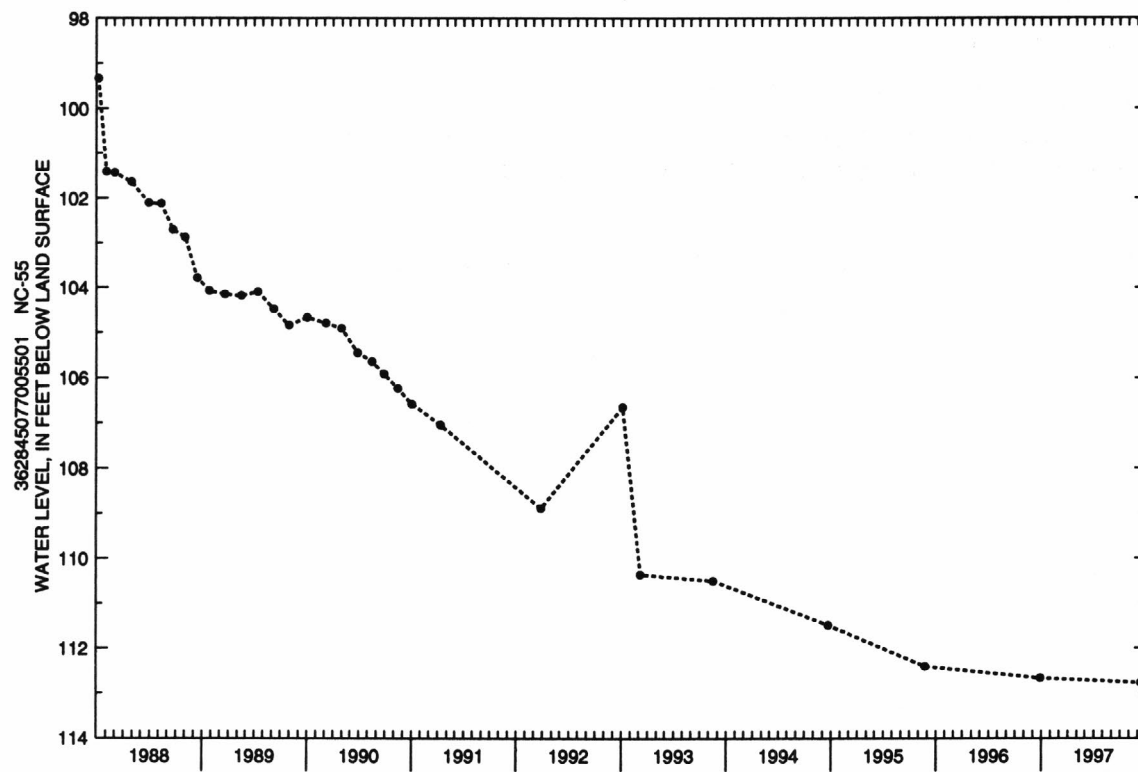
REMARKS.--Well is part of areal-effects network.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 48.36 ft below land-surface datum, May 30 and 31, 1966; lowest water level measured, 112.77 ft below land-surface datum, Sept. 11, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL
SEP 11	112.77



363026077001906. Local number, NC-155; DENR Como Research Station well B20u6.

AQUIFER.--Lower Cape Fear aquifer of Late Cretaceous age.

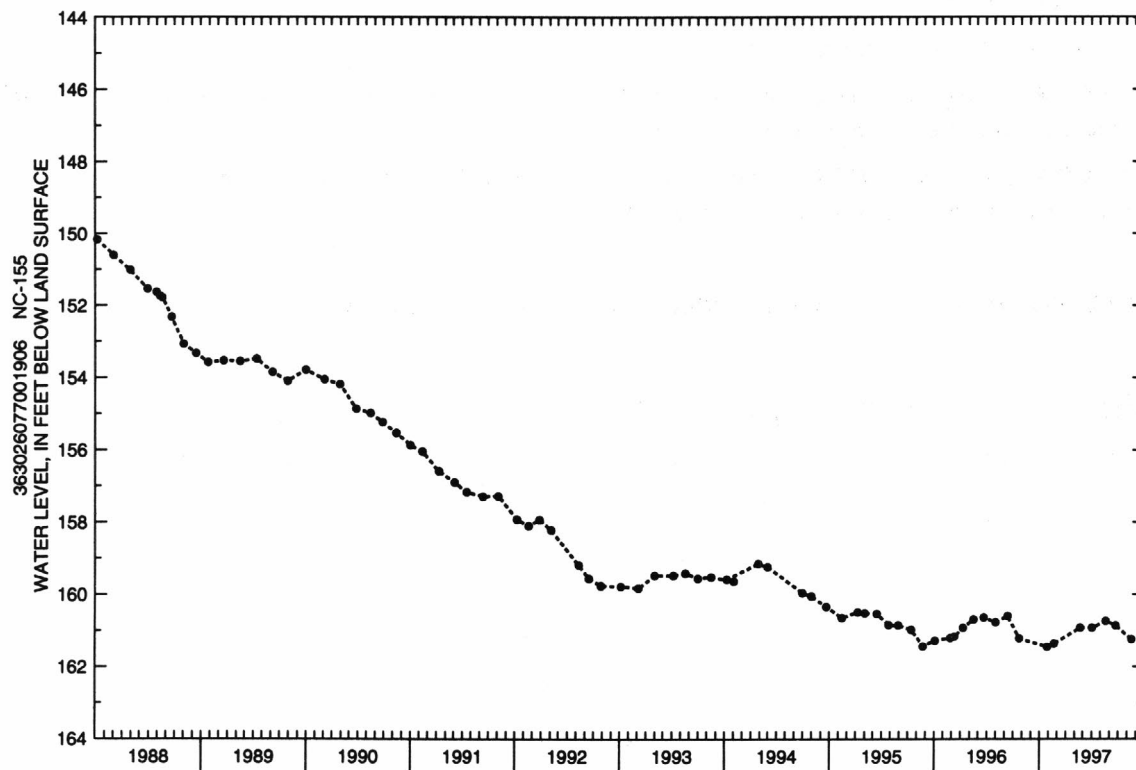
INSTRUMENTATION.--Measured periodically with steel tape.

REMARKS.--Well is part of areal-effects network.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 143.04 ft below land-surface datum, Feb. 9, 1983; lowest water level measured, 161.46 ft below land-surface datum, Oct. 29, 1996.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

[illegible]



HOKE COUNTY

350314079213301. Local number, Ho-32; DENR McCain Research Station well T48i2.

LOCATION.--Lat 35°03'17", long 79°21'35", Hydrologic Unit 03040203, near McCain, 0.6 mi west of State Highway 211 on unpaved road. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Black Creek aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation well, depth 110 ft, diameter 4 in., cased to 82 ft and from 92 to 110 ft, screened interval from 82 to 92 ft.

INSTRUMENTATION.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 350 ft above sea level (from topographic map). Measuring point: Top of collar on 4-inch casing, 1.6 ft above land-surface datum.

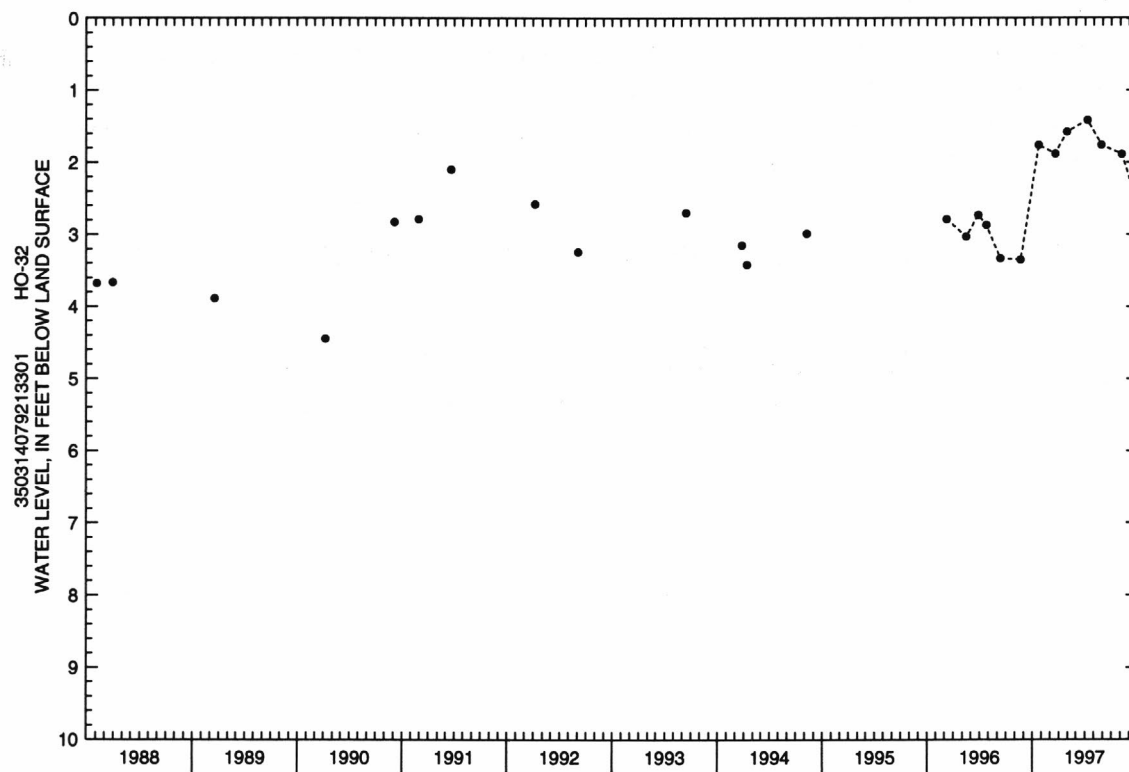
REMARKS.--Well is part of southern Coastal Plain ground-water level monitoring study.

PERIOD OF RECORD.--February 1972 to current year. Records from February 1972 to December 1987 are unpublished and available in the files of the Groundwater Section, DENR.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.51 ft above land-surface datum, Aug. 8, 1973; lowest, 5.22 ft below land-surface datum, July 15, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21 DEC 17	1.76 1.88	JAN 17	1.58	APR 9	1.42	MAY 27	1.76	AUG 6	1.89	SEP 18	2.43



HOKE COUNTY--Continued

345933079144406. Local number, Ho-47; DENR Raeford Research Station well U46e6.

LOCATION.--Lat 34°59'34", long 79°14'42", Hydrologic Unit 03030004, northwest of Raeford, 0.2 mi north of Secondary Road 1203 on Secondary Road 1311 at North Carolina Department of Transportation Maintenance Yard.

Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Black Creek aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation well, depth 111 ft, diameter 4 in., cased to 62 ft and from 67 to 96 ft and 101 to 111 ft, screened intervals from 62 to 67 ft and 96 to 101 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 274.37 ft above sea level (levels by DENR). Measuring point: Top of flange attached to floor of instrument shelter, 1.7 ft above land-surface datum (since December 1995).

REMARKS.--Well is part of southern Coastal Plain ground-water level monitoring study.

PERIOD OF RECORD.--July 1981 to current year. Continuous record from January 1994 to November 1994 and from December 1995 to current year.

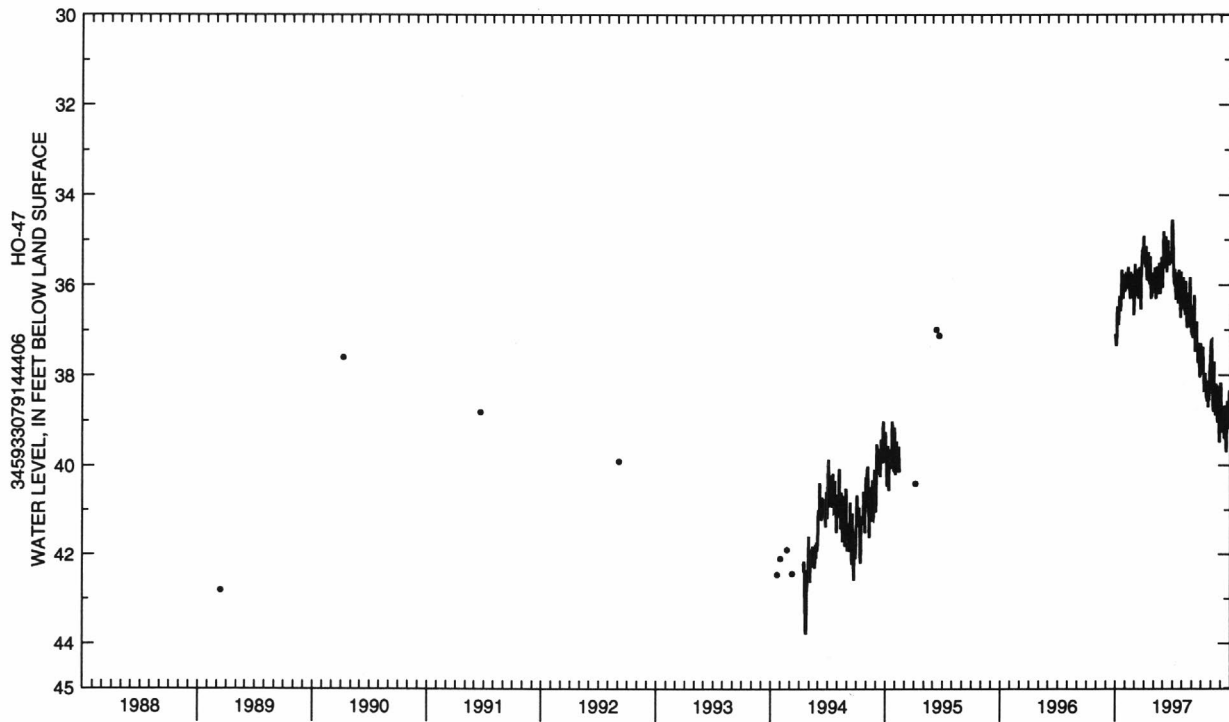
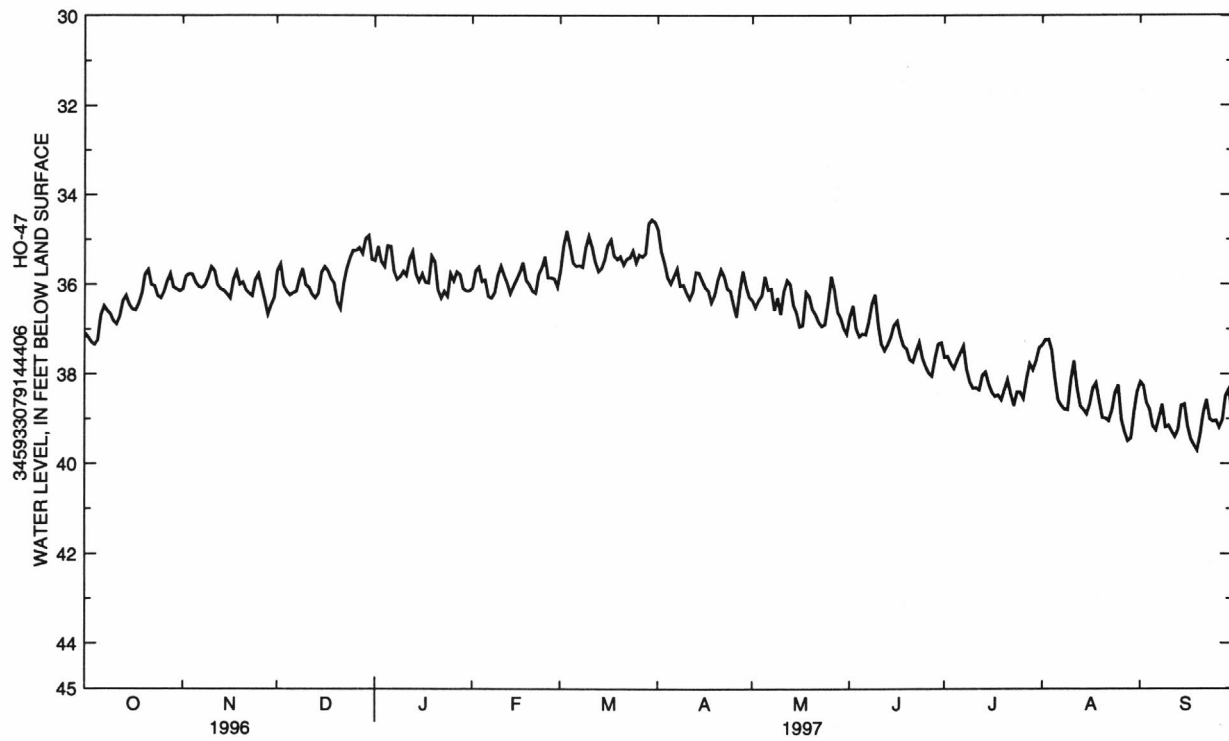
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 34.46 ft below land-surface datum, Mar. 29, 1997; lowest, 43.85 ft below land-surface datum, Jan. 20, 1994.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37.09	36.10	35.69	35.47	36.08	35.68	34.78	36.35	36.73	37.62	37.35	38.17
2	37.18	35.81	35.54	35.16	35.69	35.14	35.26	36.51	36.48	37.60	37.23	38.24
3	37.29	35.76	36.02	35.49	35.61	34.81	35.52	36.35	36.98	37.76	37.22	38.64
4	37.34	35.77	36.15	35.60	35.93	35.14	35.84	36.25	37.16	37.87	37.46	38.78
5	37.24	35.95	36.23	35.14	35.90	35.52	35.98	35.83	37.10	37.68	38.10	39.16
6	36.69	36.04	36.18	35.15	36.26	35.59	35.82	36.12	37.12	37.53	38.58	39.25
7	36.48	36.07	36.15	35.71	36.30	35.57	35.65	36.10	36.84	37.37	38.70	38.96
8	36.58	36.01	35.86	35.89	36.18	35.61	36.03	36.57	36.42	37.88	38.78	38.68
9	36.65	35.83	35.65	35.83	35.81	35.17	36.01	36.30	36.23	38.17	38.80	39.18
10	36.81	35.60	36.01	35.71	35.59	34.92	36.18	36.66	36.90	38.31	38.15	39.14
11	36.88	35.69	36.06	35.80	35.79	35.17	36.32	36.15	37.33	38.30	37.70	39.28
12	36.71	36.01	36.22	35.43	35.98	35.49	36.16	35.91	37.47	38.35	38.30	39.40
13	36.36	36.10	36.30	35.27	36.20	35.73	35.73	35.99	37.34	38.02	38.71	39.23
14	36.25	36.13	36.19	35.77	36.03	35.64	35.74	36.46	37.16	37.95	38.79	38.70
15	36.45	36.21	35.73	35.93	35.89	35.44	35.91	36.62	36.91	38.22	38.89	38.67
16	36.55	36.30	35.60	35.77	35.72	35.12	36.06	36.94	36.82	38.40	38.67	39.15
17	36.57	35.88	35.69	35.95	35.51	35.00	36.14	36.91	37.14	38.50	38.30	39.45
18	36.43	35.71	35.87	35.97	35.91	35.36	36.40	36.17	37.37	38.46	38.19	39.58
19	36.19	35.99	35.97	35.37	36.00	35.44	36.23	36.26	37.43	38.57	38.61	39.70
20	35.77	35.95	36.39	35.49	36.14	35.38	35.91	36.55	37.67	38.35	38.97	39.35
21	35.67	36.12	36.53	36.12	36.19	35.56	35.67	36.66	37.72	38.12	38.98	38.85
22	36.00	36.19	35.98	36.30	35.77	35.43	35.81	36.83	37.49	38.43	39.04	38.57
23	36.03	36.25	35.64	36.15	35.62	35.40	36.09	36.93	37.29	38.70	38.80	39.00
24	36.25	35.89	35.41	36.26	35.38	35.25	36.14	36.89	37.64	38.40	38.41	39.05
25	36.30	35.76	35.24	35.76	35.85	35.51	36.45	36.42	37.82	38.40	38.24	39.03
26	36.16	36.05	35.24	35.92	35.85	35.34	36.72	35.83	37.97	38.54	39.00	39.19
27	35.92	36.35	35.18	35.72	35.87	35.38	36.11	36.12	38.04	38.11	39.29	39.02
28	35.76	36.66	35.31	35.78	36.05	35.31	35.71	36.61	37.64	37.76	39.49	38.48
29	36.06	36.45	34.98	36.09	---	34.64	36.05	36.74	37.33	37.90	39.43	38.34
30	36.10	36.29	34.91	36.14	---	34.55	36.28	36.98	37.30	37.70	38.84	38.85
31	36.14	---	35.44	36.14	---	34.61	---	37.10	---	37.41	38.40	---

WTR YR 1997 MEAN 36.70 HIGH 34.55 LOW 39.70



351059079104201. Local number, Ho-56; Fort Bragg Background Site 2 Well 1.

AQUIFER.--Upper Cape Fear aquifer.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

REMARKS.--Well is one of the background wells for Fort Bragg, North Carolina RCRA Facilities Investigation.

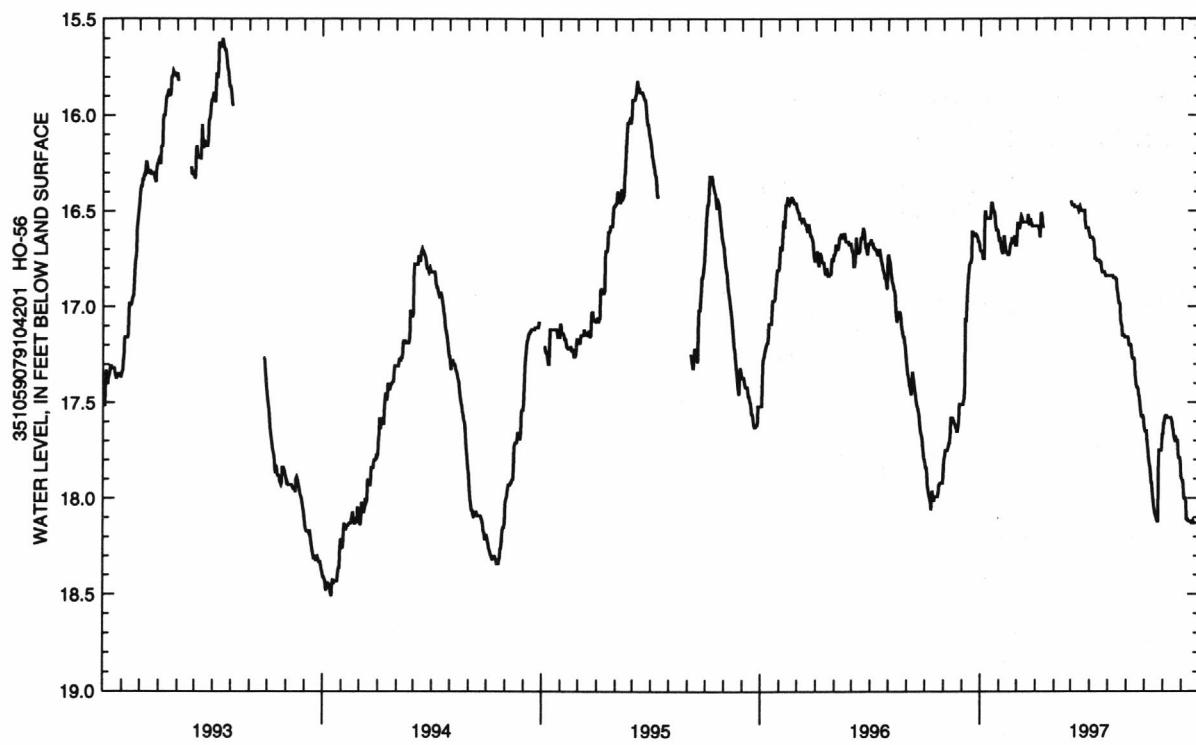
PERIOD OF RECORD.--October 1992 to September 1997.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 15.60 ft below land-surface datum, Apr. 17, 1993; lowest water level recorded, 18.51 ft below land-surface datum, Oct. 16, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.71	16.66	16.62	16.58	---	16.46	16.64	16.84	17.16	17.64	17.67	17.90
2	16.71	16.64	16.56	16.58	---	16.47	16.64	16.84	17.16	17.65	17.61	17.91
3	16.71	16.66	16.59	16.58	---	16.47	16.64	16.84	17.16	17.65	17.61	17.91
4	16.73	16.69	16.59	16.58	---	16.47	16.64	16.84	17.17	17.65	17.58	17.96
5	16.75	16.71	16.59	16.58	---	16.47	16.64	16.84	17.20	17.70	17.57	18.00
6	16.75	16.72	16.57	16.59	---	16.48	16.65	16.84	17.20	17.73	17.57	18.00
7	16.75	16.72	16.55	16.61	---	16.48	16.65	16.84	17.20	17.76	17.57	18.00
8	16.53	16.68	16.53	16.64	---	16.48	16.69	16.84	17.20	17.80	17.58	18.02
9	16.50	16.63	16.54	16.56	---	16.48	16.75	16.84	17.23	17.82	17.58	18.11
10	16.53	16.66	16.56	16.51	---	16.48	16.75	16.85	17.26	17.84	17.58	18.11
11	16.54	16.68	16.56	16.53	---	16.48	16.75	16.85	17.27	17.88	17.58	18.11
12	16.54	16.71	16.56	16.57	---	16.49	16.76	16.85	17.27	17.92	17.58	18.12
13	16.54	16.72	16.56	16.59	---	16.50	16.76	16.85	17.27	17.92	17.58	18.12
14	16.54	16.72	16.56	---	---	16.49	16.76	16.86	17.28	17.97	17.58	18.12
15	16.54	16.73	16.56	---	---	16.48	16.76	16.86	17.35	18.00	17.59	18.12
16	16.54	16.73	16.56	---	---	16.49	16.76	16.91	17.38	18.04	17.60	18.12
17	16.54	16.73	16.56	---	---	16.50	16.77	16.93	17.41	18.06	17.63	18.13
18	16.51	16.72	16.56	---	---	16.50	16.77	16.96	17.42	18.08	17.65	18.13
19	16.46	16.68	16.52	---	---	16.50	16.77	16.98	17.42	18.09	17.68	18.13
20	16.46	16.67	16.54	---	---	16.50	16.80	16.98	17.43	18.10	17.69	18.12
21	16.48	16.67	16.57	---	---	16.50	16.82	16.99	17.46	18.11	17.68	18.13
22	16.50	16.64	16.57	---	---	16.50	16.82	17.07	17.47	18.12	17.68	18.13
23	16.50	16.66	16.57	---	---	16.50	16.82	17.09	17.50	18.12	17.69	18.13
24	16.51	16.66	16.56	---	---	16.56	16.82	17.10	17.53	17.82	17.70	18.13
25	16.54	16.67	16.57	---	---	16.59	16.82	17.15	17.56	17.75	17.70	18.13
26	16.58	16.63	16.58	---	---	16.59	16.83	17.15	17.58	17.75	17.77	18.13
27	16.60	16.66	16.58	---	---	16.59	16.84	17.15	17.57	17.75	17.79	18.13
28	16.60	16.68	16.58	---	16.45	16.59	16.84	17.15	17.57	17.75	17.79	18.13
29	16.60	16.68	16.58	---	---	16.59	16.84	17.16	17.58	17.75	17.79	18.13
30	16.61	16.68	16.58	---	---	16.61	16.84	17.16	17.62	17.70	17.81	18.13
31	16.64	---	16.58	---	---	16.62	---	17.16	---	17.66	17.89	---
WTR YR 1997	MEAN	17.08	HIGH	16.45	LOW	18.13						



HOKE COUNTY--Continued

351059079104203. Local number, Ho-58; Fort Bragg Background Site 2 Well 3.

LOCATION.--Lat 35°10'59", long 79°10'42", Hydrologic Unit 03030004, from Pope Air Force Base, head west on Manchester Rd; Background Site 2 is 6.0 mi from the intersection of Manchester and Lamont Rds. on the right, located about 50-300 ft north of Manchester Rd. and 100-300 ft west of Flat Creek, between Flat Creek and dirt road; Ranger Station No. 3 is 1,600 ft west of Background Site 2 on the left, at the corner of Manchester and Raeford Vass Rds. Owner: U.S. Army.

AQUIFER.--Upper Cape Fear aquifer.

WELL CHARACTERISTICS.--Drilled observation well, depth 24.5 ft, diameter 4 in., cased to 14.5 ft, screened interval from 14.5 to 24.5 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land surface datum is 215 ft above sea level, from topographic map. Measuring point: Top of shelter floor, 2.42 ft above land-surface datum.

REMARKS.--Well is one of the background wells for Fort Bragg, North Carolina RCRA Facilities Investigation.

PERIOD OF RECORD.--December 1995 to September 1997.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 15.21 ft below land-surface datum, May 16, 1996; lowest water level recorded, 16.52 ft below land-surface datum, Sept. 30, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, PERIOD DECEMBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.87	15.73	15.83	15.59	15.37	15.13	15.30	15.50	15.66	15.95	16.07	16.27
2	15.86	15.74	15.82	15.57	15.38	15.13	15.32	15.53	15.69	15.95	16.06	16.27
3	15.87	15.78	15.81	15.57	15.38	15.12	15.32	15.51	15.70	15.98	16.07	16.28
4	15.90	15.77	15.81	15.58	15.38	15.12	15.32	15.54	15.72	16.02	16.06	16.30
5	15.89	15.77	15.77	15.56	15.36	15.09	15.33	15.53	15.73	16.05	16.07	16.30
6	15.88	15.77	15.78	15.60	15.38	15.10	15.33	15.51	15.73	16.05	16.09	16.30
7	15.86	15.76	15.76	15.60	15.36	15.11	15.34	15.52	15.73	16.06	16.09	16.30
8	15.80	15.75	15.75	15.60	15.36	15.11	15.37	15.50	15.74	16.07	16.09	16.33
9	15.82	15.79	15.77	15.52	15.38	15.10	15.39	15.49	15.76	16.07	16.09	16.33
10	15.83	15.80	15.74	15.55	15.36	15.10	15.41	15.51	15.77	16.08	16.09	16.34
11	15.83	15.83	15.72	15.59	15.36	15.11	15.39	15.51	15.77	16.09	16.09	16.35
12	15.80	15.84	15.72	15.57	15.37	15.15	15.37	15.49	15.77	16.11	16.10	16.36
13	15.77	15.82	15.72	15.56	15.37	15.15	15.40	15.50	15.78	16.12	16.10	16.36
14	15.75	15.83	15.72	15.54	15.32	15.10	15.45	15.52	15.80	16.14	16.11	16.36
15	15.74	15.85	15.70	15.53	15.33	15.17	15.44	15.52	15.82	16.17	16.12	16.36
16	15.72	15.84	15.67	15.52	15.33	15.18	15.44	15.55	15.82	16.19	16.14	16.37
17	15.70	15.83	15.65	15.53	15.33	15.17	15.44	15.55	15.84	16.20	16.16	16.37
18	15.67	15.82	15.66	15.52	15.31	15.17	15.47	15.56	15.84	16.21	16.17	16.38
19	15.67	15.83	15.64	15.51	15.31	15.17	15.47	15.56	15.85	16.22	16.19	16.38
20	15.66	15.86	15.67	15.50	15.31	15.18	15.50	15.56	15.86	16.23	16.17	16.38
21	15.67	15.86	15.65	15.50	15.26	15.18	15.50	15.58	15.88	16.23	16.17	16.44
22	15.67	15.89	15.62	15.49	15.18	15.19	15.50	15.59	15.89	16.25	16.19	16.44
23	15.66	15.89	15.61	15.48	15.19	15.23	15.48	15.59	15.91	16.25	16.22	16.44
24	15.68	15.89	15.60	15.48	15.15	15.24	15.53	15.60	15.92	16.14	16.22	16.44
25	15.69	15.88	15.64	15.45	15.14	15.23	15.55	15.60	15.92	16.09	16.22	16.42
26	15.70	15.89	15.61	15.45	15.14	15.22	15.56	15.61	15.93	16.09	16.23	16.46
27	15.68	15.93	15.60	15.41	15.13	15.24	15.54	15.63	15.93	16.09	16.24	16.47
28	15.67	15.91	15.60	15.41	15.15	15.24	15.51	15.64	15.93	16.10	16.24	16.46
29	15.69	15.91	15.58	15.42	---	15.25	15.54	15.65	15.93	16.11	16.25	16.49
30	15.68	15.90	15.59	15.38	---	15.27	15.52	15.65	15.94	16.09	16.27	16.50
31	15.73	---	15.58	15.36	---	15.28	---	15.65	---	16.07	16.27	---
WTR YR 1997	MEAN 15.73		HIGH 15.09		LOW 16.50							



HOKE COUNTY--Continued

350210079064501. Local number, Ho-114; Hoke County Utilities well WA4.

LOCATION.--Lat 35°02'10", long 79°06'45", Hydrologic Unit 03030004, northeast of Raeford, 0.3 mi north of U.S. Highway 401 on Carolina Drive. Owner: Hoke County Utilities.

AQUIFER.--Black Creek aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled supply well, depth 120 ft, diameter 8 in., cased to 60 ft and from 80 to 105 ft and 115 to 120 ft, screened intervals from 60 to 80 ft and 105 to 115 ft.

INSTRUMENTATION.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 262 ft above sea level (from topographic map). Measuring point: Top of well access pipe in pump pedestal, 2.1 ft above land-surface datum.

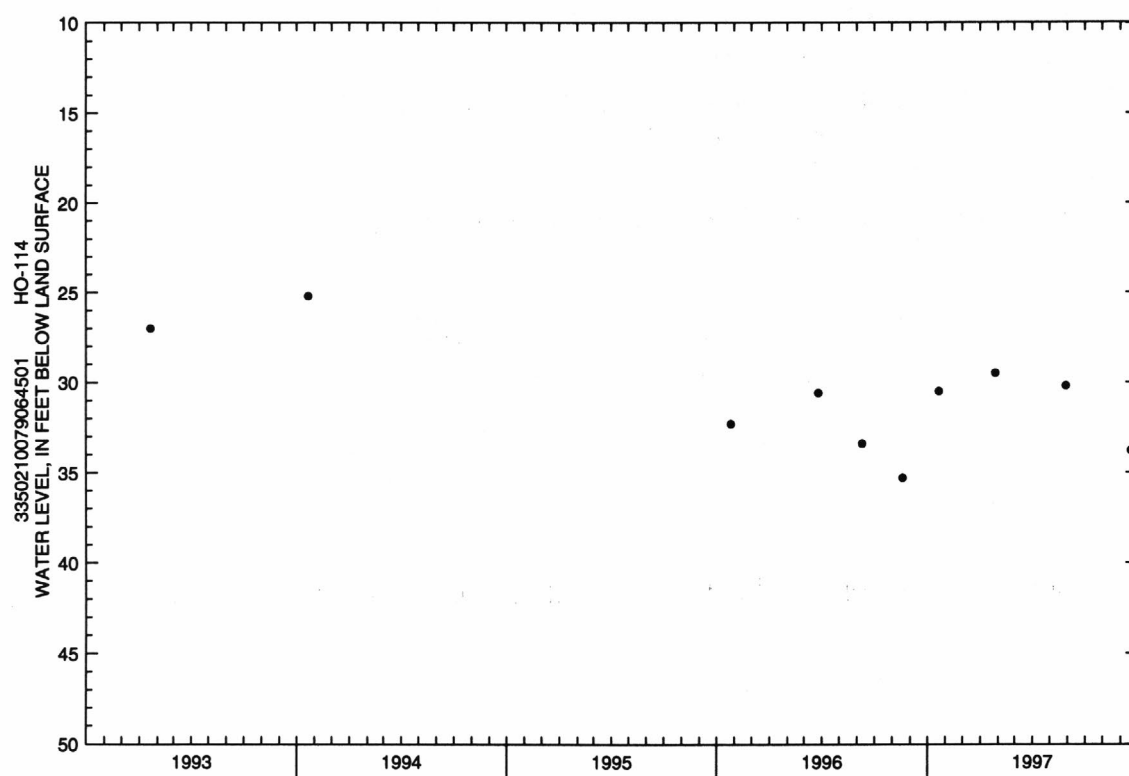
REMARKS.--Well is part of southern Coastal Plain ground-water level monitoring study.

PERIOD OF RECORD.--October 1993 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 25.2 ft below land-surface datum, Oct. 21, 1993; lowest, 35.3 ft below land-surface datum, Aug. 19, 1996.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	30.5	JAN 27	29.5	MAY 29	30.2	SEP 19	33.8



HYDE COUNTY

352527076123103. Local number, NC-159; DENR 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: DENR (North Carolina Department of Environment and Natural Resources).

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.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 3.17 ft above sea level (levels by DENR). Measuring point: Top of casing, 2.95 ft above land-surface datum; revised from 1.58 ft above land-surface datum, January 1997.

REMARKS.--Well is part of areal-effects network. Negative values of water levels measured in feet below land surface indicate ground-water levels that are above land surface.

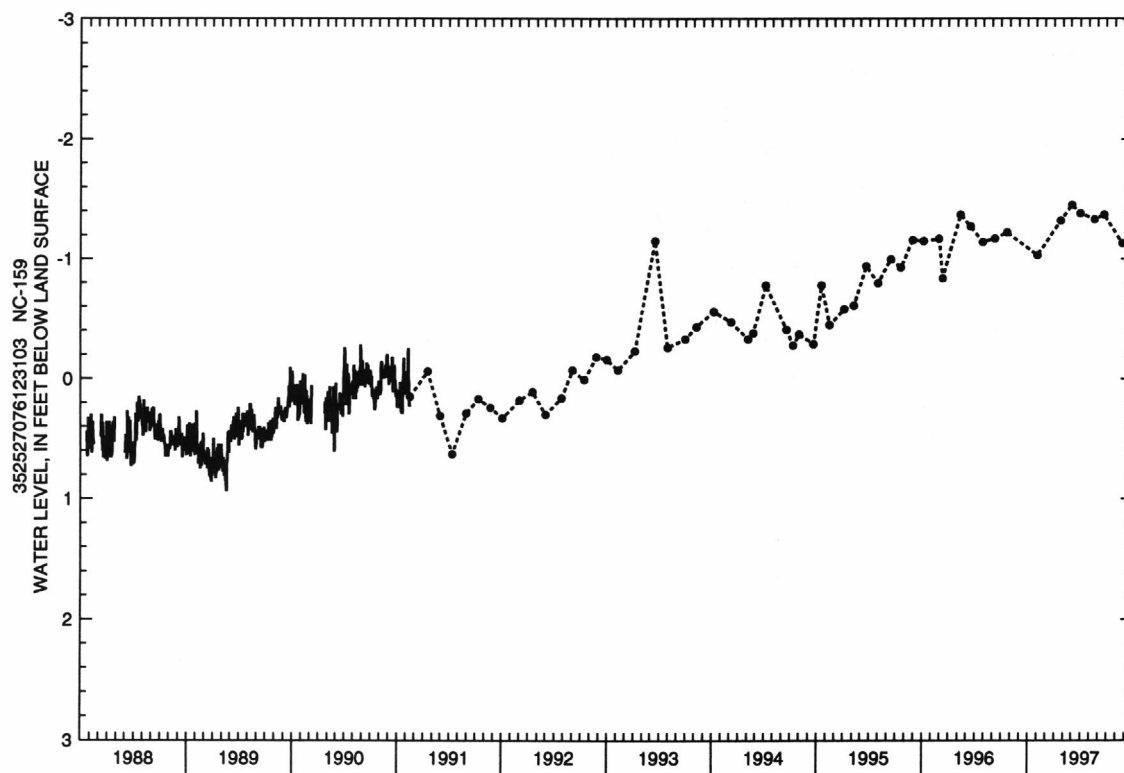
PERIOD OF RECORD.--April 1975 to current year. Continuous record November 1986 to November 1990. Records from April 1975 to July 1986 are unpublished and available in the files of the Groundwater Section, DENR.

EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 1.45 ft above land-surface datum, Mar. 4, 1997; lowest water level recorded, 1.14 ft below land-surface datum, Sept. 14, 1982.

REVISIONS.--Water-level mean values and extremes for period of record published in Water Resources Data, North Carolina, NC-87-1, should be adjusted by +0.25 ft. Water levels for the 1993 water year published in Water Resources Data, North Carolina NC-94-2, supersede those published in Water Resources Data, North Carolina, NC-93-2.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE		WATER LEVEL	DATE		WATER LEVEL	DATE		WATER LEVEL	DATE		WATER LEVEL
NOV 4	-1.03		MAR 4	-1.45		APR 2	-1.38		MAY 21	-1.33	
JAN 24	-1.32								JUN 23	-1.37	
									AUG 25	-1.13	



345809077301404. Local number, NC-172; DENR Comfort Research Station well U26j4.

AQUIFER.--Black Creek aquifer of Late Cretaceous age.

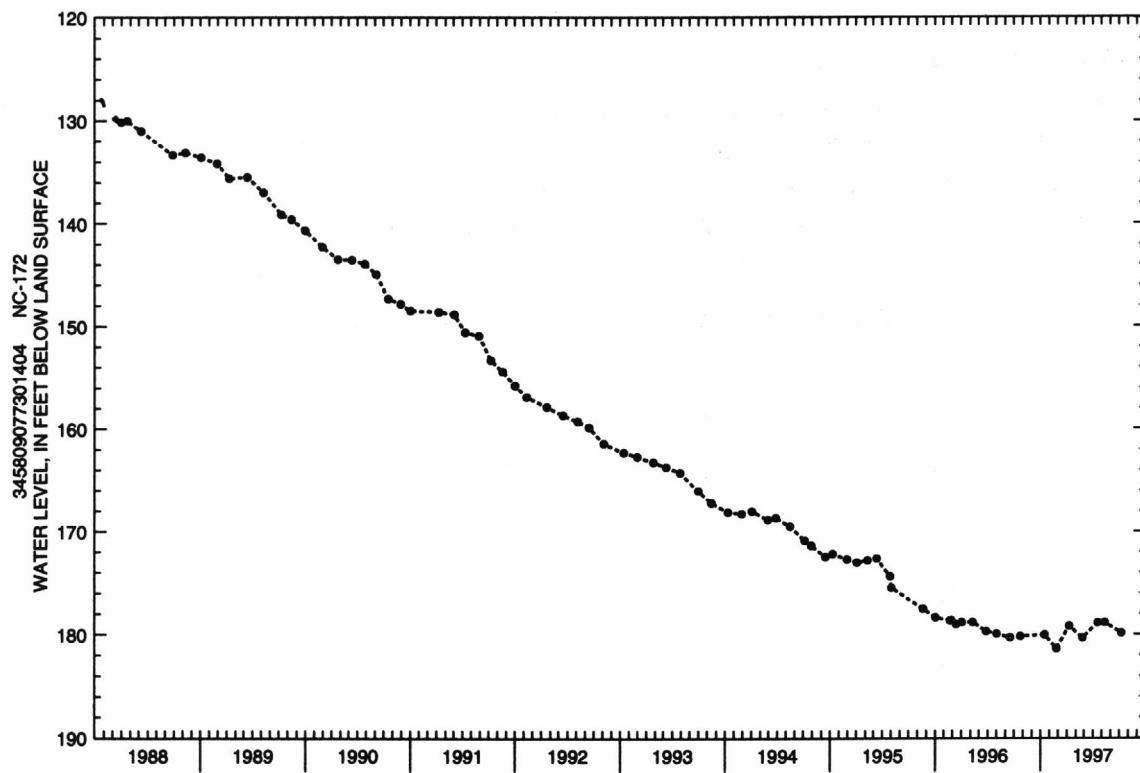
INSTRUMENTATION.--Measured periodically with steel tape.

REMARKS.--Well is part of areal-effects network.

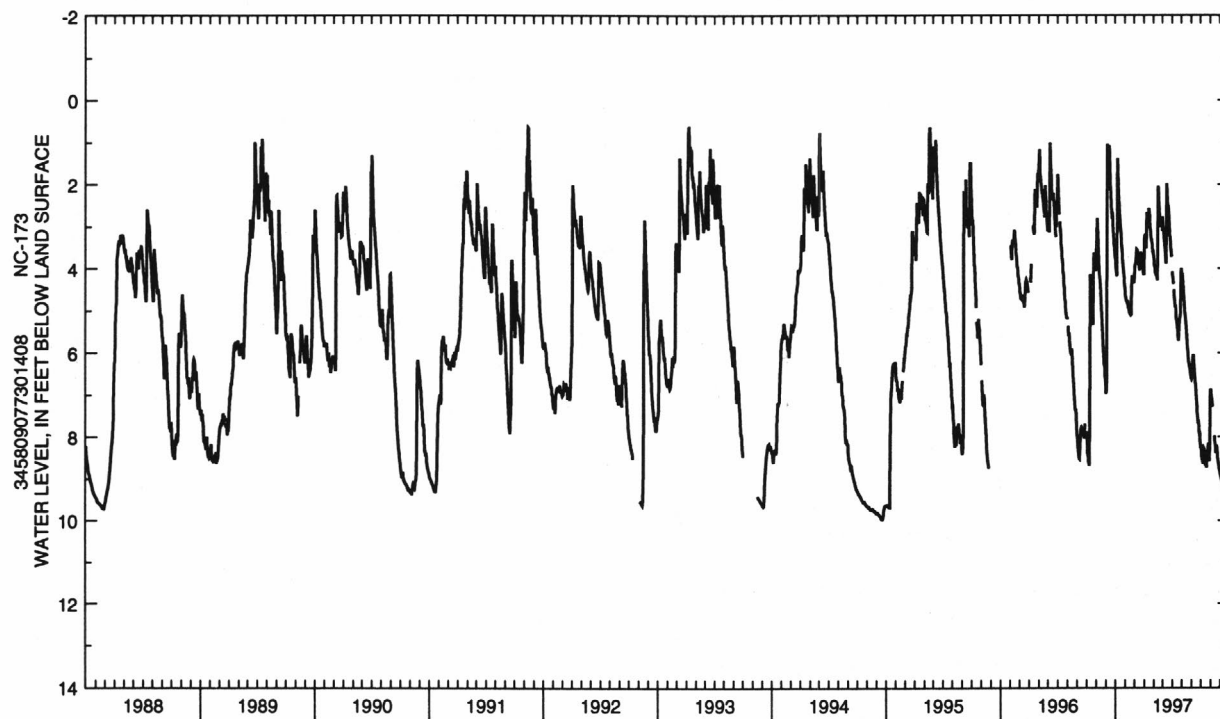
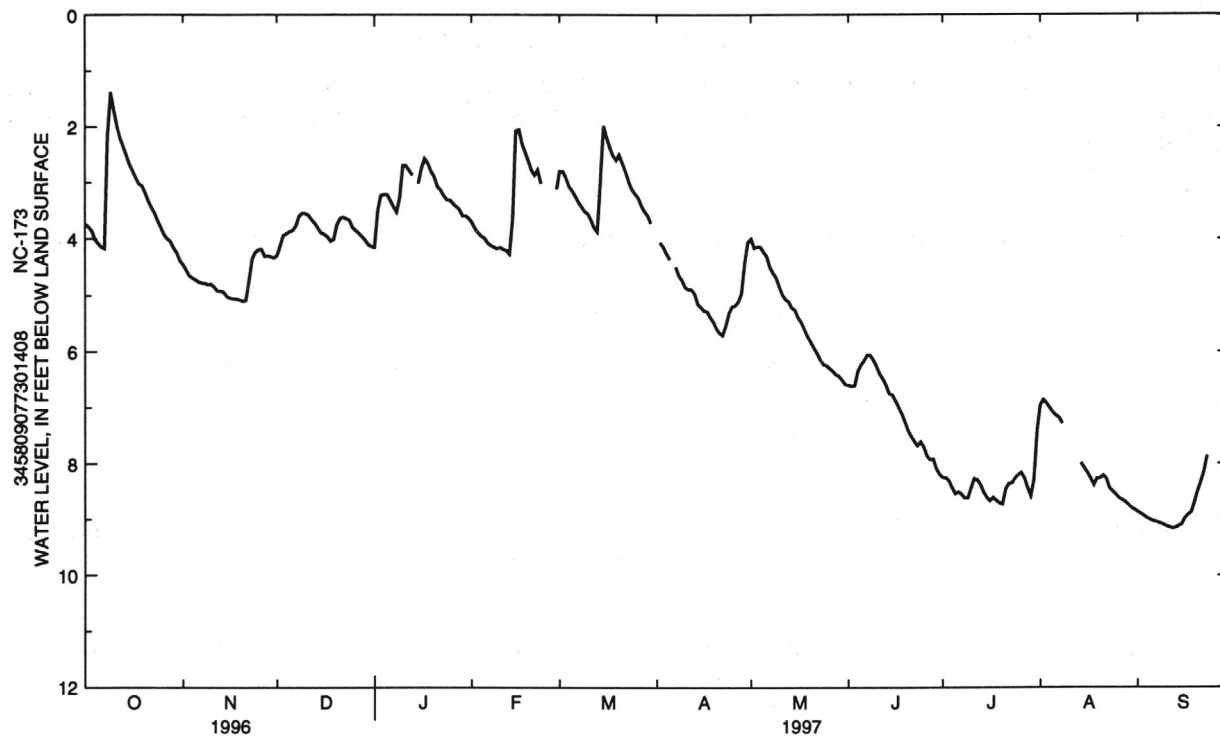
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 67.56 ft below land-surface datum, Mar. 18, 1980; lowest water level measured, 181.38 ft below land-surface datum, Nov. 25, 1996.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

[illegible]



WTR YR 1997	MEAN 5.28	HIGH 1.38	LOW 9.16
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345809077301405. Local number, NC-187; DENR Comfort Research Station well U26j5.

AQUIFER.--Peedee aquifer of Late Cretaceous age.

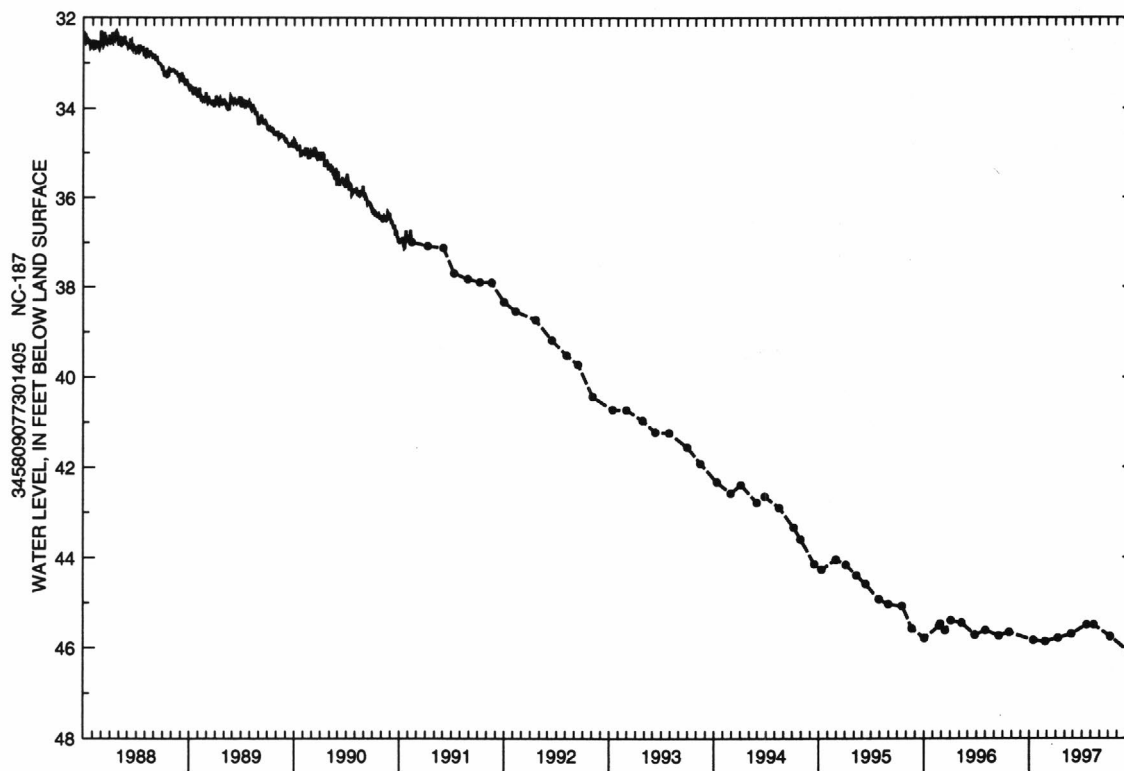
INSTRUMENTATION.--Measured periodically with steel tape.

REMARKS.--Well is part of areal-effects network.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 21.53 ft below land-surface datum, Oct. 29, 1980; lowest water level measured, 46.12 ft below land-surface datum, Sept. 16, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	45.84	JAN 8	45.79	APR 18	45.50	MAY 12	45.50	JUL 9	45.76	SEP 16	46.12
NOV 25	45.87	FEB 24	45.70								



LENOIR COUNTY

351600077381001. Local number, NC-128.

LOCATION.--Lat 35°15'59", long 77°37'52", Hydrologic Unit 03020202, on west edge of Kinston at intersection of U.S. Highways 70 and 258 Bypass, and U.S. Highways 70 and 258 Business. Owner: City of Kinston.

AQUIFER.--Black Creek aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation well, depth 300 ft, diameter 10 in., cased to 160 ft, screened intervals unknown.

INSTRUMENTATION.--Water-level recorder collecting data at 30-minute intervals.

DATUM.--Land-surface datum is 33.5 ft above sea level. Measuring point: Top of instrument shelf, 2.10 ft above land-surface datum.

REMARKS.--Well is part of local-effects network.

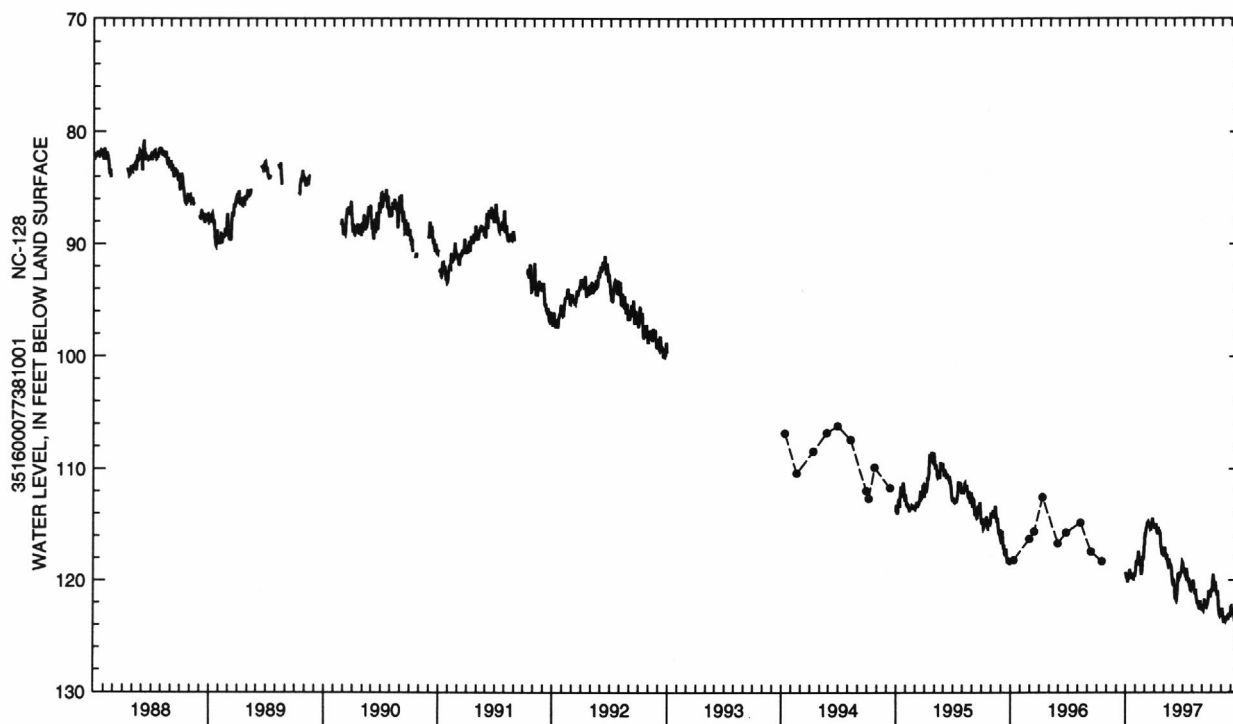
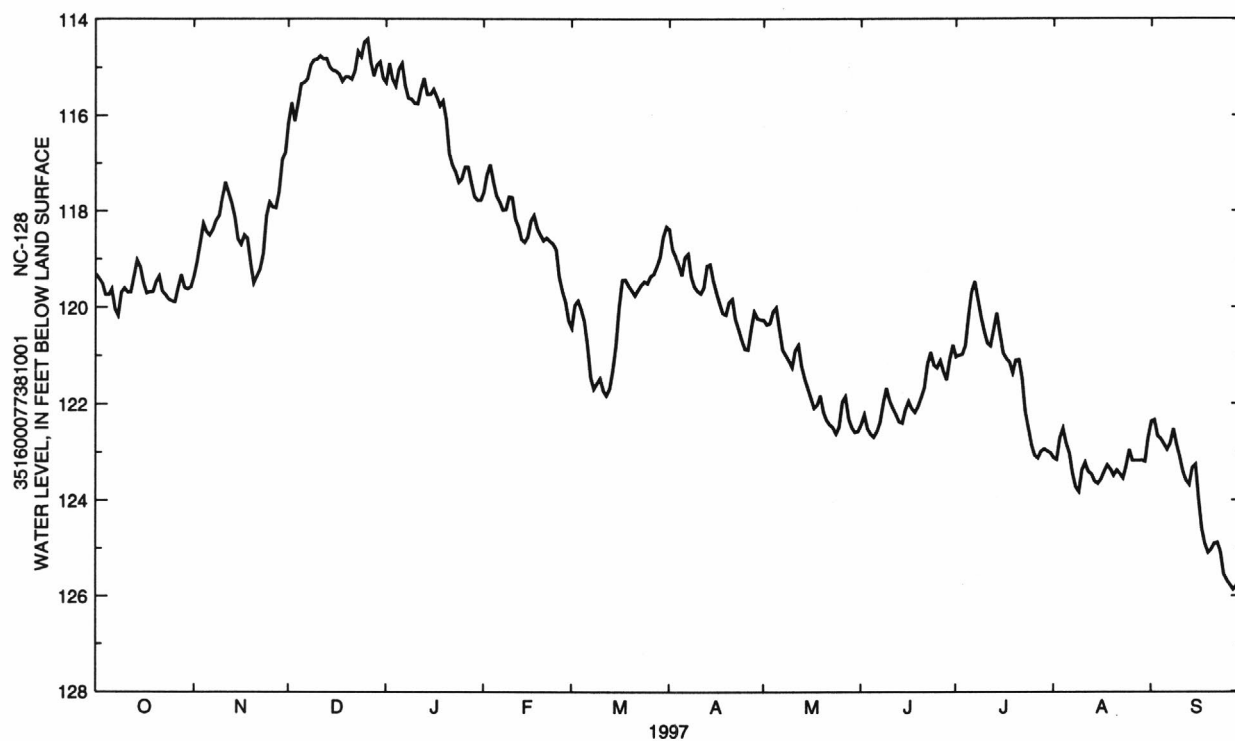
PERIOD OF RECORD.--September 1968 to September 1992, October 1993 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 34.83 ft below land-surface datum, Dec. 30, 1968; lowest water level recorded 125.96 ft below land-surface datum, Sept. 27, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119.31	119.36	116.15	115.32	117.61	120.43	118.39	120.27	122.43	121.03	123.12	122.37
2	119.40	119.06	115.74	114.92	117.23	119.96	118.80	120.37	122.23	121.00	123.16	122.34
3	119.51	118.66	116.12	115.25	117.03	119.87	118.95	120.34	122.51	120.98	122.70	122.67
4	119.74	118.26	115.73	115.39	117.39	120.05	119.12	120.09	122.63	120.80	122.51	122.73
5	119.74	118.43	115.35	115.04	117.68	120.30	119.34	120.01	122.69	120.17	122.83	122.84
6	119.62	118.50	115.31	114.92	117.81	120.79	118.97	120.47	122.57	119.68	123.02	122.95
7	120.04	118.39	115.24	115.38	117.98	121.46	118.90	120.89	122.39	119.47	123.45	122.82
8	120.17	118.20	114.95	115.64	117.97	121.69	119.37	121.00	121.99	119.83	123.73	122.52
9	119.69	118.09	114.85	115.66	117.71	121.58	119.58	121.11	121.68	120.21	123.83	122.85
10	119.60	117.73	114.83	115.75	117.72	121.48	119.67	121.25	121.94	120.50	123.37	123.10
11	119.69	117.40	114.76	115.76	118.16	121.73	119.72	120.90	122.09	120.75	123.22	123.41
12	119.69	117.61	114.82	115.45	118.34	121.83	119.59	120.79	122.23	120.81	123.41	123.59
13	119.35	117.84	114.81	115.23	118.59	121.69	119.14	121.22	122.37	120.46	123.46	123.68
14	119.02	118.12	114.99	115.57	118.65	121.33	119.11	121.49	122.40	120.13	123.61	123.33
15	119.16	118.59	115.06	115.57	118.54	120.79	119.46	121.68	122.13	120.57	123.66	123.26
16	119.48	118.70	115.08	115.46	118.20	120.02	119.70	121.89	121.95	120.95	123.57	123.97
17	119.71	118.50	115.14	115.61	118.09	119.44	119.93	122.09	122.10	121.07	123.41	124.60
18	119.68	118.57	115.29	115.80	118.37	119.43	120.13	122.02	122.18	121.14	123.27	124.91
19	119.68	119.09	115.20	115.70	118.49	119.56	120.16	121.83	122.06	121.37	123.36	125.10
20	119.47	119.50	115.20	116.09	118.62	119.65	119.90	122.17	121.87	121.10	123.49	125.03
21	119.35	119.35	115.25	116.80	118.56	119.76	119.83	122.34	121.67	121.09	123.38	124.91
22	119.67	119.21	115.07	117.05	118.63	119.65	120.25	122.43	121.17	121.47	123.45	124.89
23	119.74	118.89	114.67	117.18	118.69	119.54	120.46	122.49	120.94	122.18	123.55	125.10
24	119.83	118.11	114.78	117.40	118.81	119.47	120.68	122.62	121.21	122.50	123.30	125.55
25	119.87	117.82	114.47	117.33	119.37	119.51	120.87	122.48	121.26	122.86	122.95	125.68
26	119.89	117.92	114.41	117.08	119.68	119.36	120.89	121.96	121.11	123.07	123.18	125.77
27	119.58	117.94	114.89	117.08	119.89	119.31	120.45	121.85	121.33	123.13	123.18	125.87
28	119.32	117.60	115.18	117.42	120.29	119.15	120.10	122.31	121.51	122.99	123.18	125.80
29	119.59	116.92	114.96	117.70	---	118.96	120.24	122.49	121.09	122.94	123.17	125.67
30	119.62	116.78	114.89	117.78	---	118.54	120.26	122.59	120.79	122.98	123.20	125.67
31	119.58	---	115.23	117.78	---	118.33	---	122.57	---	123.02	122.71	---
WTR YR 1997	MEAN 119.96		HIGH 114.41		LOW 125.87							



LENOIR COUNTY--Continued

351937077284201. Local number, NC-185; DENR Graingers Research Station well Q25d12.

LOCATION.--Lat 35°19'37", long 77°28'42", Hydrologic Unit 03020202, 1.6 mi northeast of Graingers on N.C. Highway 11 at E. I. du Pont de Nemours and Company's Kinston Plant. Owner: DENR (North Carolina Department of Environment, and Natural Resources).

AQUIFER.--Peedee aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation well, drilled to 134 ft, diameter 4 in., cased to 124 ft, screened interval from 124 to 134 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 66 ft above sea level (from topographic map). Measuring point: Top of instrument shelf, 3.10 ft above land-surface datum.

REMARKS.--Well is part of areal-effects network.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 39.87 ft below land-surface datum, Sept. 22, 1996; lowest water level recorded, 60.61 ft below land-surface datum, July 31, 1987.

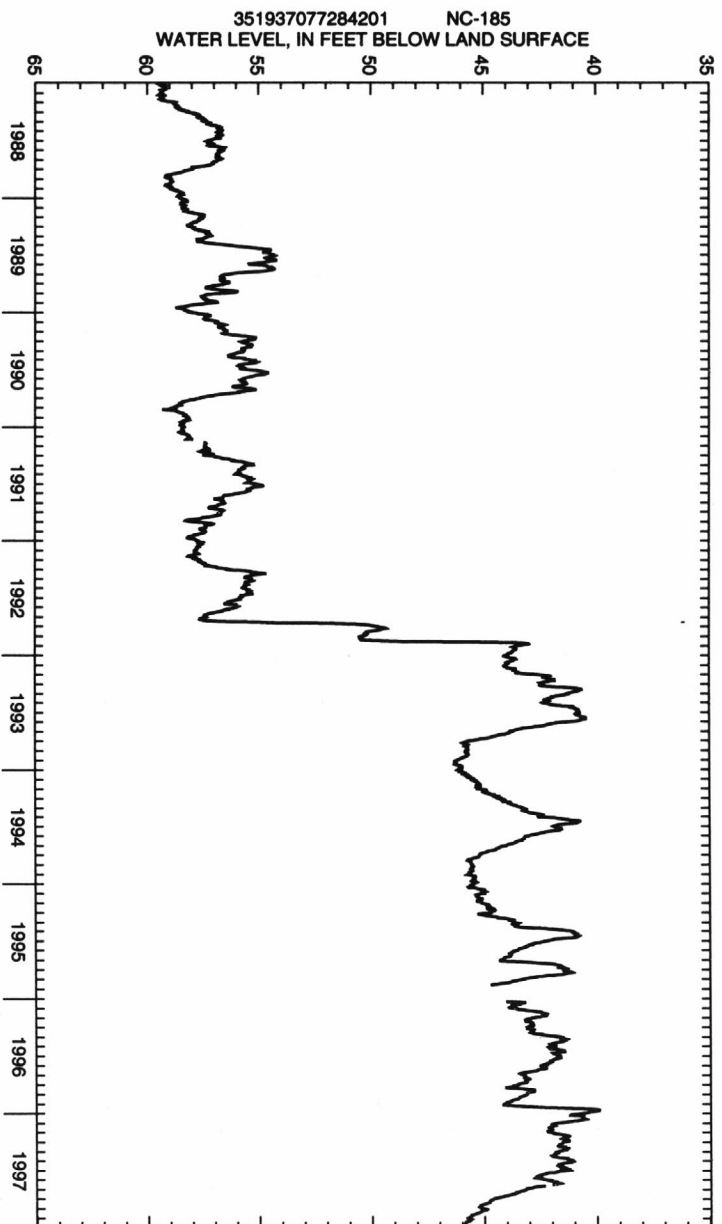
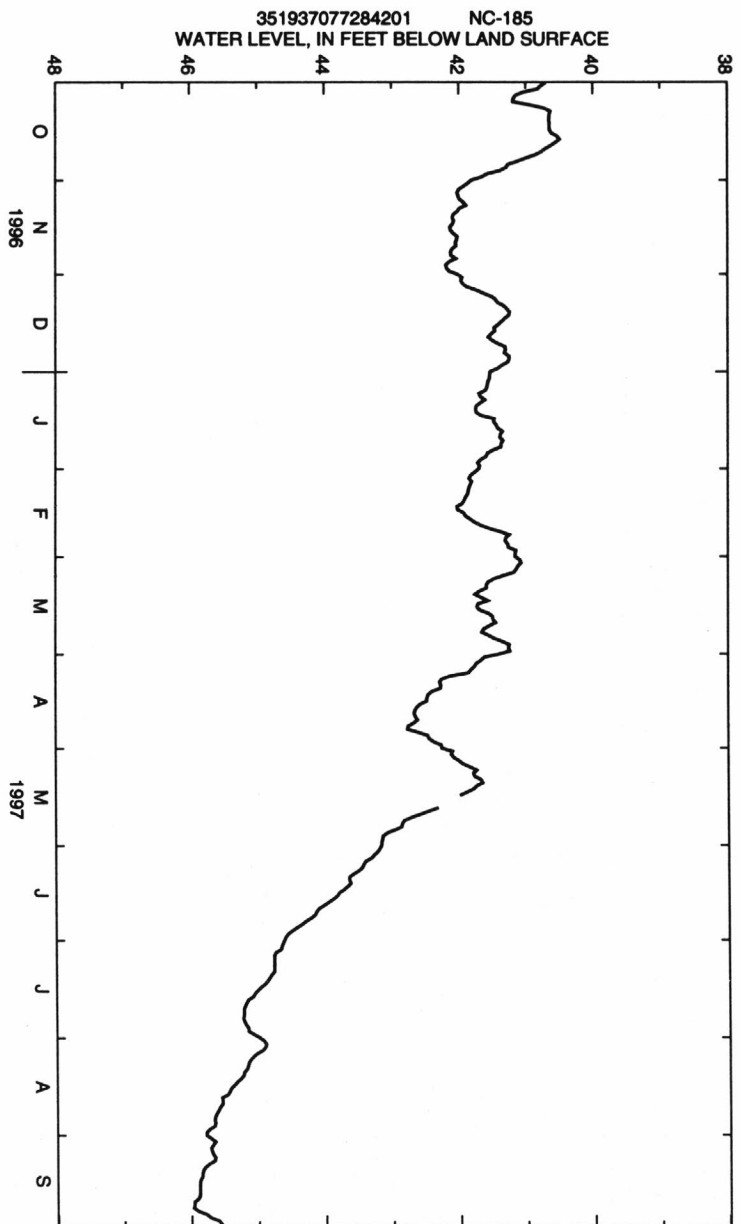
WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40.70	41.81	42.02	41.53	41.70	41.16	41.40	42.26	43.16	44.61	44.99	45.78
2	40.77	41.86	41.95	41.54	41.76	41.09	41.62	42.10	43.19	44.63	44.93	45.71
3	40.82	41.93	41.97	41.54	41.82	41.07	41.67	42.12	43.22	44.65	44.89	45.65
4	41.03	42.00	41.94	41.56	41.85	41.12	41.74	42.08	43.27	44.66	44.90	45.68
5	41.15	42.02	41.88	41.57	41.81	41.15	41.77	42.01	43.31	44.74	44.94	45.71
6	41.18	42.01	41.74	41.58	41.83	41.18	41.82	41.95	43.40	44.76	45.02	45.70
7	41.19	41.99	41.64	41.60	41.85	41.34	41.86	41.84	43.43	44.76	45.08	45.68
8	40.95	41.93	41.52	41.70	41.86	41.47	42.12	41.74	43.45	44.76	45.12	45.65
9	40.73	41.89	41.45	41.68	41.87	41.56	42.26	41.79	43.50	44.76	45.15	45.66
10	40.63	41.99	41.42	41.61	41.90	41.59	42.29	41.77	43.58	44.76	45.16	45.74
11	40.64	42.02	41.33	41.68	41.92	41.59	42.27	41.68	43.64	44.76	45.18	45.80
12	40.65	42.08	41.28	41.74	41.95	41.69	42.28	41.65	43.64	44.80	45.22	45.83
13	40.65	42.09	41.24	41.75	42.03	41.76	42.41	41.74	43.62	44.83	45.23	45.84
14	40.64	42.07	41.25	41.74	42.02	41.67	42.46	41.79	43.67	44.86	45.27	45.84
15	40.64	42.09	41.31	41.67	41.93	41.57	42.48	41.89	43.72	44.90	45.32	45.87
16	40.64	42.13	41.36	41.47	41.90	41.71	42.48	41.99	43.79	44.96	45.36	45.88
17	40.61	42.12	41.41	41.48	41.83	41.73	42.58	---	43.82	45.01	45.41	45.88
18	40.53	42.08	41.47	41.44	41.76	41.69	42.63	---	43.88	45.05	45.43	45.88
19	40.49	42.02	41.46	41.42	41.67	41.56	42.66	---	43.95	45.08	45.46	45.88
20	40.55	42.03	41.52	41.35	41.54	41.50	42.67	42.32	44.02	45.15	45.55	45.88
21	40.62	42.05	41.56	41.38	41.39	41.49	42.65	42.45	44.09	45.18	45.54	45.90
22	40.70	42.04	41.50	41.39	41.25	41.45	42.62	42.58	44.13	45.20	45.54	45.96
23	40.77	42.10	41.42	41.34	41.30	41.55	42.68	42.71	44.15	45.22	45.58	45.96
24	40.86	42.12	41.31	41.37	41.31	41.63	42.76	42.82	44.21	45.22	45.60	45.97
25	41.00	42.11	41.30	41.37	41.27	41.66	42.77	42.85	44.29	45.22	45.63	45.90
26	41.12	42.04	41.32	41.49	41.26	41.56	42.61	42.86	44.35	45.23	45.65	45.78
27	41.26	42.14	41.25	41.57	41.15	41.47	42.47	42.96	44.42	45.21	45.66	45.72
28	41.29	42.19	41.25	41.59	41.16	41.35	42.45	43.08	44.49	45.19	45.65	45.60
29	41.39	42.18	41.27	41.67	---	41.25	42.38	43.14	44.55	45.15	45.66	45.56
30	41.57	42.14	41.36	41.72	---	41.26	42.27	43.15	44.59	45.15	45.73	45.58
31	41.66	---	41.42	41.69	---	41.24	---	43.16	---	45.07	45.78	---
WTR YR 1997	MEAN 42.81		HIGH 40.49		LOW 45.97							

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

129



351609077370605. Local number, NC-186; DENR Kinston Yard Research Station well Q27r5.

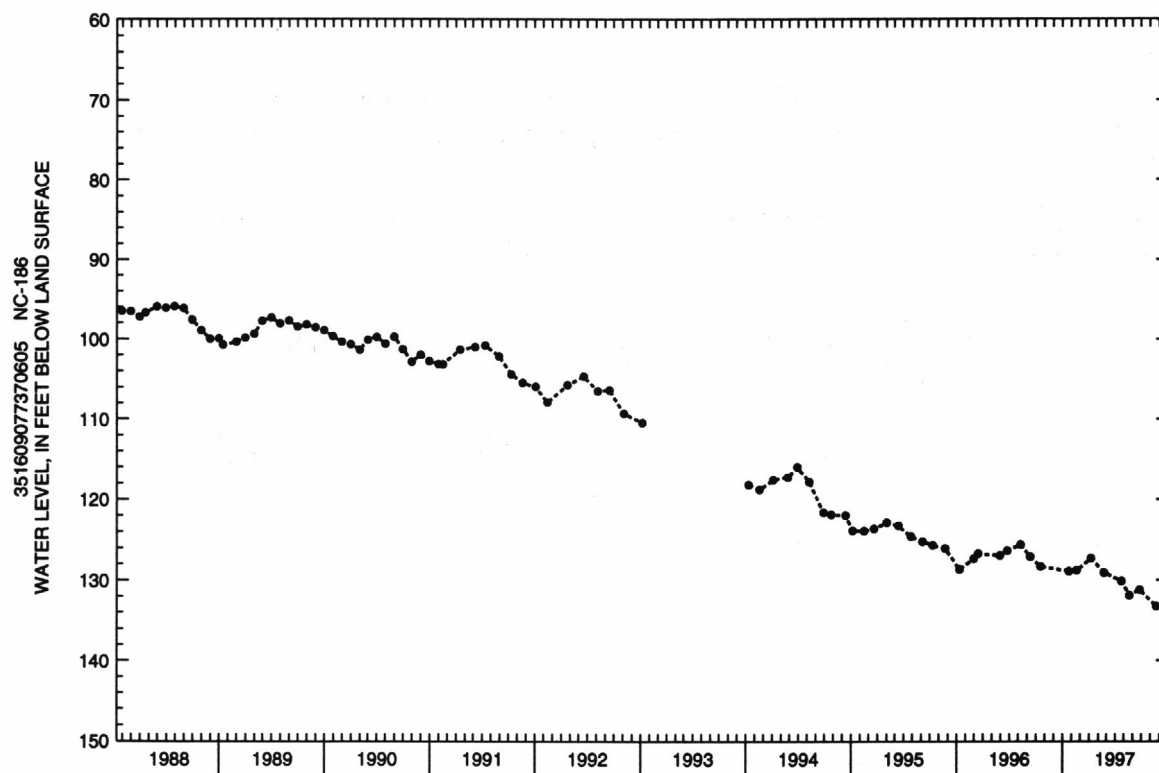
AQUIFER.--Upper Cape Fear aquifer of late Cretaceous age.

INSTRUMENTATION.-- Measured periodically with steel tape.

REMARKS.--Well is part of areal-effects network.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 68.78 ft below land-surface datum, Aug. 12, 1974; lowest water level measured 133.28 ft below land-surface datum, Aug. 21, 1997.

DATE		WATER LEVEL		DATE		WATER LEVEL		DATE		WATER LEVEL	
OCT 24	128.92	JAN 8	127.34	APR 23	130.17	MAY 21	131.94	JUN 25	131.25	AUG 21	133.28
NOV 19	128.82	FEB 21	129.11								



350126080503903. Local number, Me-250.

AQUIFER.--Unconfined saprolite derived from felsic metavolcanic rock.

WELL CHARACTERISTICS.--Drilled observation well, depth 26.0 ft, diameter 4 in., cased 21.0 ft, screened and sand filter packed from 21.0 to 26.0 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 688.6 ft above sea level (levels by private contractor). 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 B-1A.

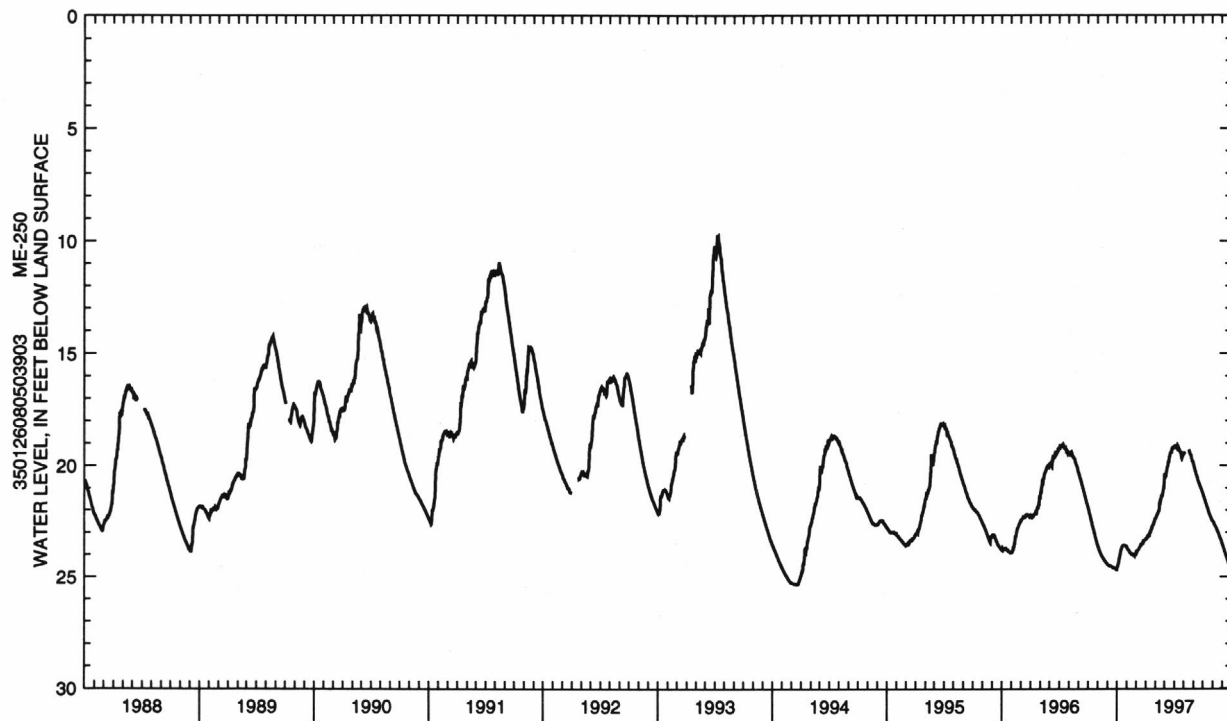
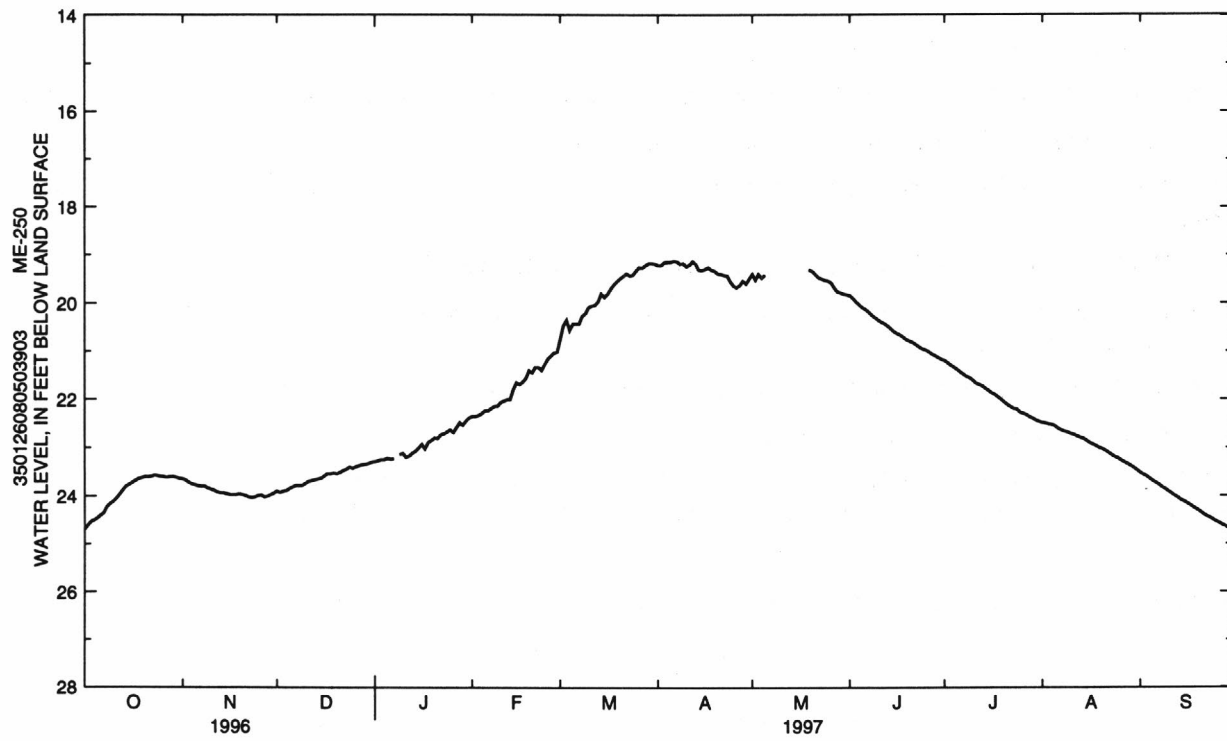
PERIOD OF RECORD.--December 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 9.63 ft below land-surface datum, Apr. 10, 1993; lowest water level recorded, 25.32 ft below land-surface datum Dec. 17, 18, 19, 20, 21, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.68	23.65	23.91	23.30	22.36	20.75	19.22	19.40	19.85	21.20	22.49	23.52
2	24.59	23.67	23.94	23.28	22.36	20.47	19.22	19.52	19.91	21.25	22.50	23.56
3	24.52	23.72	23.91	23.26	22.34	20.36	19.16	19.40	19.98	21.30	22.52	23.59
4	24.50	23.75	23.90	23.26	22.30	20.57	19.15	19.48	20.04	21.34	22.53	23.64
5	24.45	23.77	23.85	23.23	22.24	20.43	19.15	19.42	20.10	21.39	22.56	23.69
6	24.40	23.79	23.82	23.25	22.24	20.43	19.13	---	20.14	21.44	22.61	23.73
7	24.35	23.80	23.79	23.24	22.19	20.43	19.14	---	20.19	21.49	22.65	23.77
8	24.22	23.80	23.79	---	22.15	20.27	19.19	---	20.26	21.53	22.67	23.82
9	24.16	23.84	23.79	23.15	22.15	20.22	19.18	---	20.31	21.56	22.69	23.86
10	24.11	23.86	23.75	23.13	22.07	20.09	19.24	---	20.36	21.61	22.72	23.91
11	24.05	23.89	23.71	23.21	22.04	20.06	19.21	---	20.40	21.67	22.74	23.95
12	23.96	23.92	23.69	23.18	22.01	20.05	19.14	---	20.43	21.70	22.77	24.00
13	23.87	23.94	23.67	23.12	22.01	19.97	19.19	---	20.48	21.73	22.80	24.04
14	23.80	23.94	23.66	23.08	21.80	19.81	19.31	---	20.54	21.78	22.82	24.09
15	23.76	23.96	23.64	23.01	21.66	19.88	19.32	---	20.60	21.83	22.86	24.12
16	23.72	23.98	23.59	22.94	21.69	19.82	19.30	---	20.64	21.88	22.91	24.16
17	23.68	23.98	23.55	23.03	21.65	19.71	19.26	---	20.67	21.91	22.94	24.20
18	23.64	23.98	23.55	22.90	21.57	19.62	19.31	---	20.72	21.96	22.97	24.25
19	23.62	23.97	23.53	22.86	21.41	19.55	19.33	19.31	20.77	22.01	23.01	24.29
20	23.60	23.98	23.55	22.81	21.45	19.49	19.39	19.34	20.80	22.07	23.03	24.33
21	23.60	24.00	23.52	22.82	21.34	19.44	19.40	19.41	20.83	22.12	23.07	24.38
22	23.59	24.03	23.48	22.74	21.34	19.39	19.42	19.47	20.87	22.16	23.11	24.42
23	23.57	24.04	23.45	22.72	21.40	19.43	19.43	19.50	20.92	22.20	23.16	24.45
24	23.58	24.03	23.41	22.68	21.28	19.42	19.55	19.53	20.96	22.21	23.20	24.49
25	23.59	24.00	23.43	22.64	21.17	19.33	19.64	19.54	20.98	22.28	23.23	24.53
26	23.60	23.99	23.40	22.69	21.10	19.26	19.68	19.58	21.02	22.30	23.27	24.56
27	23.61	24.03	23.38	22.59	21.04	19.27	19.63	19.69	21.07	22.33	23.31	24.60
28	23.60	24.01	23.36	22.49	21.02	19.22	19.54	19.77	21.10	22.37	23.34	24.63
29	23.60	23.98	23.35	22.54	---	19.18	19.60	19.79	21.14	22.40	23.38	24.67
30	23.61	23.95	23.34	22.45	---	19.18	19.50	19.82	21.18	22.44	23.42	24.70
31	23.64	---	23.31	22.39	---	19.19	---	19.83	---	22.47	23.47	---
WTR YR 1997	MEAN	22.12		HIGH	19.13		LOW	24.70				



351730080524203. Local number, NC-146.

AQUIFER.--Unconfined saprolite derived from metamorphosed quartz diorite.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

REMARKS.--Well is part of climatic-effects network.

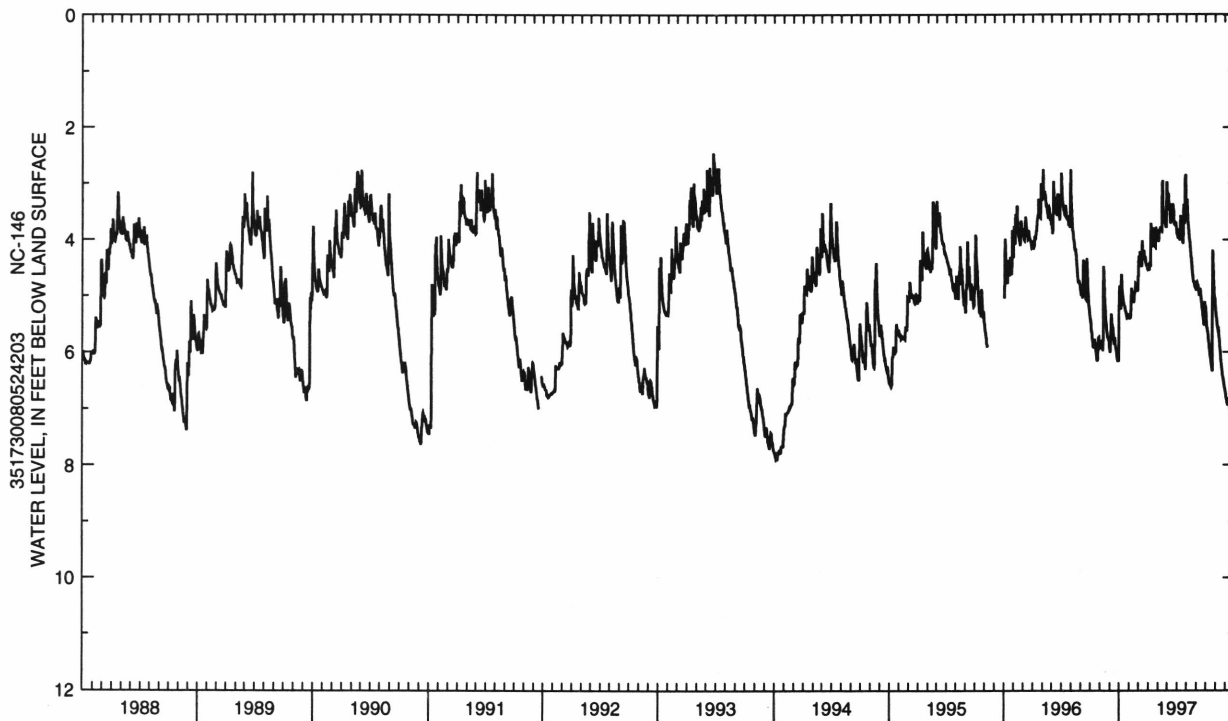
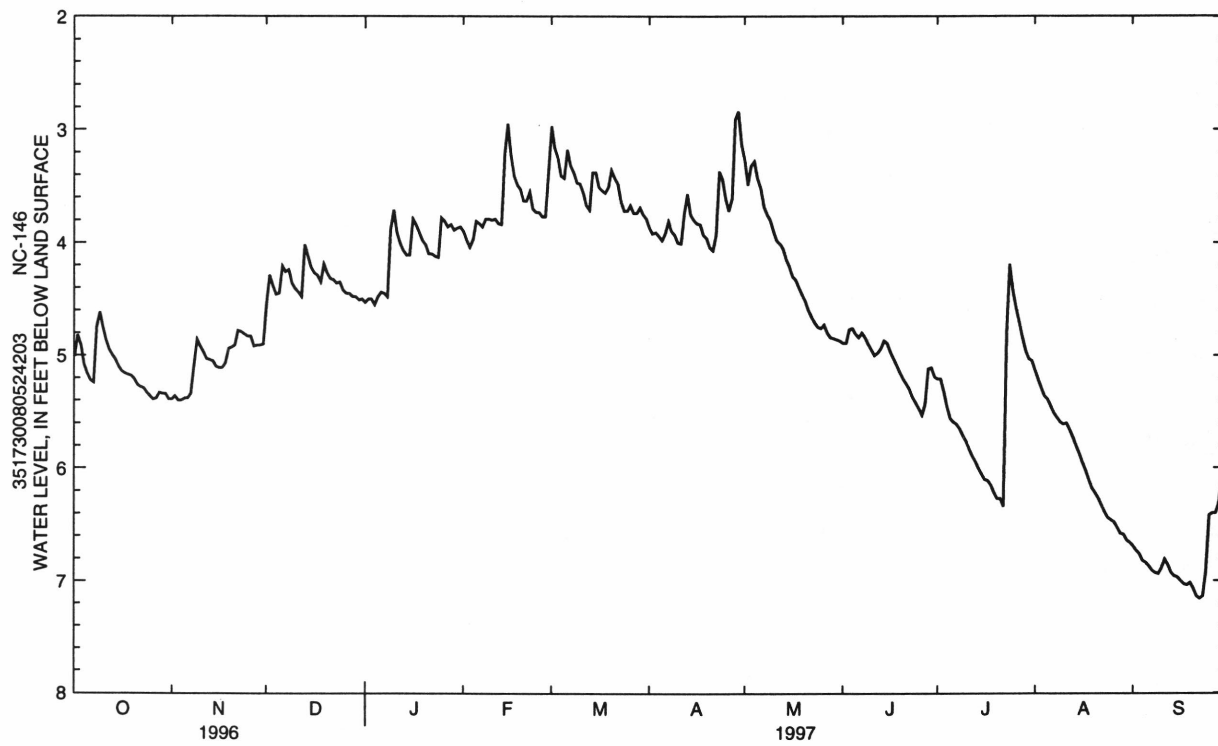
PERIOD OF RECORD.--November 1984 to current year.

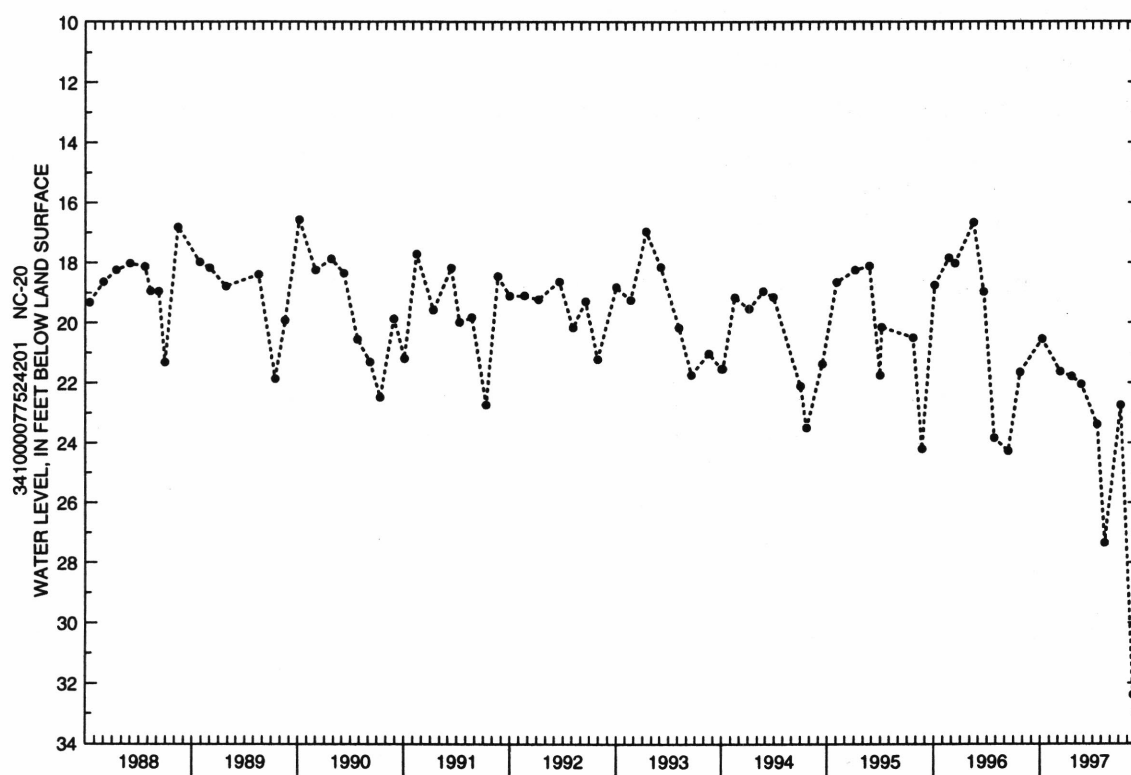
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 2.28 ft below land-surface datum, Mar. 24, 1993; lowest water level recorded, 7.93 ft below land-surface datum, Oct. 10 and 11, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.01	5.39	4.55	4.53	3.90	2.97	3.87	3.27	4.89	5.21	5.13	6.69
2	4.82	5.36	4.29	4.50	3.98	3.16	3.92	3.49	4.89	5.21	5.21	6.73
3	4.91	5.40	4.38	4.50	4.04	3.25	3.91	3.32	4.77	5.33	5.29	6.76
4	5.08	5.40	4.46	4.55	3.97	3.41	3.94	3.28	4.76	5.46	5.36	6.82
5	5.16	5.38	4.45	4.48	3.81	3.43	3.98	3.43	4.81	5.56	5.39	6.84
6	5.22	5.38	4.21	4.44	3.83	3.18	3.92	3.52	4.84	5.59	5.45	6.87
7	5.24	5.34	4.26	4.45	3.86	3.32	3.81	3.68	4.80	5.61	5.51	6.91
8	4.75	5.09	4.24	4.48	3.79	3.38	3.90	3.75	4.84	5.65	5.55	6.93
9	4.62	4.86	4.36	3.89	3.79	3.47	3.93	3.80	4.90	5.71	5.59	6.94
10	4.75	4.92	4.41	3.71	3.80	3.48	4.00	3.90	4.95	5.76	5.61	6.89
11	4.87	4.97	4.44	3.91	3.79	3.56	4.01	3.98	5.00	5.83	5.60	6.81
12	4.95	5.03	4.48	4.01	3.83	3.67	3.75	4.01	4.98	5.89	5.66	6.86
13	5.00	5.04	4.02	4.07	3.84	3.71	3.57	4.05	4.94	5.94	5.73	6.93
14	5.04	5.05	4.12	4.11	3.22	3.38	3.75	4.15	4.87	6.00	5.80	6.96
15	5.10	5.10	4.22	4.11	2.95	3.38	3.80	4.21	4.89	6.05	5.87	6.97
16	5.14	5.11	4.27	3.79	3.23	3.51	3.83	4.30	4.97	6.10	5.95	7.00
17	5.16	5.11	4.29	3.84	3.41	3.54	3.84	4.33	5.03	6.11	6.02	7.03
18	5.17	5.07	4.35	3.91	3.49	3.56	3.93	4.40	5.09	6.15	6.10	7.04
19	5.18	4.94	4.19	3.98	3.53	3.51	3.96	4.46	5.15	6.22	6.18	7.02
20	5.21	4.93	4.27	4.02	3.63	3.36	4.04	4.52	5.21	6.27	6.22	7.07
21	5.26	4.91	4.32	4.10	3.63	3.43	4.07	4.60	5.25	6.27	6.27	7.14
22	5.28	4.78	4.33	4.10	3.55	3.48	3.93	4.66	5.30	6.34	6.33	7.16
23	5.29	4.79	4.36	4.12	3.70	3.64	3.37	4.71	5.37	4.78	6.39	7.14
24	5.33	4.81	4.35	4.13	3.73	3.72	3.44	4.75	5.42	4.19	6.44	6.92
25	5.36	4.83	4.42	3.78	3.73	3.72	3.61	4.76	5.47	4.43	6.46	6.42
26	5.39	4.83	4.45	3.81	3.77	3.67	3.72	4.73	5.53	4.58	6.48	6.40
27	5.38	4.92	4.45	3.86	3.77	3.74	3.61	4.80	5.43	4.71	6.53	6.40
28	5.33	4.91	4.48	3.84	3.36	3.74	2.91	4.84	5.12	4.84	6.58	6.32
29	5.34	4.91	4.48	3.89	---	3.69	2.84	4.85	5.11	4.96	6.59	6.09
30	5.34	4.90	4.51	3.87	---	3.75	3.13	4.86	5.19	5.03	6.64	6.14
31	5.39	---	4.50	3.86	---	3.79	---	4.87	---	5.05	6.66	---
WTR YR 1997	MEAN 4.76		HIGH 2.84		LOW 7.16							





ONslow COUNTY

344425077272501. Local number, NC-52.

LOCATION.--Lat 34°44'18", long 77°27'29", Hydrologic Unit 03030001, southwest of Jacksonville, 0.25 mi east of U.S. Highway 17 at U.S. Marine Corps Camp Geiger, and 2 mi south of U.S. Highway 258. 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.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 17.0 ft above sea level (from topographic map). Measuring point: Top of instrument shelf, 1.83 ft above land-surface datum; revised from 1.90 ft. above land-surface datum, April 29, 1993.

REMARKS.--Well is part of areal-effects network.

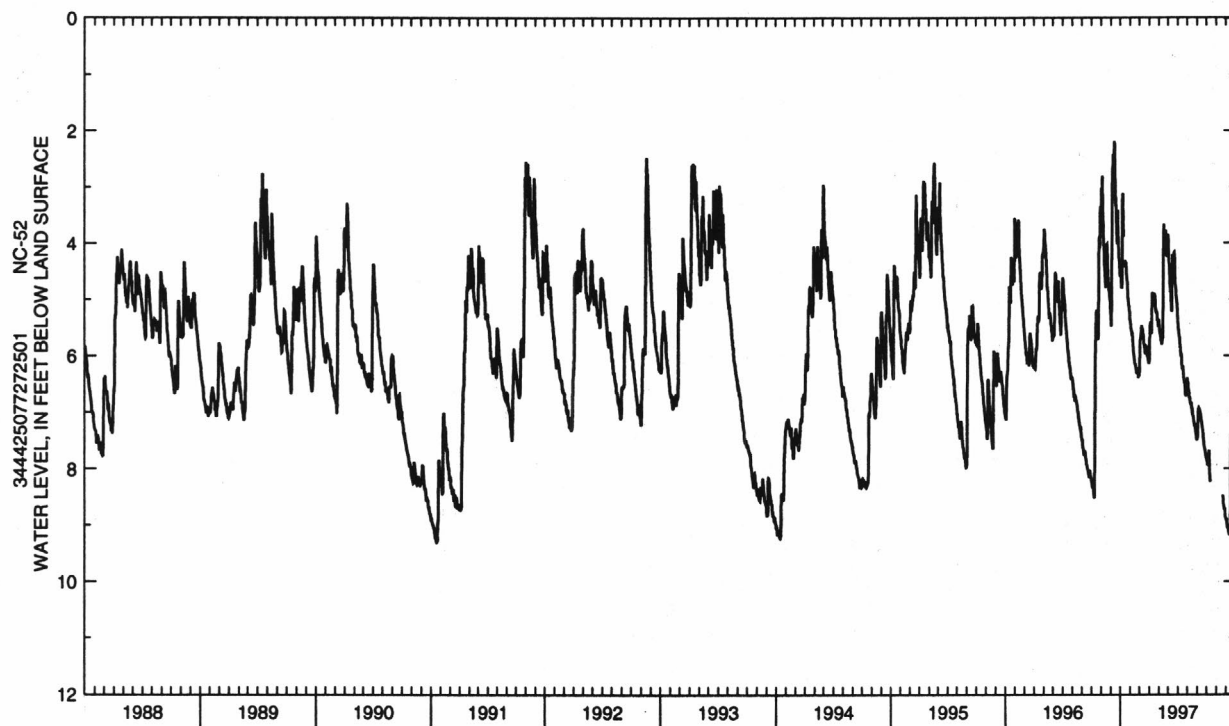
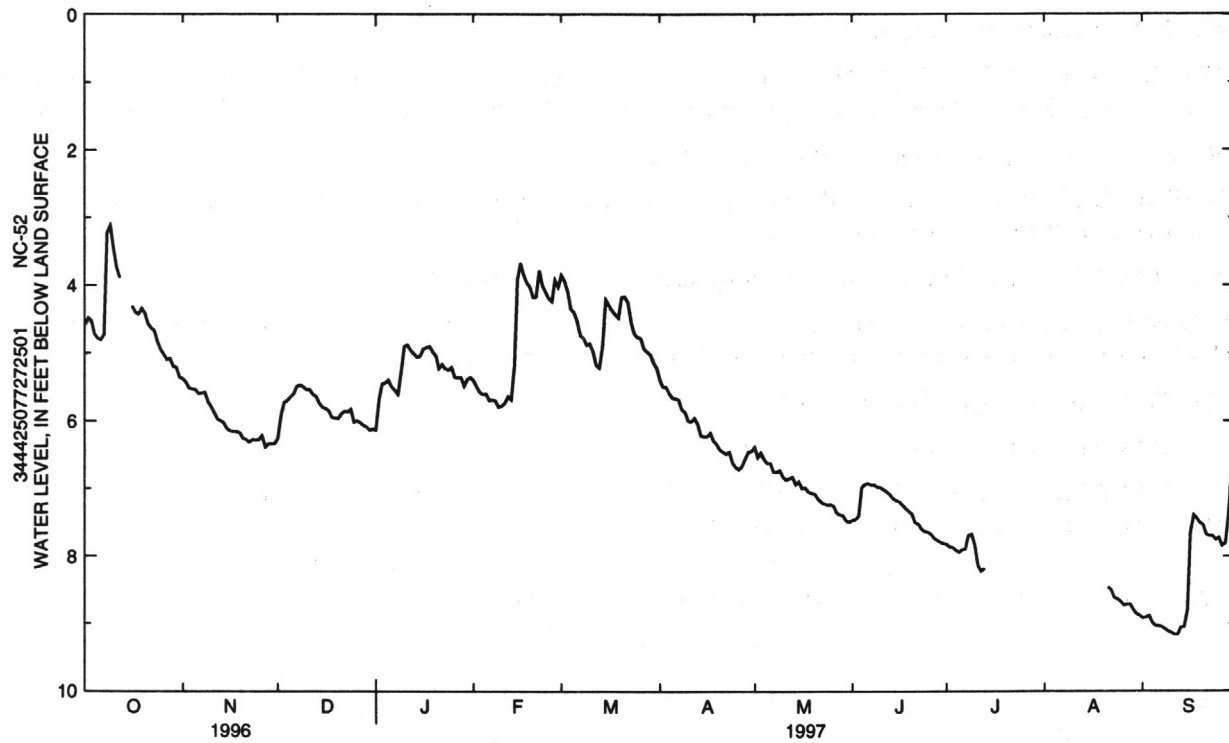
PERIOD OF RECORD.--January 1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.67 ft below land-surface datum, Sept. 14, 1984; lowest water level recorded, 10.44 ft below land-surface datum, Jan. 3, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.58	5.38	6.27	6.14	5.40	3.85	5.39	6.39	7.47	7.83	---	8.92
2	4.48	5.43	5.92	5.68	5.50	3.93	5.50	6.54	7.46	7.87	---	8.91
3	4.53	5.52	5.73	5.46	5.58	4.09	5.50	6.47	7.41	7.88	---	8.89
4	4.72	5.53	5.70	5.44	5.61	4.35	5.59	6.57	6.99	7.92	---	8.99
5	4.79	5.54	5.65	5.40	5.60	4.40	5.66	6.63	6.94	7.95	---	9.04
6	4.81	5.60	5.60	5.50	5.70	4.53	5.67	6.63	6.93	7.91	---	9.04
7	4.73	5.59	5.49	5.55	5.69	4.74	5.69	6.75	6.95	7.90	---	9.05
8	3.23	5.58	5.47	5.61	5.71	4.78	5.83	6.76	6.95	7.70	---	9.08
9	3.12	5.73	5.50	5.28	5.80	4.88	5.87	6.73	6.98	7.68	---	9.12
10	3.46	5.80	5.54	4.90	5.78	4.86	6.00	6.83	6.99	7.84	---	9.14
11	3.74	5.89	5.54	4.88	5.74	4.98	6.01	6.87	7.02	8.15	---	9.17
12	3.89	5.98	5.61	4.96	5.64	5.18	5.96	6.85	7.05	8.23	---	9.17
13	---	6.00	5.64	5.01	5.69	5.22	6.05	6.83	7.09	8.19	---	9.06
14	---	6.03	5.74	5.06	5.18	4.90	6.22	6.94	7.15	---	---	9.06
15	---	6.12	5.80	5.05	3.92	4.21	6.23	6.90	7.18	---	---	8.80
16	4.31	6.15	5.82	4.94	3.67	4.29	6.23	7.00	7.20	---	---	7.66
17	4.40	6.16	5.85	4.92	3.84	4.37	6.18	6.99	7.25	---	---	7.39
18	4.43	6.16	5.95	4.90	3.96	4.43	6.30	7.05	7.30	---	---	7.44
19	4.34	6.18	5.96	4.98	4.02	4.48	6.35	7.07	7.34	---	---	7.51
20	4.41	6.26	5.97	5.04	4.18	4.18	6.43	7.08	7.38	---	---	7.54
21	4.57	6.28	5.90	5.23	4.17	4.17	6.46	7.15	7.51	---	8.47	7.68
22	4.63	6.32	5.86	5.17	3.78	4.25	6.49	7.20	7.53	---	8.51	7.70
23	4.67	6.28	5.87	5.23	4.00	4.55	6.46	7.23	7.60	---	8.62	7.70
24	4.83	6.29	5.83	5.25	4.10	4.72	6.62	7.25	7.64	---	8.64	7.76
25	4.95	6.28	6.02	5.21	4.19	4.77	6.69	7.24	7.65	---	8.68	7.73
26	5.02	6.22	6.00	5.36	4.24	4.78	6.72	7.26	7.68	---	8.73	7.85
27	5.10	6.39	6.03	5.36	3.92	4.94	6.67	7.36	7.74	---	8.72	7.81
28	5.08	6.34	6.07	5.36	4.03	4.98	6.56	7.39	7.77	---	8.72	7.43
29	5.20	6.34	6.09	5.49	---	5.02	6.46	7.40	7.80	---	8.80	6.78
30	5.21	6.34	6.14	5.39	---	5.14	6.45	7.48	7.82	---	8.86	6.59
31	5.36	---	6.12	5.36	---	5.22	---	7.50	---	---	8.88	---
WTR YR 1997	MEAN 6.16		HIGH 3.12		LOW 9.17							



ONslow COUNTY--Continued

343641077290104. Local number, NC-188; DENR Dixon Tower Research Station well Y25q4.

LOCATION.--Lat 34°36'41", long 77°29'01", Hydrologic Unit 03030001, 1.5 mi north of Dixon at North Carolina Division of Forest Resources Fire Tower on U.S. Highway 17. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Pee Dee aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation well, drilled to 550 ft, diameter 4 in., cased to 524 ft, screened interval from 524 to 534 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 67.44 ft above sea level (levels by DENR). Measuring point: Top of instrument shelf, 2.53 ft above land-surface datum.

REMARKS.--Well is part of areal-effects network.

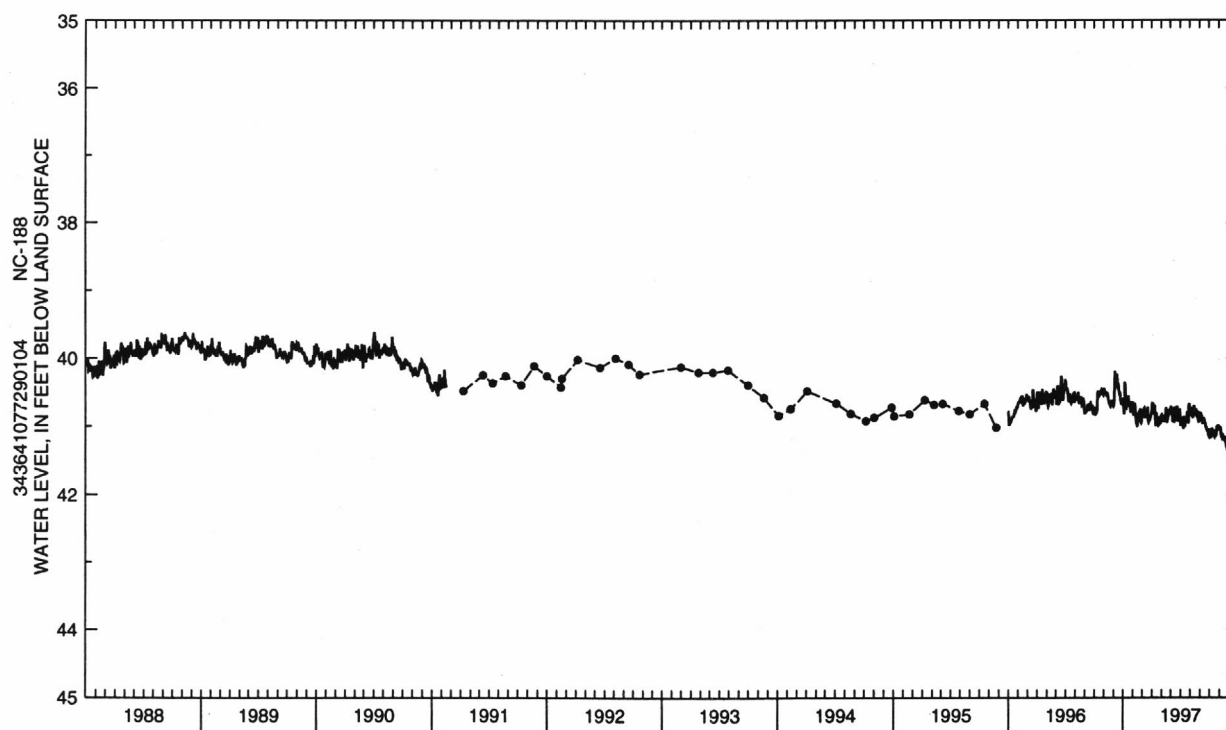
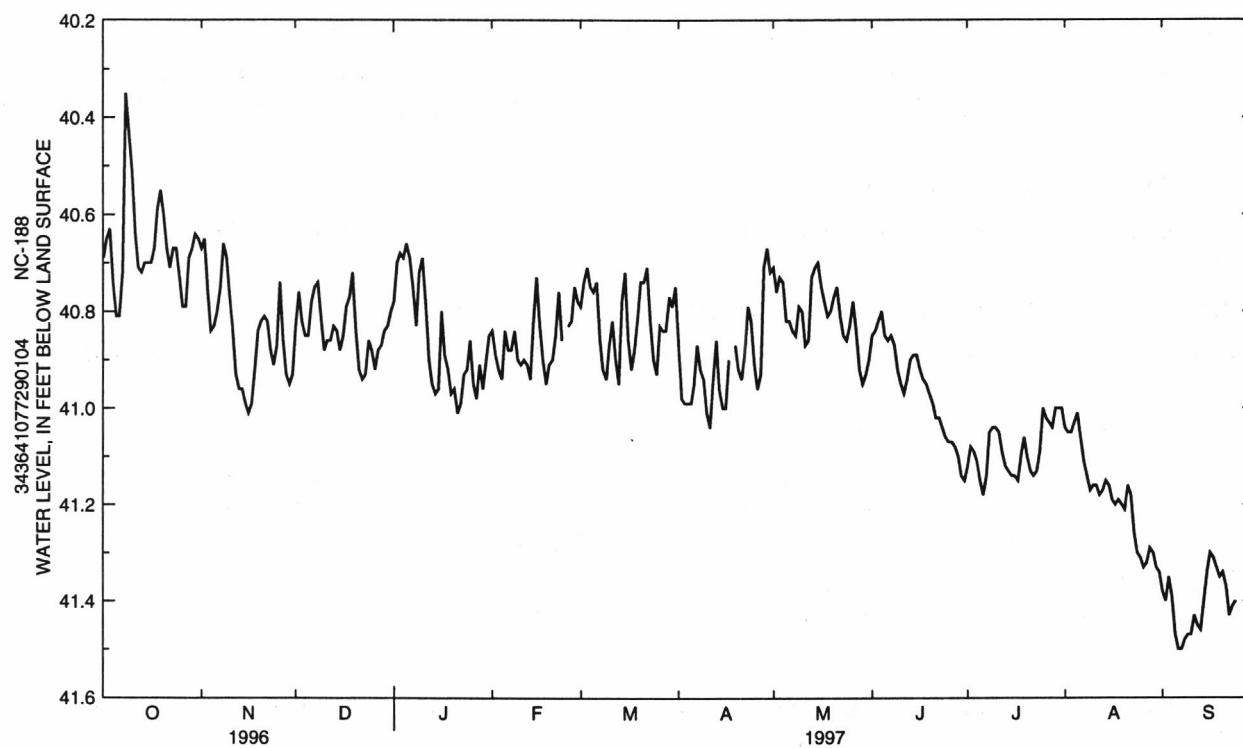
PERIOD OF RECORD.--April 1982 to September 1997 (discontinued). Continuous record August 1986 to November 1990. Measured periodically with a steel tape November 1990 to June 1995. Records from May 1983 to July 1986 are unpublished and available in the files of the Groundwater Section, DENR.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 38.86 ft below land-surface datum, May 12, 1983; lowest water level measured, 41.51 ft below land-surface datum, Sept. 6, 7, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40.69	40.67	40.83	40.78	40.84	40.79	40.87	40.71	40.85	41.12	41.04	41.38
2	40.65	40.65	40.76	40.70	40.89	40.74	40.98	40.76	40.84	41.08	41.05	41.40
3	40.63	40.76	40.82	40.68	40.92	40.71	40.99	40.73	40.82	41.09	41.05	41.35
4	40.74	40.84	40.85	40.69	40.94	40.75	40.99	40.74	40.80	41.11	41.03	41.39
5	40.81	40.83	40.85	40.66	40.84	40.76	40.99	40.82	40.85	41.15	41.01	41.47
6	40.81	40.80	40.78	40.69	40.88	40.74	40.95	40.82	40.86	41.18	41.06	41.50
7	40.72	40.75	40.75	40.75	40.88	40.86	40.87	40.84	40.85	41.14	41.11	41.50
8	40.35	40.66	40.74	40.83	40.84	40.92	40.92	40.85	40.87	41.05	41.14	41.48
9	40.43	40.69	40.81	40.72	40.90	40.94	40.94	40.79	40.92	41.04	41.17	41.47
10	40.51	40.77	40.88	40.69	40.91	40.87	41.01	40.80	40.95	41.04	41.16	41.47
11	40.64	40.84	40.86	40.78	40.90	40.82	41.04	40.87	40.97	41.05	41.16	41.43
12	40.71	40.93	40.86	40.90	40.91	40.90	40.94	40.86	40.94	41.09	41.18	41.45
13	40.72	40.96	40.83	40.95	40.94	40.95	40.86	40.73	40.90	41.12	41.17	41.46
14	40.70	40.96	40.84	40.97	40.82	40.78	40.96	40.71	40.89	41.13	41.15	41.40
15	40.70	40.99	40.88	40.96	40.73	40.72	41.00	40.70	40.89	41.14	41.16	41.34
16	40.70	41.01	40.85	40.80	40.83	40.86	41.00	40.75	40.92	41.14	41.19	41.30
17	40.67	40.99	40.79	40.89	40.90	40.92	40.90	40.78	40.94	41.15	41.20	41.31
18	40.59	40.92	40.77	40.92	40.95	40.88	---	40.81	40.95	41.10	41.19	41.33
19	40.55	40.84	40.72	40.97	40.91	40.81	40.87	40.80	40.97	41.06	41.20	41.35
20	40.60	40.82	40.84	40.96	40.90	40.74	40.92	40.77	40.99	41.10	41.21	41.34
21	40.67	40.81	40.92	41.01	40.85	40.74	40.94	40.75	41.02	41.13	41.16	41.37
22	40.71	40.82	40.94	40.99	40.76	40.71	40.89	40.81	41.02	41.14	41.18	41.43
23	40.67	40.88	40.93	40.93	40.86	40.82	40.79	40.85	41.04	41.13	41.26	41.41
24	40.67	40.91	40.86	40.92	---	40.90	40.82	40.86	41.06	41.09	41.30	41.40
25	40.73	40.87	40.88	40.86	40.83	40.93	40.91	40.83	41.07	41.00	41.31	---
26	40.79	40.74	40.92	40.95	40.82	40.83	40.96	40.78	41.07	41.02	41.33	---
27	40.79	40.86	40.88	40.98	40.75	40.84	40.93	40.84	41.08	41.03	41.32	---
28	40.69	40.93	40.87	40.91	40.78	40.84	40.71	40.92	41.10	41.04	41.29	---
29	40.67	40.95	40.84	40.96	---	40.77	40.67	40.95	41.14	41.00	41.30	---
30	40.64	40.93	40.83	40.90	---	40.79	40.72	40.93	41.15	41.00	41.33	---
31	40.65	---	40.80	40.85	---	40.75	---	40.90	---	41.00	41.34	---
WTR YR 1997	MEAN		40.93	HIGH		40.35	LOW		41.50			



ONSLOW COUNTY--Continued

344837077291607. Local number, NC-189; DENR Jacksonville 258 Well Field Research Station well W25f7.

LOCATION.--Lat 34°48'37", long 77°29'16", Hydrologic Unit 03030001, 1.4 mi northeast of U.S. Highway 258 and State Highway 24 on Wells Road. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Black Creek aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation well, drilled to 834 ft, diameter 4 in., cased to 824 ft, screened interval from 824 to 834 ft.

INSTRUMENTATION.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 26.62 ft above sea level (levels by DENR). Measuring point: Top of instrument shelf, 3.78 ft above land-surface datum.

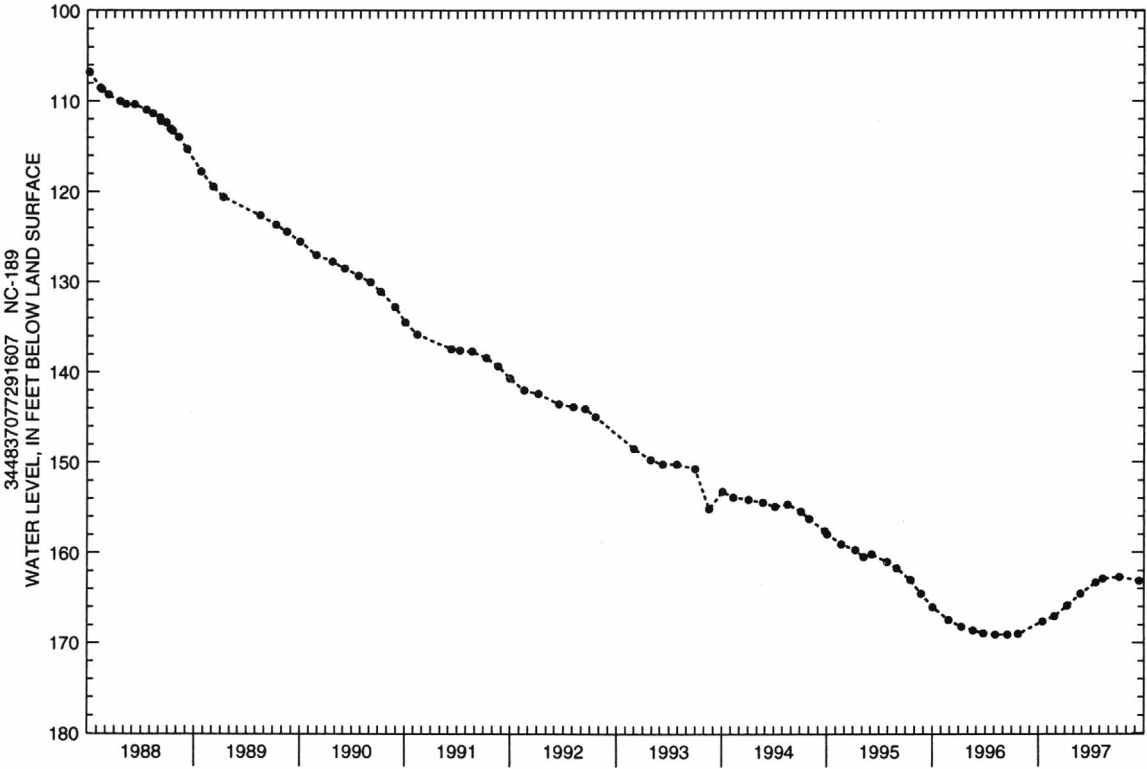
REMARKS.--Well is part of areal-effects network.

PERIOD OF RECORD.--April 1988 to current year. Continuous record from October 1986 to April 1988 are unreliable and unpublished.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 96.64 ft below land-surface datum, Oct. 15, 1986; lowest water level measured, 169.10 ft below land-surface datum, June 17, 1996.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	167.60	JAN 8	165.90	APR 18	163.31	MAY 13	162.88	JUL 9	162.71	SEP 16	163.13
NOV 25	167.05	FEB 24	164.57								



ONslow COUNTY--Continued

343641077290103. Local number, On-227; DENR Dixon Tower Research Station well Y25q3.

LOCATION.--Lat 34°36'41", long 77°29'01", Hydrologic Unit 03030001, 1.5 mi north of Dixon at North Carolina Division of Forest Resources Fire Tower on U.S. Highway 17. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Castle Hayne aquifer.

WELL CHARACTERISTICS.--Drilled observation well, depth 240.0 ft, diameter 4 in., cased to 150.0 ft, screened interval from 150.0 to 240.0 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 68 ft above sea level, (levels by DENR). Measuring point: Top of shelter floor, 2.13 ft above land-surface datum.

REMARKS.--Well is part of Marine Corps Base, Camp Lejeune, North Carolina, Water Resources Network project.

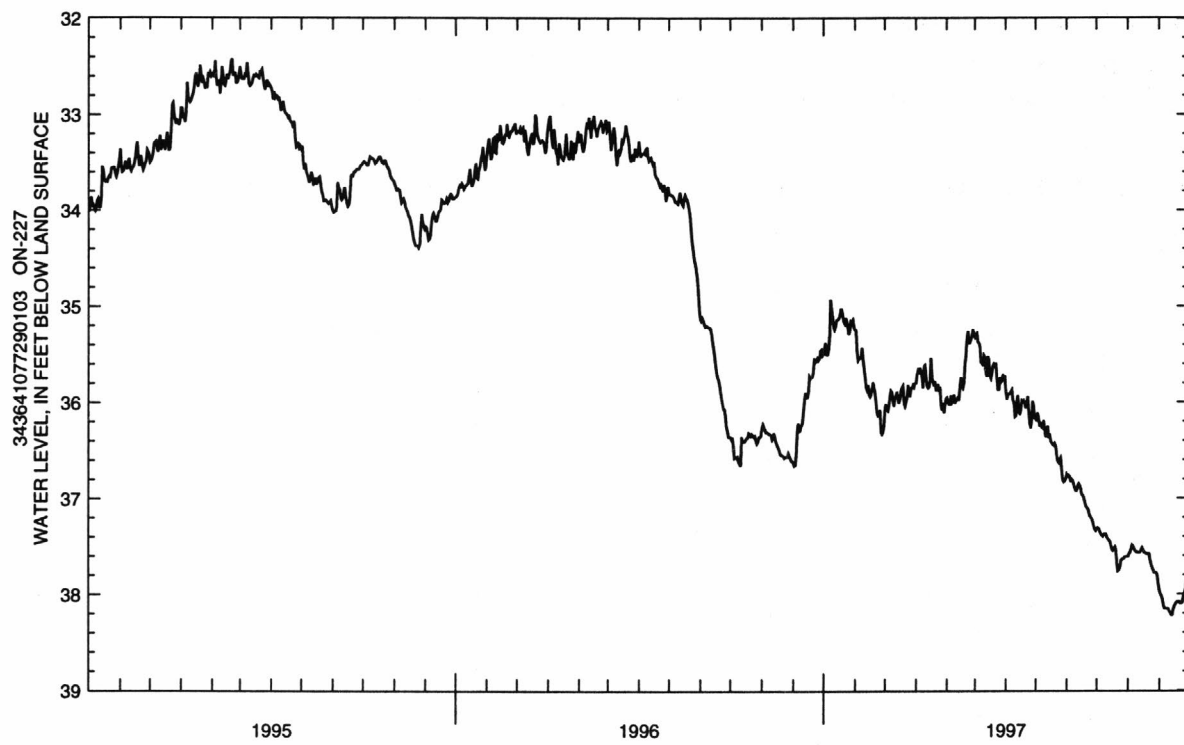
PERIOD OF RECORD.--October 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 32.35 ft below land-surface datum, Feb. 22, 1995; lowest water level recorded, 38.23 ft below land-surface datum, Sept. 13, 14, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35.49	35.24	36.06	35.80	35.95	35.32	35.89	36.15	36.75	37.32	37.61	37.97
2	35.42	35.25	36.02	35.71	36.00	35.29	35.97	36.20	36.77	37.31	37.58	38.00
3	35.38	35.47	36.08	35.67	36.02	35.28	35.92	36.11	36.76	37.32	37.57	38.02
4	35.50	35.56	36.09	35.70	36.02	35.37	35.91	36.18	36.77	37.35	37.53	38.05
5	35.50	35.54	36.03	35.64	35.93	35.38	35.91	36.25	36.83	37.37	37.49	38.12
6	35.44	35.54	35.94	35.68	36.00	35.42	35.89	36.21	36.80	37.39	37.50	38.15
7	35.31	35.52	35.88	35.74	35.98	35.58	35.87	36.26	36.81	37.40	37.53	38.15
8	34.93	35.43	35.90	35.85	35.92	35.58	35.98	36.27	36.85	37.38	37.55	38.15
9	35.03	35.55	35.99	35.62	36.01	35.62	36.00	36.19	36.90	37.37	37.56	38.15
10	35.12	35.66	36.04	35.61	35.98	35.51	36.15	36.27	36.92	37.37	37.56	38.16
11	35.21	35.74	35.95	35.73	35.96	35.53	36.14	36.36	36.92	37.41	37.57	38.18
12	35.24	35.84	35.93	35.83	35.95	35.69	35.98	36.33	36.87	37.43	37.57	38.20
13	35.20	35.87	35.89	35.85	35.98	35.73	35.93	36.25	36.85	37.44	37.56	38.22
14	35.14	35.82	35.96	35.84	35.82	35.52	36.11	36.37	36.87	37.45	37.54	38.22
15	35.14	35.92	36.01	35.78	35.74	35.56	36.12	36.33	36.90	37.50	37.52	38.16
16	35.13	35.94	35.96	35.54	35.83	35.72	36.09	36.41	36.96	37.54	37.55	38.13
17	35.10	35.92	35.87	35.75	35.85	35.75	35.98	36.42	36.97	37.55	37.57	38.11
18	35.03	35.85	35.85	35.78	35.79	35.69	35.99	36.44	37.00	37.53	37.57	38.09
19	35.03	35.79	35.83	35.83	35.60	35.62	35.98	36.45	37.04	37.51	37.58	38.08
20	35.09	35.85	36.01	35.78	35.51	35.60	36.01	36.43	37.08	37.55	37.58	38.08
21	35.16	35.89	36.04	35.88	35.35	35.62	36.06	36.46	37.10	37.69	37.58	38.08
22	35.18	36.00	36.00	35.84	35.26	35.59	36.02	36.55	37.11	37.76	37.58	38.10
23	35.12	36.11	35.95	35.81	35.38	35.76	35.94	36.61	37.15	37.75	37.65	38.10
24	35.15	36.14	35.82	35.87	35.38	35.87	36.08	36.63	37.19	37.72	37.70	38.09
25	35.23	36.13	35.90	35.86	35.35	35.87	36.21	36.60	37.20	37.65	37.73	38.02
26	35.29	36.08	35.94	36.03	35.30	35.74	36.27	36.58	37.22	37.64	37.75	37.99
27	35.25	36.31	35.85	36.08	35.24	35.79	36.19	36.70	37.25	37.63	37.78	37.96
28	35.15	36.33	35.85	36.01	35.29	35.78	35.99	36.81	37.29	37.63	37.78	37.84
29	35.16	36.31	35.82	36.11	---	35.71	36.03	36.83	37.33	37.61	37.78	37.80
30	35.14	36.24	35.84	36.02	---	35.75	36.16	36.82	37.34	37.61	37.81	37.81
31	35.22	---	35.80	35.96	---	35.74	---	36.80	---	37.61	37.89	---
WTR YR 1997	MEAN 36.40		HIGH 34.93		LOW 38.22							



ONSLOW COUNTY--Continued

343641077290106. Local number, On-230; DENR Dixon Tower Research Station well Y25q6.

LOCATION.--Lat 34°36'41", long 77°29'01", Hydrologic Unit 03030001, 1.5 mi. north of Dixon at North Carolina Division of Forest Resources Fire Tower on U.S. Highway 17. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Surficial aquifer.

WELL CHARACTERISTICS.--Drilled observation well, depth 22.0 ft, diameter 4 in., cased to 18.4 ft, screened interval from 18.4 to 22.0 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 68 ft above sea level, (levels by DENR). Measuring point: Top of shelter floor, 2.10 ft above land-surface datum.

REMARKS.--Well is part of Marine Corps Base, Camp Lejeune, North Carolina, Water Resources Network project.

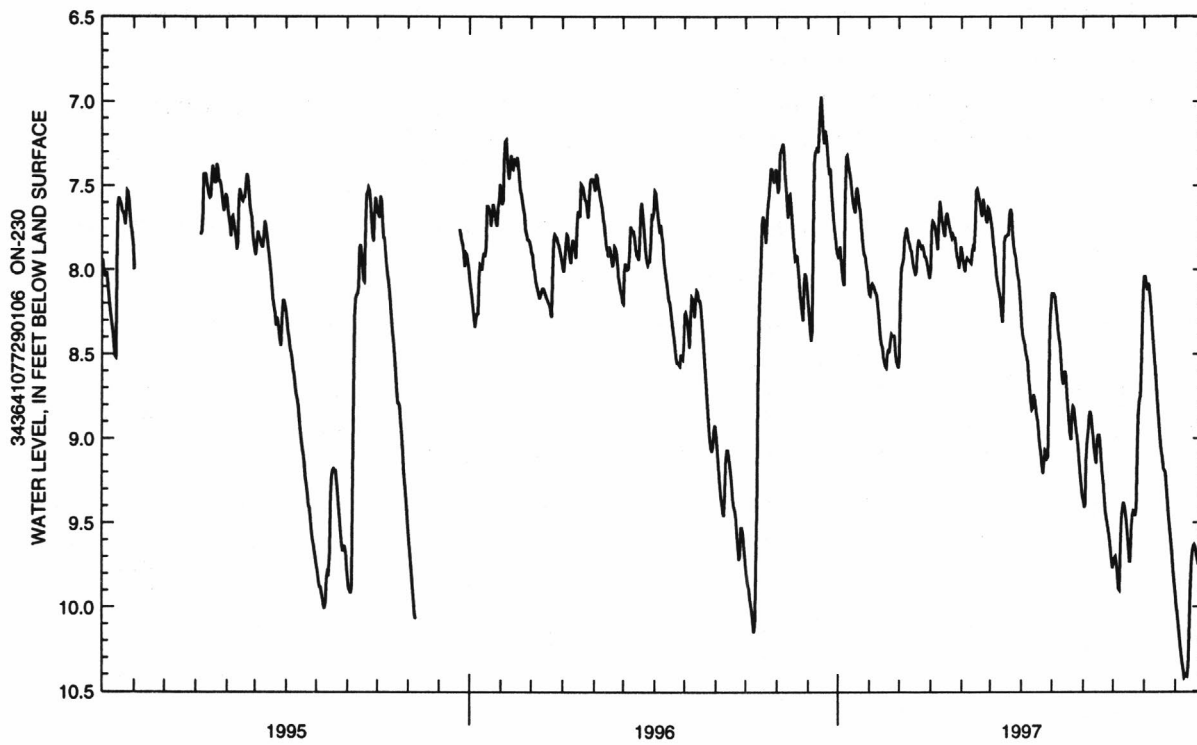
PERIOD OF RECORD.--October 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 6.37 ft below land-surface datum, Jan. 22, 1995; lowest water level recorded, 10.44 ft below land-surface datum, Sept. 10, 13, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.92	8.14	8.51	7.99	7.89	7.68	8.33	8.14	9.37	9.75	8.04	9.93
2	7.91	8.15	8.13	7.75	7.94	7.72	8.39	8.14	9.41	9.71	8.04	10.00
3	7.86	8.09	7.99	7.71	7.98	7.77	8.42	8.14	9.39	9.70	8.08	10.04
4	7.95	8.08	7.96	7.72	8.01	7.84	8.44	8.16	9.12	9.74	8.12	10.10
5	8.02	8.09	7.93	7.74	7.95	7.89	8.49	8.22	9.01	9.80	8.08	10.17
6	8.07	8.11	7.82	7.78	7.93	7.96	8.52	8.27	8.96	9.89	8.10	10.23
7	8.09	8.13	7.78	7.82	7.94	8.03	8.55	8.35	8.87	9.90	8.17	10.28
8	7.60	8.14	7.75	7.88	7.94	8.07	8.65	8.41	8.84	9.65	8.25	10.33
9	7.33	8.18	7.79	7.71	7.95	8.11	8.70	8.44	8.87	9.48	8.34	10.37
10	7.32	8.25	7.83	7.59	7.96	8.14	8.79	8.54	8.94	9.42	8.42	10.42
11	7.36	8.33	7.84	7.63	7.89	8.18	8.83	8.64	8.99	9.38	8.50	10.41
12	7.40	8.40	7.88	7.69	7.86	8.26	8.82	8.68	9.06	9.40	8.59	10.40
13	7.44	8.44	7.89	7.74	7.87	8.31	8.74	8.62	9.12	9.44	8.68	10.41
14	7.49	8.46	7.94	7.78	7.73	8.14	8.77	8.60	9.15	9.49	8.77	10.35
15	7.55	8.52	7.98	7.80	7.53	7.83	8.82	8.63	9.01	9.57	8.85	10.16
16	7.60	8.55	8.01	7.69	7.52	7.80	8.87	8.76	8.98	9.65	8.95	9.91
17	7.64	8.57	8.03	7.66	7.55	7.80	8.90	8.83	8.98	9.73	9.02	9.74
18	7.66	8.58	8.00	7.69	7.58	7.79	8.99	8.91	9.04	9.73	9.08	9.67
19	7.53	8.50	7.87	7.73	7.61	7.79	9.05	8.98	9.13	9.53	9.11	9.64
20	7.51	8.47	7.82	7.75	7.66	7.67	9.09	9.01	9.21	9.45	9.18	9.63
21	7.56	8.49	7.84	7.79	7.68	7.64	9.16	8.85	9.27	9.43	9.19	9.65
22	7.62	8.42	7.85	7.81	7.58	7.67	9.21	8.81	9.35	9.44	9.20	9.69
23	7.65	8.38	7.87	7.79	7.61	7.78	9.15	8.82	9.43	9.46	9.28	9.72
24	7.74	8.39	7.86	7.81	7.66	7.85	9.07	8.89	9.47	9.40	9.37	9.75
25	7.82	8.39	7.88	7.81	7.70	7.90	9.08	8.95	9.51	9.07	9.45	9.69
26	7.88	8.39	7.92	7.87	7.72	7.92	9.12	8.99	9.55	8.86	9.51	9.62
27	7.91	8.48	7.92	7.92	7.63	7.98	9.11	9.05	9.59	8.77	9.57	9.49
28	7.92	8.54	7.95	7.94	7.64	8.03	8.71	9.15	9.64	8.75	9.64	9.08
29	7.98	8.56	7.98	7.99	---	8.06	8.34	9.22	9.72	8.60	9.72	8.78
30	8.01	8.58	8.02	7.94	---	8.13	8.22	9.28	9.77	8.35	9.80	8.65
31	8.08	---	8.05	7.86	---	8.22	---	9.34	---	8.12	9.86	---
WTR YR 1997	MEAN 8.53		HIGH 7.32		LOW 10.42							



ONSLOW COUNTY--Continued

344139077211201. Local number, On-255; DENR Hadnot Point Research Station well X24s1.

LOCATION.--Lat 34°41'39", long 77°21'12", Hydrologic Unit 03030001, on Camp Lejeune, from the corner of Brewster Boulevard and Stone Street Extension proceed south on Stone Street Extension 1.6 mi to horse stables, well is in pasture 0.4 mi from tack shop. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Castle Hayne aquifer.

WELL CHARACTERISTICS.--Drilled observation well, depth 90.0 ft, diameter 4 in., cased to 80.0 ft, screened interval from 80.0 to 90.0 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 18.63 ft above sea level, (levels by DENR). Measuring point: Top of floor of shelter 1.32 ft above land-surface datum.

REMARKS.--Well is part of Marine Corps Base, Camp Lejeune, North Carolina, Water Resources Network project.

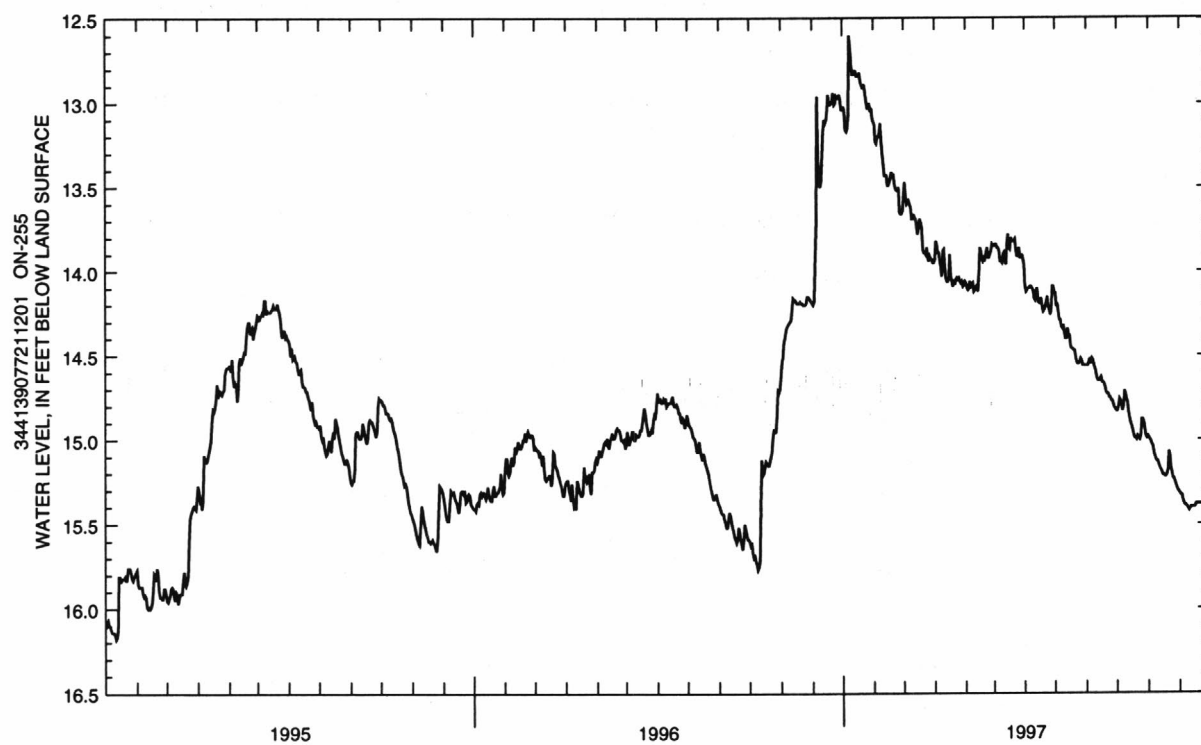
PERIOD OF RECORD.--October 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 12.36 ft below land-surface datum, Oct. 8, 1996; lowest water level recorded, 16.19 ft below land-surface datum, Oct. 11, 1994.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.04	13.11	13.54	13.93	14.07	13.85	14.09	14.13	14.56	14.83	14.99	15.32
2	13.02	13.13	13.47	13.82	14.10	13.84	14.12	14.21	14.56	14.81	15.00	15.33
3	13.05	13.23	13.55	13.84	14.11	13.84	14.11	14.19	14.54	14.76	15.01	15.33
4	13.16	13.24	13.60	13.89	14.10	13.86	14.10	14.25	14.52	14.77	15.03	15.36
5	13.17	13.20	13.59	13.89	14.06	13.86	14.10	14.29	14.55	14.79	15.04	15.38
6	13.15	13.20	13.58	13.94	14.09	13.88	14.09	14.29	14.52	14.83	15.08	15.39
7	13.08	13.18	13.60	13.97	14.08	13.94	14.09	14.33	14.53	14.80	15.10	15.39
8	12.60	13.12	13.62	14.03	14.07	13.94	14.10	14.34	14.56	14.71	15.12	15.40
9	12.69	13.23	13.69	13.88	14.12	13.95	14.11	14.32	14.58	14.73	15.13	15.41
10	12.77	13.31	13.69	13.87	14.11	13.90	14.16	14.37	14.61	14.76	15.13	15.42
11	12.83	13.37	13.66	13.97	14.10	13.89	14.17	14.40	14.64	14.78	15.15	15.41
12	12.83	13.43	13.68	14.04	14.08	13.94	14.12	14.40	14.65	14.84	15.17	15.40
13	12.81	13.43	13.69	14.06	14.12	13.96	14.10	14.34	14.65	14.87	15.18	15.40
14	12.81	13.43	13.74	14.06	14.00	13.83	14.18	14.38	14.64	14.90	15.19	15.40
15	12.84	13.49	13.78	14.04	13.86	13.78	14.19	14.38	14.63	14.92	15.21	15.40
16	12.84	13.49	13.73	13.90	13.88	13.86	14.19	14.45	14.66	14.94	15.21	15.40
17	12.84	13.47	13.69	14.03	13.92	13.87	14.16	14.46	14.66	14.97	15.22	15.38
18	12.82	13.44	13.71	14.06	13.94	13.80	14.22	14.46	14.67	14.99	15.22	15.38
19	12.87	13.41	13.74	14.09	13.92	13.82	14.24	14.47	14.69	14.99	15.21	15.38
20	12.89	13.44	13.87	14.05	13.93	13.82	14.23	14.47	14.72	15.00	15.18	15.38
21	12.91	13.42	13.89	14.08	13.90	13.82	14.21	14.51	14.73	14.98	15.07	15.38
22	12.91	13.48	13.89	14.05	13.86	13.81	14.18	14.54	14.73	14.99	15.10	15.38
23	12.89	13.51	13.90	14.04	13.92	13.87	14.15	14.55	14.75	15.00	15.17	15.38
24	12.94	13.52	13.86	14.05	13.92	13.91	14.21	14.55	14.75	14.98	15.20	15.38
25	12.99	13.52	13.92	14.04	13.90	13.91	14.23	14.54	14.77	14.88	15.23	15.38
26	13.03	13.50	13.94	14.06	13.88	13.86	14.26	14.52	14.77	14.88	15.23	15.38
27	13.03	13.65	13.91	14.07	13.84	13.92	14.22	14.53	14.79	14.90	15.25	15.38
28	13.00	13.66	13.93	14.06	13.85	13.92	14.09	14.56	14.81	14.94	15.27	15.36
29	13.05	13.66	13.93	14.09	---	13.90	14.09	14.56	14.82	14.98	15.29	15.35
30	13.03	13.64	13.95	14.08	---	13.93	14.13	14.56	14.83	14.99	15.30	15.35
31	13.09	---	13.95	14.06	---	13.96	---	14.56	---	14.98	15.31	---
WTR YR 1997	MEAN 14.22		HIGH 12.60		LOW 15.42							



ONSLOW COUNTY--Continued

344139077211202. Local number, On-256; DENR Hadnot Point Research Station well X24s2.

LOCATION.--Lat 34°41'39", long 77°21'12", Hydrologic Unit 03030001, on Camp Lejeune, from the corner of Brewster Boulevard and Stone Street Extension proceed south on Stone Street Extension 1.6 mi to horse stables, well is in pasture 0.4 mi from tack shop. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Black Creek aquifer.

WELL CHARACTERISTICS.--Drilled observation well, depth 918.0 ft, well cased 2.5 in. to 918.0 ft in the Black Creek aquifer, 4 in. isolation casing to 208.0 ft in the Castle Hayne aquifer, and 8 in. isolation casing 115.0 ft in the Surficial aquifer, screened interval from 908.0 to 918.0 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 19.24 ft above sea level, (levels by DENR) . Measuring point: Top of floor of shelter 4.69 ft above land-surface datum.

REMARKS.--Well is part of Marine Corps Base, Camp Lejeune, North Carolina, Water Resources Network project.

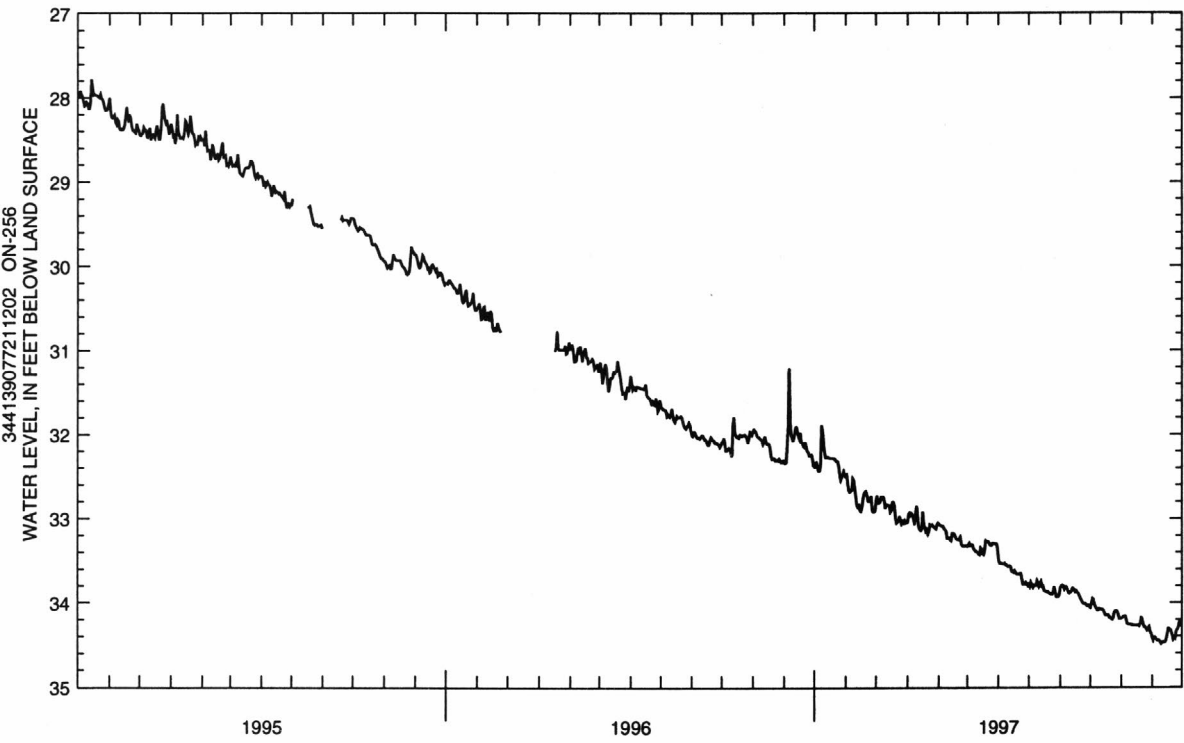
PERIOD OF RECORD.--October 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 30.15 ft below land-surface datum, Oct. 4, 5, 1995; lowest water level recorded, 34.50 ft below land-surface datum, Sept. 9, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32.38	32.50	32.77	33.04	33.06	33.33	33.49	33.78	33.82	34.06	34.19	34.42
2	32.34	32.48	32.72	32.94	33.08	33.31	33.53	33.81	33.80	34.02	34.18	34.45
3	32.33	32.58	32.81	32.93	33.08	33.29	33.53	33.76	33.79	33.95	34.17	34.41
4	32.39	32.66	32.81	32.96	33.09	33.32	33.53	33.80	33.80	33.96	34.16	34.41
5	32.43	32.68	32.80	32.94	33.09	33.31	33.54	33.82	33.84	34.02	34.16	34.44
6	32.43	32.67	32.74	32.96	33.12	33.31	33.54	33.79	33.81	34.05	34.21	34.45
7	32.34	32.66	32.74	33.01	33.13	33.36	33.53	33.80	33.81	34.07	34.25	34.45
8	31.89	32.52	32.74	33.07	33.15	33.37	33.55	33.80	33.84	34.09	34.26	34.45
9	31.99	32.54	32.78	32.91	33.23	33.39	33.55	33.74	33.88	34.09	34.26	34.47
10	32.12	32.66	32.88	32.85	33.23	33.39	33.57	33.77	33.89	34.07	34.26	34.49
11	32.21	32.74	32.83	32.98	33.23	33.40	33.57	33.81	33.88	34.08	34.26	34.48
12	32.27	32.84	32.84	33.10	33.25	33.42	33.56	33.78	33.87	34.08	34.27	34.47
13	32.27	32.86	32.84	33.13	33.26	33.43	33.57	33.75	33.83	34.08	34.27	34.47
14	32.27	32.84	32.84	33.14	33.17	33.35	33.63	33.81	33.83	34.09	34.27	34.47
15	32.27	32.90	32.92	33.12	33.17	33.37	33.63	33.80	33.85	34.12	34.27	34.44
16	32.28	32.91	32.90	32.92	33.18	33.42	33.64	33.86	33.87	34.15	34.27	34.39
17	32.28	32.87	32.80	33.07	33.21	33.43	33.62	33.86	33.86	34.15	34.27	34.31
18	32.28	32.77	32.80	33.10	33.24	33.37	33.65	33.87	33.88	34.15	34.27	34.31
19	32.28	32.70	32.83	33.15	33.24	33.26	33.66	33.87	33.89	34.15	34.28	34.32
20	32.28	32.68	32.99	33.13	33.25	33.27	33.66	33.87	33.92	34.18	34.25	34.34
21	32.29	32.67	33.05	33.18	33.25	33.27	33.66	33.89	33.95	34.18	34.17	34.39
22	32.31	32.72	33.04	33.15	33.22	33.28	33.65	33.89	33.97	34.19	34.20	34.44
23	32.32	32.79	33.03	33.07	33.30	33.31	33.65	33.90	34.00	34.20	34.25	34.42
24	32.32	32.79	32.97	33.08	33.32	33.32	33.72	33.90	34.01	34.17	34.29	34.43
25	32.39	32.79	33.02	33.07	33.33	33.32	33.78	33.87	34.01	34.11	34.29	34.34
26	32.49	32.73	33.06	33.09	33.33	33.29	33.78	33.81	34.01	34.10	34.31	34.32
27	32.54	32.89	33.03	33.10	33.32	33.29	33.78	33.87	34.03	34.10	34.33	34.30
28	32.51	32.92	33.05	33.11	33.32	33.30	33.76	33.93	34.04	34.11	34.31	34.23
29	32.48	32.92	33.02	33.12	---	33.30	33.78	33.93	34.03	34.15	34.29	34.22
30	32.44	32.90	33.05	33.07	---	33.30	33.80	33.93	34.05	34.19	34.35	34.28
31	32.48	---	33.04	33.05	---	33.36	---	33.91	---	34.19	34.36	---
WTR YR 1997	MEAN 33.47		HIGH 31.89		LOW 34.49							



ONslow COUNTY--Continued

344139077211204. Local number, On-264; DENR Hadnot Point Research Station well X24s4.

LOCATION.--Lat 34°41'39", long 77°21'12", Hydrologic Unit 03030001, on Camp Lejeune, from the corner of Brewster Boulevard and Stone Street Extension proceed south on Stone Street Extension 1.6 mi to horse stables, well is in pasture 0.4 mi from tack shop. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Pee Dee aquifer.

WELL CHARACTERISTICS.--Drilled observation well, depth 527.0 ft, well cased 2.5 in. to 517.0 ft in the Pee Dee aquifer, 4 in. isolation casing to 208.0 ft in the Castle Hayne aquifer, and 8 in. isolation casing 78.0 ft in the Surficial aquifer, screened interval from 517.0 to 527.0 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 23.19 ft above sea level, (levels by DENR). Measuring point: Top of shelter floor, 3.92 ft above land-surface datum.

REMARKS.--Well is part of Marine Corps Base, Camp Lejeune, North Carolina, Water Resources Network project.

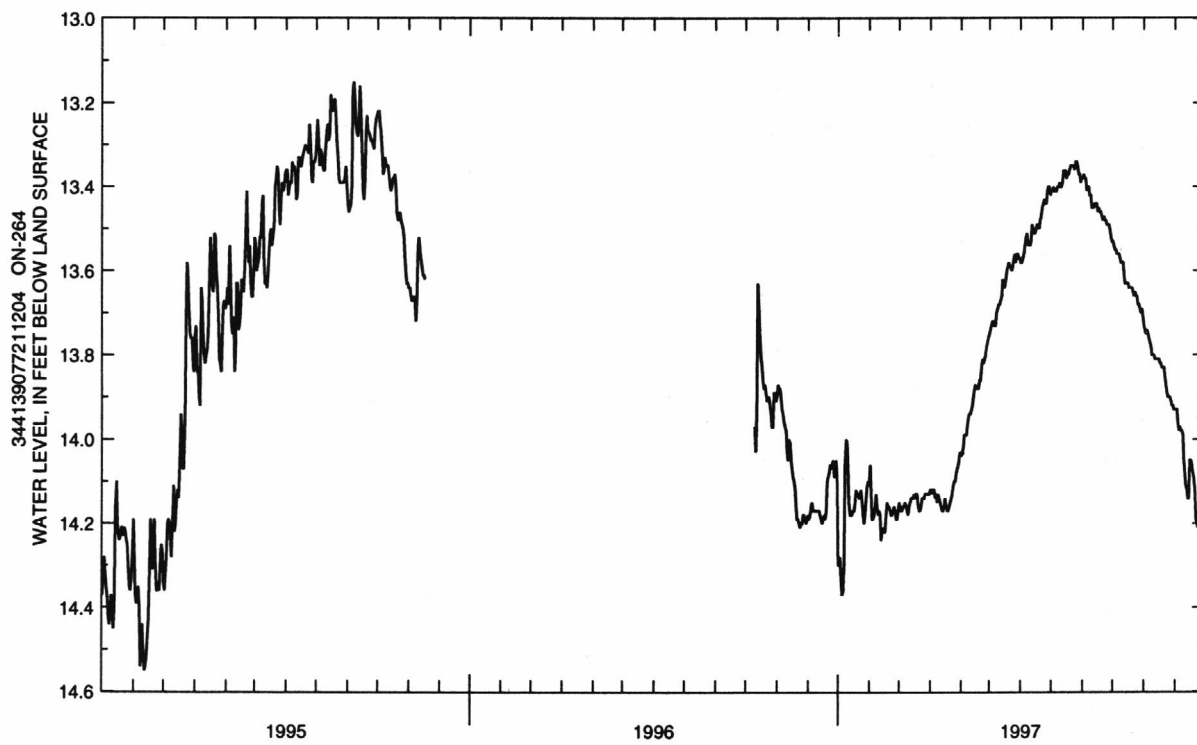
PERIOD OF RECORD.--October 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 13.08 ft below land-surface datum, Jun. 6, 1995; lowest water level recorded, 14.57 ft below land-surface datum, Nov. 11, 1994.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.30	14.11	14.15	14.12	14.04	13.75	13.58	13.41	13.38	13.53	13.73	13.93
2	14.29	14.06	14.16	14.12	14.03	13.74	13.58	13.41	13.37	13.54	13.74	13.93
3	14.28	14.12	14.17	14.13	14.02	13.73	13.57	13.40	13.38	13.55	13.75	13.93
4	14.33	14.19	14.17	14.12	13.99	13.72	13.56	13.41	13.38	13.55	13.74	13.96
5	14.37	14.19	14.16	14.12	13.99	13.72	13.54	13.41	13.41	13.56	13.75	13.98
6	14.36	14.18	14.16	14.14	13.99	13.73	13.52	13.41	13.40	13.56	13.76	13.97
7	14.30	14.16	14.15	14.13	13.97	13.73	13.51	13.40	13.40	13.56	13.77	13.98
8	14.06	14.13	14.16	14.15	13.95	13.70	13.54	13.40	13.42	13.57	13.78	13.98
9	14.00	14.16	14.17	14.13	13.94	13.69	13.53	13.39	13.42	13.58	13.80	13.99
10	14.01	14.18	14.18	14.14	13.94	13.68	13.54	13.40	13.45	13.58	13.80	14.05
11	14.07	14.17	14.16	14.15	13.93	13.68	13.53	13.40	13.45	13.58	13.80	14.08
12	14.15	14.18	14.15	14.16	13.92	13.67	13.49	13.39	13.45	13.61	13.81	14.11
13	14.18	14.24	14.14	14.17	13.90	13.66	13.50	13.36	13.44	13.63	13.81	14.12
14	14.18	14.21	14.14	14.17	13.88	13.62	13.51	13.37	13.44	13.63	13.81	14.14
15	14.18	14.22	14.14	14.16	13.87	13.63	13.51	13.36	13.44	13.63	13.81	14.14
16	14.17	14.22	14.13	14.14	13.88	13.64	13.50	13.38	13.46	13.63	13.81	14.05
17	14.17	14.22	14.14	14.16	13.88	13.62	13.49	13.37	13.45	13.64	13.82	14.05
18	14.15	14.18	14.13	14.17	13.88	13.60	13.49	13.37	13.46	13.64	13.82	14.06
19	14.12	14.15	14.13	14.17	13.86	13.59	13.50	13.36	13.46	13.64	13.83	14.08
20	14.13	14.16	14.16	14.16	13.86	13.58	13.48	13.35	13.47	13.64	13.83	14.09
21	14.13	14.16	14.17	14.15	13.83	13.59	13.47	13.35	13.48	13.65	13.83	14.12
22	14.14	14.17	14.17	14.14	13.81	13.59	13.45	13.35	13.47	13.66	13.85	14.19
23	14.13	14.18	14.16	14.13	13.82	13.60	13.44	13.35	13.48	13.65	13.87	14.20
24	14.12	14.18	14.14	14.11	13.81	13.59	13.43	13.36	13.48	13.66	13.89	14.21
25	14.15	14.17	14.14	14.10	13.80	13.57	13.44	13.34	13.49	13.66	13.90	14.17
26	14.18	14.16	14.14	14.10	13.78	13.56	13.44	13.34	13.49	13.68	13.90	14.12
27	14.20	14.17	14.13	14.08	13.77	13.58	13.41	13.35	13.49	13.68	13.90	14.13
28	14.18	14.19	14.13	14.07	13.76	13.56	13.40	13.37	13.50	13.69	13.91	14.07
29	14.14	14.19	14.13	14.06	---	13.56	13.40	13.37	13.52	13.70	13.92	14.05
30	14.11	14.17	14.13	14.04	---	13.57	13.42	13.39	13.53	13.69	13.92	14.10
31	14.10	---	14.13	14.03	---	13.57	---	13.38	---	13.71	13.93	---
WTR YR 1997	MEAN 13.83		HIGH 13.34		LOW 14.37							



ONSLOW COUNTY--Continued

344139077211205. Local number, On-265; DENR Hadnot Point Research Station well X24s5.

LOCATION.--Lat 34°41'39", long 77°21'12", Hydrologic Unit 03030001, on Camp Lejeune, from the corner of Brewster Boulevard and Stone Street Extension proceed south on Stone Street Extension 1.6 mi to horse stables, well is in pasture 0.4 mi from tack shop. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Castle Hayne aquifer.

WELL CHARACTERISTICS.--Drilled observation well, depth 295.0 ft, well cased 2.5 in. to 285.0 ft in the Castle Hayne aquifer, 4 in. isolation casing to 117.0 ft in the Surficial aquifer, screened interval from 285.0 to 295.0 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 23.26 ft above sea level, (levels by DENR). Measuring point: Top of shelter floor, 3.47 ft above land-surface datum.

REMARKS.--Well is part of Marine Corps Base, Camp Lejeune, North Carolina, Water Resources Network project.

PERIOD OF RECORD.--October 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 16.08 ft below land-surface datum, Nov. 8, 1996; lowest water level recorded, 20.26 ft below land-surface datum, Oct. 7, 1994.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.02	16.24	16.53	16.79	16.97	16.94	16.95	16.97	17.18	17.54	18.35	19.19
2	16.95	16.20	16.50	16.69	16.99	16.89	17.04	17.05	17.17	17.53	18.36	19.21
3	16.92	16.34	16.58	16.67	17.02	16.88	17.00	17.01	17.14	17.53	18.38	19.17
4	17.01	16.36	16.61	16.70	17.04	16.91	16.98	17.06	17.13	17.53	18.39	19.20
5	17.00	16.31	16.58	16.67	16.97	16.89	16.97	17.16	17.20	17.54	18.42	19.27
6	16.93	16.29	16.52	16.73	17.01	16.88	16.94	17.16	17.18	17.58	18.51	19.31
7	16.80	16.26	16.50	16.77	17.01	16.98	16.87	17.20	17.17	17.59	18.58	19.31
8	16.41	16.14	16.51	16.87	16.96	16.99	16.95	17.21	17.20	17.55	18.67	19.30
9	16.49	16.22	16.59	16.69	17.03	17.00	16.95	17.13	17.25	17.55	18.72	19.24
10	16.57	16.30	16.66	16.67	17.03	16.90	17.04	17.18	17.30	17.56	18.75	19.18
11	16.66	16.37	16.60	16.79	17.02	16.87	17.06	17.26	17.32	17.62	18.79	19.18
12	16.69	16.47	16.62	16.92	17.02	16.94	16.92	17.23	17.31	17.68	18.82	19.21
13	16.65	16.49	16.60	16.96	17.08	16.99	16.84	17.14	17.29	17.71	18.84	19.22
14	16.59	16.45	16.66	16.98	16.95	16.81	16.97	17.18	17.30	17.73	18.84	19.22
15	16.60	16.52	16.71	16.95	16.86	16.81	17.03	17.15	17.32	17.78	18.87	19.16
16	16.56	16.53	16.67	16.74	16.97	16.93	17.04	17.24	17.37	17.83	18.92	19.06
17	16.51	16.50	16.60	16.92	17.04	16.98	16.94	17.25	17.38	17.87	18.95	19.07
18	16.42	16.42	16.60	16.96	17.08	16.94	16.96	17.27	17.40	17.92	18.95	19.08
19	16.40	16.32	16.60	17.01	17.02	16.87	16.98	17.26	17.44	17.95	18.95	19.10
20	16.42	16.35	16.80	16.96	17.02	16.82	16.98	17.23	17.48	18.01	18.93	19.07
21	16.43	16.34	16.87	17.03	16.95	16.82	16.96	17.27	17.50	18.03	18.85	19.12
22	16.40	16.43	16.85	17.02	16.91	16.76	16.94	17.32	17.50	18.07	18.89	19.16
23	16.33	16.51	16.83	16.99	17.02	16.87	16.86	17.33	17.52	18.11	18.97	19.13
24	16.34	16.53	16.74	16.99	17.04	16.96	16.94	17.31	17.53	18.10	19.03	19.12
25	16.37	16.52	16.80	16.98	17.02	16.98	17.04	17.26	17.53	18.09	19.04	19.03
26	16.39	16.48	16.85	17.07	16.98	16.88	17.11	17.19	17.52	18.11	19.07	19.05
27	16.36	16.68	16.79	17.10	16.90	16.91	17.07	17.22	17.54	18.13	19.07	19.03
28	16.28	16.73	16.81	17.02	16.92	16.91	16.86	17.31	17.56	18.17	19.05	18.93
29	16.28	16.72	16.79	17.09	---	16.86	16.88	17.29	17.57	18.22	19.07	18.95
30	16.21	16.67	16.81	17.03	---	16.88	16.99	17.27	17.56	18.27	19.13	19.02
31	16.26	---	16.79	16.97	---	16.84	---	17.24	---	18.31	19.16	---
WTR YR 1997	MEAN 17.32		HIGH 16.14		LOW 19.31							



ONSLOW COUNTY--Continued

344139077211206. Local number, On-266; DENR Hadnot Point Research Station well X24s6.

LOCATION.--Lat 34°41'39", long 77°21'12", Hydrologic Unit 03030001, on Camp Lejeune, from the corner of Brewster Boulevard and Stone Street Extension proceed south on Stone Street Extension 1.6 mi to horse stables, well is in pasture 0.4 mi from tack shop. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Castle Hayne aquifer.

WELL CHARACTERISTICS.--Drilled observation well, depth 130.0 ft, diameter 6 in., cased to 120.0 ft, screened interval from 120.0 to 130.0 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 23.47 ft above sea level, (levels by DENR). Measuring point: Top of shelter floor, 1.73 ft above land-surface datum.

REMARKS.--Well is part of Marine Corps Base, Camp Lejeune, North Carolina, Water Resources Network project.

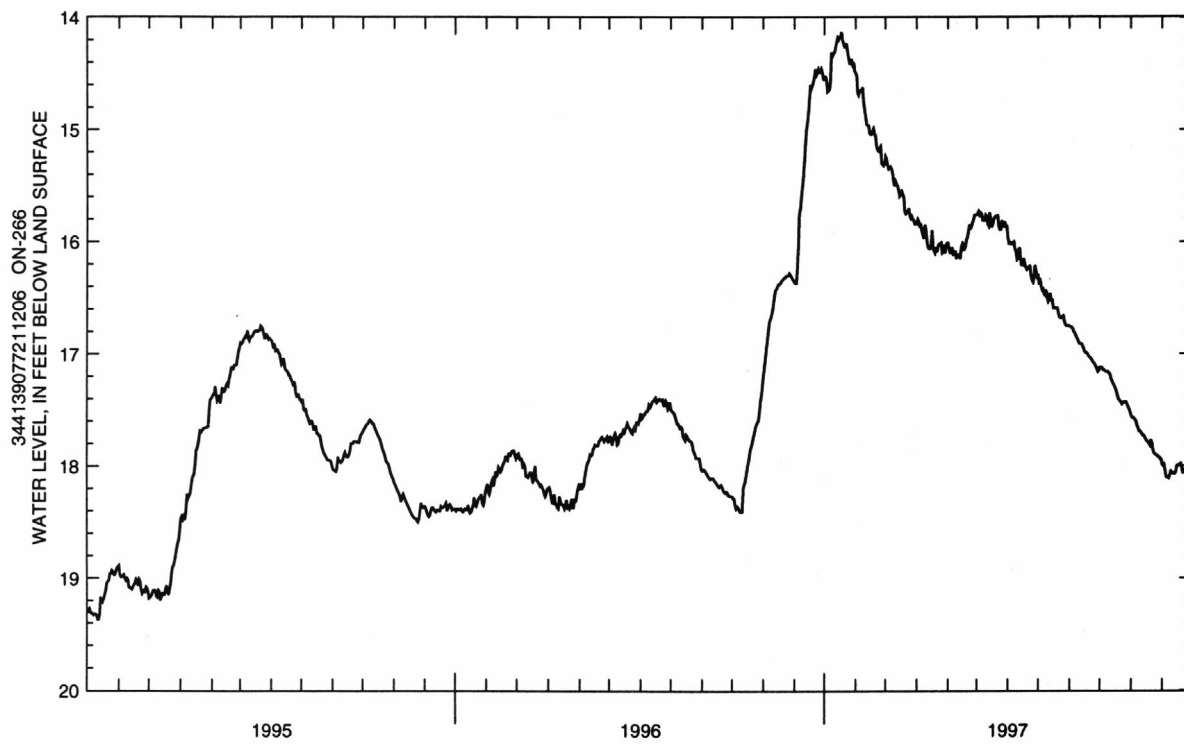
PERIOD OF RECORD.--October 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 14.09 ft below land-surface datum, Oct. 18, 1996; lowest water level recorded, 19.38 ft below land-surface datum, Oct. 11, 1994.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.55	14.49	15.24	15.84	16.01	15.76	15.96	16.29	16.75	17.12	17.55	17.99
2	14.52	14.52	15.26	15.80	16.07	15.75	16.02	16.38	16.76	17.12	17.57	18.00
3	14.56	14.67	15.31	15.82	16.10	15.73	16.02	16.33	16.76	17.12	17.57	17.99
4	14.66	14.69	15.35	15.86	16.10	15.76	16.01	16.40	16.77	17.14	17.58	18.04
5	14.65	14.65	15.34	15.85	16.05	15.74	16.02	16.43	16.80	17.14	17.59	18.10
6	14.64	14.65	15.33	15.91	16.11	15.75	16.01	16.42	16.81	17.15	17.60	18.10
7	14.57	14.65	15.35	15.94	16.10	15.81	16.00	16.47	16.83	17.16	17.64	18.10
8	14.31	14.62	15.39	15.97	16.08	15.81	16.07	16.48	16.85	17.16	17.66	18.11
9	14.34	14.75	15.47	15.85	16.15	15.81	16.08	16.43	16.87	17.16	17.69	18.08
10	14.32	14.82	15.50	15.90	16.12	15.76	16.16	16.50	16.89	17.17	17.69	18.05
11	14.31	14.88	15.46	16.00	16.13	15.77	16.15	16.53	16.91	17.18	17.70	18.06
12	14.27	14.95	15.49	16.05	16.12	15.84	16.06	16.50	16.91	17.22	17.72	18.07
13	14.22	14.96	15.50	16.06	16.15	15.86	16.06	16.46	16.91	17.24	17.73	18.07
14	14.18	14.96	15.54	16.06	16.04	15.74	16.20	16.53	16.93	17.26	17.73	18.07
15	14.20	15.03	15.59	16.03	16.02	15.80	16.21	16.51	16.95	17.28	17.75	18.05
16	14.18	15.04	15.57	15.90	16.07	15.87	16.21	16.59	16.98	17.30	17.77	18.00
17	14.17	15.04	15.55	16.07	16.07	15.84	16.15	16.59	16.99	17.32	17.78	18.00
18	14.13	15.01	15.58	16.08	16.04	15.80	16.21	16.59	16.99	17.35	17.79	17.99
19	14.20	14.99	15.60	16.10	15.98	15.78	16.23	16.59	17.00	17.39	17.80	17.99
20	14.23	15.04	15.74	16.05	15.96	15.77	16.25	16.59	17.02	17.41	17.82	17.98
21	14.26	15.05	15.75	16.09	15.91	15.78	16.24	16.63	17.03	17.42	17.77	18.03
22	14.26	15.15	15.74	16.04	15.85	15.77	16.23	16.67	17.04	17.43	17.80	18.07
23	14.23	15.18	15.73	16.02	15.89	15.86	16.21	16.68	17.05	17.45	17.86	18.04
24	14.30	15.19	15.70	16.02	15.86	15.89	16.30	16.68	17.07	17.44	17.89	18.05
25	14.36	15.17	15.77	16.01	15.83	15.89	16.34	16.67	17.08	17.43	17.90	18.02
26	14.41	15.15	15.79	16.10	15.80	15.81	16.36	16.66	17.09	17.43	17.90	18.04
27	14.41	15.30	15.77	16.09	15.76	15.85	16.32	16.71	17.11	17.43	17.91	18.01
28	14.37	15.31	15.80	16.03	15.76	15.86	16.21	16.74	17.13	17.45	17.92	17.96
29	14.42	15.32	15.81	16.10	---	15.82	16.26	16.75	17.16	17.47	17.92	17.98
30	14.40	15.30	15.84	16.03	---	15.86	16.31	16.75	17.15	17.49	17.94	18.02
31	14.48	---	15.83	16.01	---	15.86	---	16.75	---	17.52	17.94	---
WTR YR 1997	MEAN 16.29		HIGH 14.13		LOW 18.11							



ONslow COUNTY--Continued

344139077211207. Local number, On-267; DENR Hadnot Point Research Station well X24s7.

LOCATION.--Lat 34°41'39", long 77°21'12", Hydrologic Unit 03030001, on Camp Lejeune, from the corner of Brewster Boulevard and Stone Street Extension proceed south on Stone Street Extension 1.6 mi to horse stables, well is in pasture 0.4 mi from tack shop. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Surficial aquifer.

WELL CHARACTERISTICS.--Drilled observation well, depth 40.0 ft, diameter 4 in., cased to 30.0 ft, screened interval from 30.0 to 40.0 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 24.06 ft above sea level, (levels by DENR). Measuring point: Top of shelter floor, 0.93 ft above land-surface datum.

REMARKS.--Well is part of Marine Corps Base, Camp Lejeune, North Carolina, Water Resources Network project.

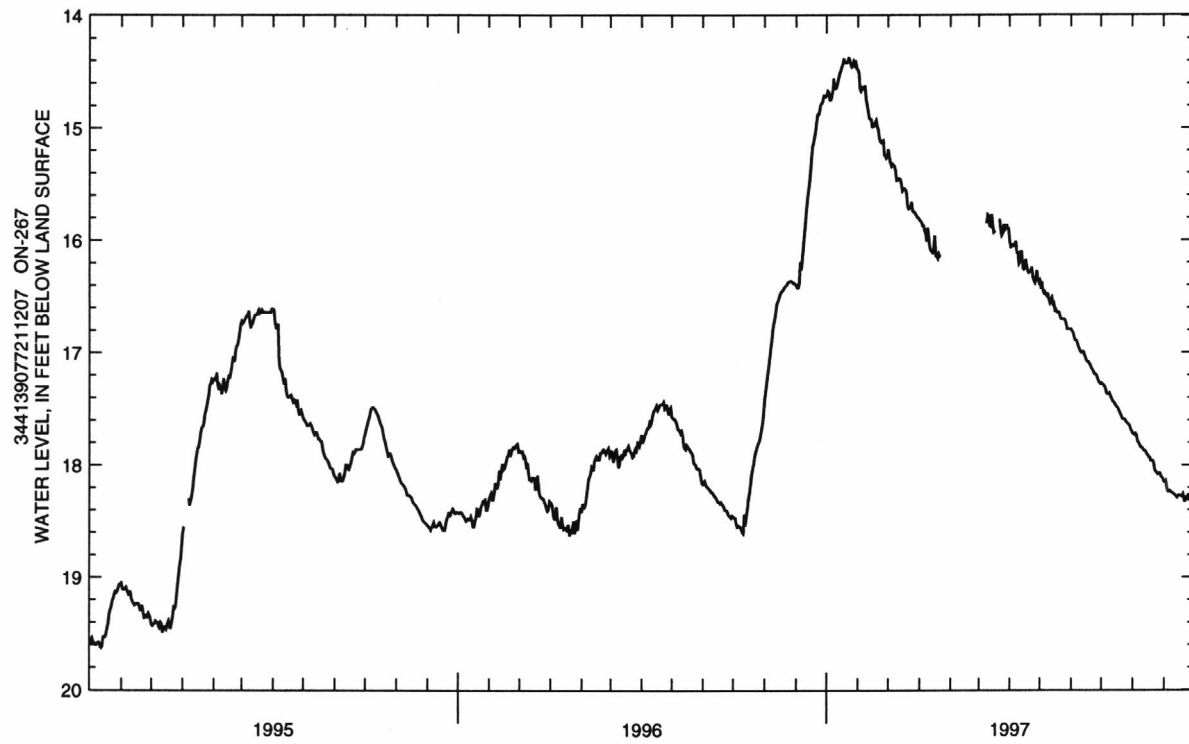
PERIOD OF RECORD.--October 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 14.35 ft below land-surface datum, Oct. 18, 1996; lowest water level recorded, 19.63 ft below land-surface datum, Oct. 11, 1994.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.71	14.48	15.19	15.82	---	---	16.01	16.36	16.79	17.27	17.72	18.15
2	14.67	14.51	15.26	15.83	---	---	16.07	16.43	16.81	17.28	17.72	18.15
3	14.68	14.65	15.31	15.84	---	---	16.04	16.37	16.82	17.29	17.73	18.14
4	14.75	14.67	15.34	15.87	---	---	16.04	16.45	16.86	17.30	17.72	18.21
5	14.75	14.64	15.32	15.87	---	---	16.05	16.47	16.89	17.32	17.74	18.24
6	14.72	14.65	15.33	15.92	---	---	16.03	16.46	16.89	17.36	17.79	18.24
7	14.67	14.64	15.34	15.94	---	---	16.01	16.49	16.91	17.37	17.80	18.23
8	14.56	14.62	15.38	16.01	---	15.84	16.11	16.50	16.94	17.37	17.82	18.24
9	14.65	14.74	15.47	15.89	---	15.84	16.11	16.47	16.97	17.36	17.84	18.25
10	14.65	14.80	15.47	15.97	---	15.77	16.21	16.53	16.99	17.39	17.84	18.25
11	14.64	14.85	15.45	16.06	---	15.78	16.19	16.56	17.00	17.41	17.85	18.26
12	14.60	14.91	15.45	16.09	---	15.87	16.10	16.53	16.99	17.43	17.87	18.27
13	14.55	14.92	15.46	16.10	---	15.88	16.10	16.51	16.99	17.44	17.87	18.28
14	14.51	14.92	15.51	16.11	---	15.77	16.25	16.57	17.02	17.45	17.88	18.29
15	14.49	14.99	15.56	16.07	---	15.86	16.26	16.56	17.04	17.47	17.90	18.27
16	14.46	14.99	15.54	15.96	---	15.93	16.25	16.64	17.07	17.48	17.91	18.27
17	14.43	14.98	15.54	16.14	---	15.92	16.17	16.62	17.08	17.49	17.93	18.27
18	14.38	14.95	15.55	16.14	---	---	16.24	16.64	17.08	17.51	17.93	18.28
19	14.42	14.93	15.58	16.16	---	---	16.28	16.64	17.10	17.53	17.96	18.28
20	14.42	14.99	15.70	16.12	---	---	16.29	16.64	17.11	17.55	17.96	18.26
21	14.42	15.01	15.72	16.15	---	15.82	16.28	16.68	17.14	17.57	17.96	18.32
22	14.41	15.09	15.71	---	---	15.82	16.27	16.70	17.15	17.59	17.99	18.32
23	14.37	15.12	15.71	---	---	15.91	16.24	16.70	17.17	17.59	18.05	18.29
24	14.40	15.13	15.66	---	---	15.96	16.33	16.70	17.19	17.59	18.06	18.30
25	14.44	15.12	15.74	---	---	15.94	16.36	16.70	17.19	17.61	18.07	18.26
26	14.46	15.11	15.75	---	---	15.86	16.38	16.71	17.20	17.62	18.08	18.32
27	14.45	15.24	15.75	---	---	15.91	16.33	16.74	17.23	17.63	18.07	18.28
28	14.41	15.25	15.77	---	---	15.90	16.27	16.79	17.25	17.64	18.07	18.24
29	14.44	15.27	15.78	---	---	15.86	16.35	16.79	17.27	17.65	18.10	18.29
30	14.42	15.25	15.80	---	---	15.90	16.38	16.79	17.28	17.68	18.11	18.32
31	14.47	---	15.80	---	---	15.90	---	16.79	---	17.70	18.12	---
WTR YR 1997	MEAN 16.42		HIGH 14.37		LOW 18.32							



ONSLOW COUNTY--Continued

344304077232901. Local number, On-290; Paradise Point Well

LOCATION.--Lat 34°43'04", long 77°23'29", Hydrologic Unit 03030001, from Brewster Boulevard entrance of Camp Lejeune golf course, go north to driving range, west on gravel road north of pond to split in road, right to tree line, 500 ft north. Owner: U.S. Geological Survey.

AQUIFER.--Castle Hayne aquifer.

WELL CHARACTERISTICS.--Drilled observation well, depth 232.0 ft, diameter 4 in., cased to 222.0 ft, screened interval from 222.0 to 232.0 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of shelter floor, 2.47 ft above land-surface datum.

REMARKS.--Well is part of Marine Corps Base, Camp Lejeune, North Carolina, Water Resources Network project.

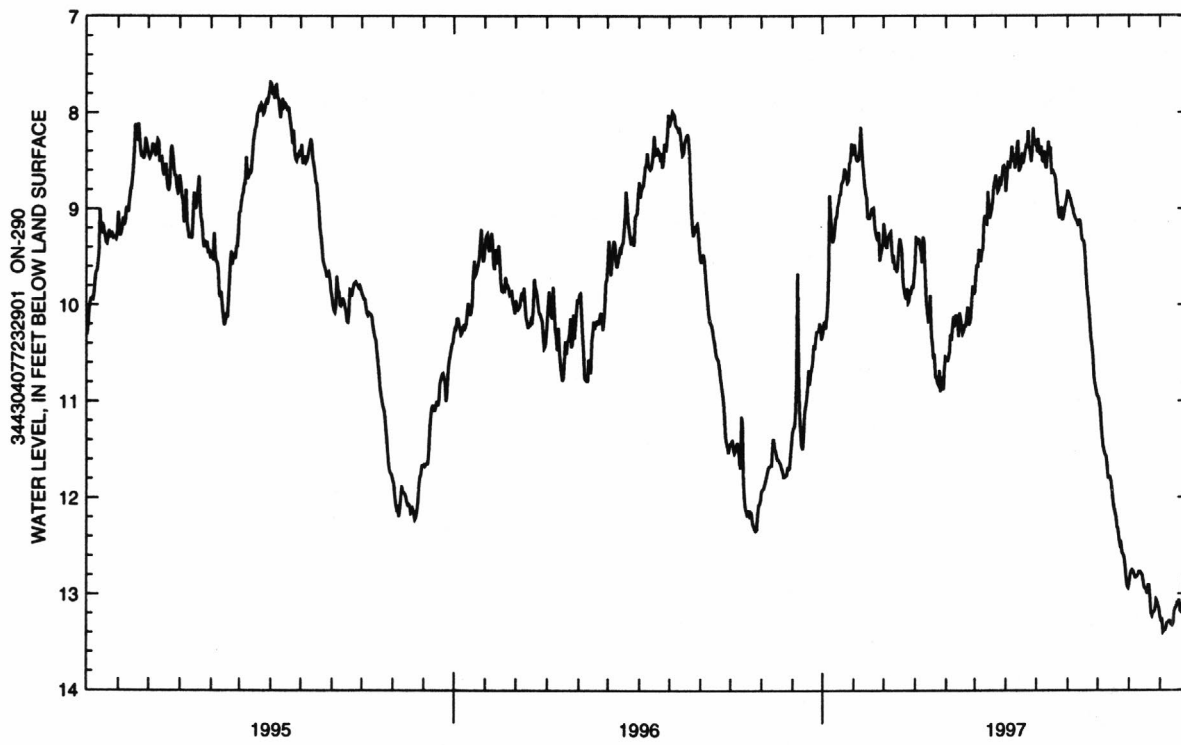
PERIOD OF RECORD.--October 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 7.58 ft below land-surface datum, Apr. 2, 1995; lowest water level recorded, 13.50 ft below land-surface datum, Sept. 4, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.30	8.37	9.15	9.56	10.55	9.86	8.82	8.28	8.81	10.95	12.89	13.25
2	10.20	8.33	9.24	9.30	10.59	9.69	8.66	8.41	8.84	10.98	12.81	13.28
3	10.17	8.44	9.38	9.31	10.54	9.58	8.52	8.27	8.88	11.06	12.77	13.27
4	10.25	8.49	9.41	9.37	10.49	9.61	8.53	8.42	8.90	11.21	12.75	13.40
5	10.12	8.50	9.31	9.31	10.31	9.42	8.58	8.43	8.97	11.35	12.76	13.38
6	9.97	8.49	9.28	9.40	10.37	9.45	8.46	8.35	8.99	11.46	12.80	13.38
7	9.64	8.38	9.26	9.44	10.21	9.55	8.35	8.50	9.05	11.52	12.83	13.35
8	8.86	8.15	9.24	9.56	10.12	9.45	8.48	8.51	9.08	11.56	12.83	13.30
9	9.09	8.32	9.43	9.29	10.23	9.41	8.46	8.40	9.11	11.57	12.82	13.30
10	9.23	8.52	9.53	9.36	10.11	9.12	8.58	8.55	9.13	11.65	12.80	13.28
11	9.35	8.63	9.51	9.68	10.11	9.07	8.52	8.58	9.16	11.80	12.77	13.28
12	9.31	8.76	9.63	9.94	10.17	9.15	8.35	8.44	9.14	11.80	12.77	13.32
13	9.20	8.83	9.60	10.09	10.33	9.16	8.29	8.30	9.11	11.79	12.79	13.33
14	9.10	8.89	9.66	10.17	10.08	8.82	8.61	8.41	9.20	11.83	12.80	13.31
15	9.08	9.09	9.59	10.16	10.14	8.95	8.58	8.36	9.31	11.93	12.85	13.19
16	8.98	9.10	9.39	9.90	10.24	9.10	8.55	8.64	9.33	12.04	12.93	13.15
17	8.93	9.10	9.31	10.33	10.30	9.05	8.42	8.59	9.34	12.11	12.95	13.14
18	8.85	9.06	9.37	10.40	10.27	8.99	8.53	8.63	9.46	12.15	12.95	13.09
19	8.85	9.00	9.43	10.56	10.20	8.92	8.47	8.64	9.65	12.21	13.00	13.09
20	8.74	9.00	9.76	10.51	10.23	8.77	8.41	8.70	9.82	12.31	12.91	13.06
21	8.72	8.99	9.84	10.75	10.12	8.70	8.34	8.85	9.93	12.33	12.91	13.18
22	8.68	9.18	9.90	10.75	10.02	8.65	8.35	8.93	10.04	12.42	13.04	13.19
23	8.58	9.25	9.94	10.81	10.21	8.76	8.19	9.06	10.19	12.50	13.20	13.12
24	8.61	9.30	9.83	10.83	10.19	8.82	8.35	9.10	10.34	12.48	13.23	13.09
25	8.67	9.33	9.98	10.68	10.14	8.79	8.40	9.03	10.43	12.58	13.19	12.81
26	8.73	9.24	9.96	10.90	9.94	8.67	8.51	8.98	10.54	12.59	13.19	12.75
27	8.71	9.54	9.86	10.84	9.80	8.76	8.39	9.12	10.74	12.63	13.17	12.63
28	8.53	9.47	9.87	10.75	9.89	8.67	8.16	9.07	10.82	12.72	13.06	12.41
29	8.50	9.43	9.80	10.88	---	8.56	8.31	8.99	10.88	12.84	13.08	12.56
30	8.32	9.36	9.83	10.65	---	8.55	8.33	8.96	10.94	12.92	13.12	12.63
31	8.44	---	9.72	10.54	---	8.58	---	8.91	---	12.94	13.15	---
WTR YR 1997	MEAN 10.15		HIGH 8.15		LOW 13.40							



ONSLOW COUNTY--Continued

344037077253901. Local number, On-291; Ragged Point Well

LOCATION.--Lat 34°40'37", long 77°25'39", Hydrologic Unit 03030001, at U.S. Highway 17 in Verona, turn east onto Town Point Road, go 2.05 mi to road on left marked TLZ Eagle, turn left, go 0.9 mi, well is on left side of road. Owner: U.S. Geological Survey.

AQUIFER.--Castle Hayne aquifer.

WELL CHARACTERISTICS.--Drilled observation well, depth 180.0 ft, diameter 4 in., cased to 170.0 ft, screened interval from 170.0 to 180.0 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 25 ft above sea level, from topographic map. Measuring point: Top of shelter floor, 2.87 ft above land-surface datum.

REMARKS.--Well is part of Marine Corps Base, Camp Lejeune, North Carolina, Water Resources Network project.

PERIOD OF RECORD.--October 1994 to current year.

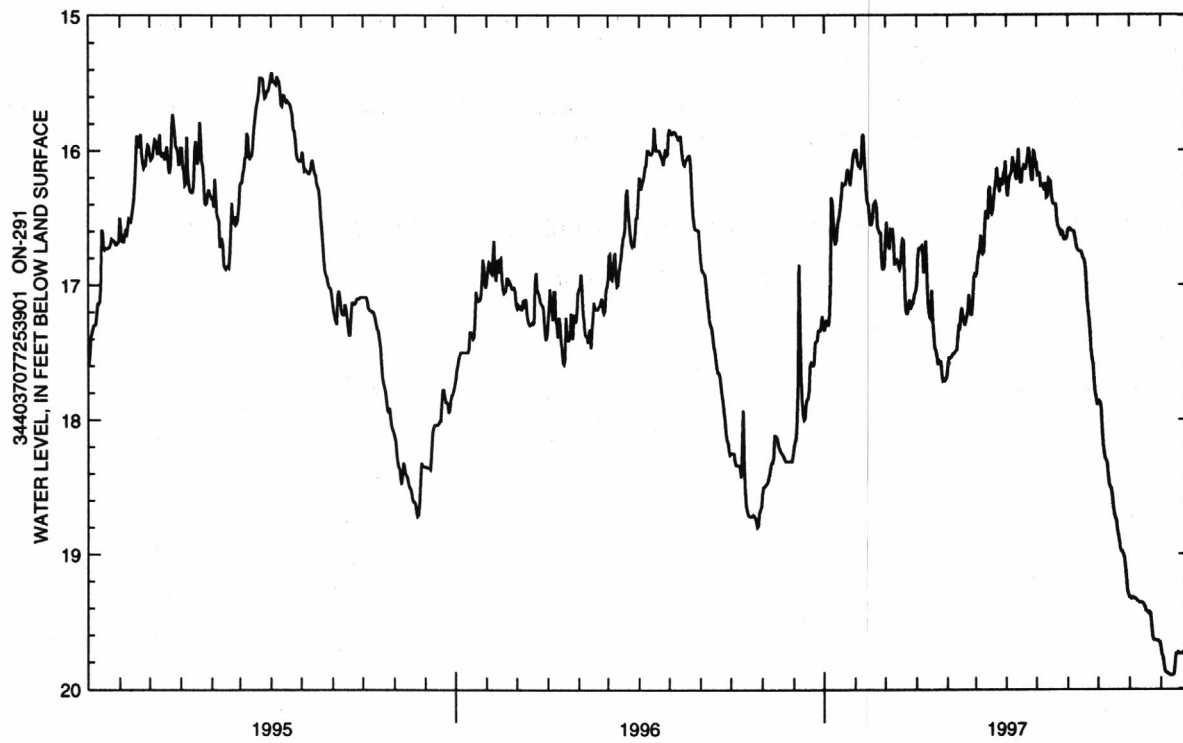
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 15.40 ft below land-surface datum, Apr. 2, 1995; lowest water level recorded, 19.91 ft below land-surface datum, Sept. 10, 11, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.34	16.03	16.65	16.98	17.61	16.93	16.28	16.10	16.59	17.87	19.32	19.70
2	17.31	15.99	16.53	16.79	17.54	16.90	16.34	16.18	16.58	17.86	19.32	19.75
3	17.27	16.07	16.68	16.73	17.54	16.81	16.26	16.17	16.58	17.87	19.33	19.76
4	17.28	16.11	16.71	16.73	17.54	16.76	16.20	16.17	16.59	17.92	19.32	19.81
5	17.30	16.12	16.73	16.72	17.53	16.73	16.18	16.26	16.60	18.07	19.32	19.87
6	17.23	16.13	16.59	16.71	17.51	16.63	16.16	16.25	16.60	18.18	19.33	19.88
7	17.00	16.09	16.60	16.77	17.51	16.76	16.05	16.26	16.60	18.25	19.33	19.88
8	16.35	15.90	16.59	16.91	17.50	16.77	16.09	16.28	16.64	18.29	19.34	19.89
9	16.39	15.88	16.67	16.78	17.49	16.75	16.12	16.25	16.69	18.30	19.35	19.89
10	16.52	16.07	16.85	16.67	17.48	16.56	16.20	16.25	16.73	18.32	19.35	19.90
11	16.66	16.17	16.82	16.87	17.39	16.45	16.22	16.35	16.74	18.42	19.36	19.90
12	16.70	16.32	16.81	17.10	17.31	16.48	16.11	16.34	16.75	18.48	19.36	19.90
13	16.67	16.39	16.82	17.20	17.32	16.51	15.99	16.21	16.75	18.50	19.36	19.90
14	16.57	16.40	16.86	17.24	17.21	16.30	16.18	16.22	16.75	18.51	19.36	19.89
15	16.52	16.50	16.88	17.25	17.17	16.27	16.24	16.23	16.77	18.57	19.37	19.81
16	16.49	16.55	16.84	17.04	17.23	16.45	16.24	16.34	16.80	18.65	19.39	19.74
17	16.41	16.55	16.71	17.28	17.27	16.47	16.15	16.39	16.81	18.70	19.42	19.74
18	16.34	16.51	16.66	17.37	17.30	16.44	16.12	16.40	16.85	18.73	19.42	19.73
19	16.25	16.41	16.67	17.47	17.27	16.36	16.14	16.40	16.95	18.75	19.43	19.74
20	16.26	16.39	17.01	17.48	17.23	16.29	16.14	16.40	17.10	18.82	19.44	19.74
21	16.25	16.38	17.19	17.53	17.20	16.23	16.11	16.50	17.19	18.86	19.43	19.74
22	16.25	16.42	17.21	17.59	17.07	16.13	16.05	16.56	17.25	18.90	19.44	19.74
23	16.20	16.57	17.21	17.56	17.17	16.20	15.98	16.57	17.35	18.96	19.53	19.73
24	16.14	16.59	17.14	17.57	17.22	16.27	16.02	16.60	17.48	18.98	19.62	19.73
25	16.16	16.61	17.11	17.57	17.22	16.31	16.13	16.62	17.55	18.98	19.64	19.72
26	16.22	16.61	17.18	17.66	17.11	16.21	16.22	16.60	17.59	19.00	19.64	19.71
27	16.26	16.80	17.15	17.71	16.95	16.24	16.22	16.61	17.71	19.03	19.64	19.69
28	16.18	16.88	17.14	17.70	16.92	16.26	16.01	16.66	17.80	19.10	19.64	19.69
29	16.11	16.88	17.10	17.71	---	16.17	16.02	16.66	17.84	19.18	19.64	19.68
30	16.03	16.85	17.06	17.70	---	16.16	16.11	16.66	17.89	19.27	19.65	19.67
31	16.01	---	17.05	17.68	---	16.08	---	16.65	---	19.30	19.65	---

WTR YR 1997 MEAN 17.35 HIGH 15.88 LOW 19.90



ONslow COUNTY--Continued

343512077265601. Local number, On-292; Rifle Range Well RR-97

LOCATION.--Lat 34°35'12", long 77°26'56", Hydrologic Unit 03030001, from Jacksonville take U.S. Highway 17 south to N.C. Highway 210, turn left, go 1.7 mi to the Rifle Range, turn left, go 0.8 mi, well is on right 20 feet off road. Owner: U.S. Marine Corps.

AQUIFER.--Castle Hayne aquifer.

WELL CHARACTERISTICS.--Drilled supply well.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 50 ft above sea level, from topographic map. Measuring point: Top of shelter floor, 1.97 ft above land-surface datum.

REMARKS.--Well is part of Marine Corps Base, Camp Lejeune, North Carolina, Water Resources Network project.

PERIOD OF RECORD.--October 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 36.19 ft below land-surface datum, Mar. 23, 1995; lowest water level recorded, 40.89 ft below land-surface datum, Sept. 4-9, 14, 15, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39.25	38.69	39.23	39.27	39.30	38.97	39.10	39.04	39.52	39.95	40.36	40.78
2	39.18	38.67	39.17	39.18	39.31	38.91	39.26	39.13	39.52	39.95	40.37	40.81
3	39.16	38.84	39.30	39.10	39.34	38.87	39.24	39.14	39.51	39.94	40.37	40.79
4	39.27	38.90	39.35	39.10	39.35	38.86	39.18	39.18	39.48	39.95	40.36	40.81
5	39.27	38.87	39.33	39.05	39.24	38.84	39.17	39.29	39.54	39.95	40.35	40.89
6	39.19	38.86	39.24	39.09	39.26	38.79	39.11	39.29	39.54	39.97	40.38	40.89
7	39.05	38.80	39.20	39.17	39.29	38.94	39.03	39.30	39.54	40.03	40.44	40.89
8	38.57	38.68	39.20	39.29	39.22	39.00	39.08	39.32	39.55	40.08	40.46	40.89
9	38.65	38.76	39.30	39.04	39.32	39.00	39.10	39.26	39.59	40.08	40.48	40.89
10	38.76	38.88	39.39	39.00	39.33	38.89	39.21	39.28	39.61	40.08	40.48	40.89
11	38.91	38.98	39.29	39.14	39.32	38.82	39.25	39.40	39.63	40.08	40.48	40.89
12	38.96	39.12	39.26	39.31	39.30	38.89	39.13	39.40	39.63	40.11	40.49	40.89
13	38.94	39.18	39.22	39.38	39.34	38.96	39.02	39.29	39.62	40.12	40.49	40.89
14	38.88	39.12	39.31	39.39	39.19	38.78	39.17	39.33	39.63	40.13	40.49	40.89
15	38.89	39.20	39.40	39.34	39.05	38.74	39.25	39.31	39.64	40.17	40.49	40.87
16	38.87	39.21	39.33	39.03	39.18	38.97	39.25	39.42	39.66	40.22	40.54	40.86
17	38.81	39.16	39.19	39.21	39.27	39.04	39.12	39.45	39.67	40.25	40.57	40.86
18	38.73	39.06	39.15	39.27	39.35	39.03	39.13	39.46	39.69	40.26	40.56	40.86
19	38.72	38.92	39.17	39.34	39.24	38.93	39.18	39.46	39.71	40.26	40.57	40.86
20	38.76	38.91	39.43	39.29	39.20	38.87	39.18	39.45	39.75	40.30	40.54	40.86
21	38.78	38.89	39.54	39.36	39.13	38.87	39.16	39.46	39.78	40.34	40.51	40.87
22	38.77	38.98	39.53	39.31	39.02	38.81	39.06	39.48	39.80	40.35	40.51	40.89
23	38.70	39.12	39.50	39.20	39.11	38.90	38.96	39.49	39.82	40.35	40.56	40.87
24	38.72	39.15	39.35	39.21	39.18	39.02	39.03	39.49	39.87	40.34	40.57	40.87
25	38.77	39.14	39.43	39.18	39.18	39.05	39.16	39.48	39.89	40.28	40.59	40.81
26	38.83	39.07	39.50	39.32	39.10	38.96	39.22	39.47	39.90	40.28	40.65	40.75
27	38.82	39.35	39.38	39.42	38.98	38.96	39.21	39.49	39.91	40.28	40.67	40.72
28	38.72	39.47	39.37	39.31	38.97	38.97	39.00	39.55	39.93	40.29	40.66	40.65
29	38.71	39.49	39.33	39.40	---	38.94	38.95	39.58	39.94	40.29	40.66	40.65
30	38.65	39.43	39.32	39.38	---	38.95	39.04	39.58	39.95	40.32	40.70	40.68
31	38.70	---	39.26	39.31	---	38.93	---	39.57	---	40.33	40.73	---
WTR YR 1997	MEAN 39.53		HIGH 38.57		LOW 40.89							



ONSLOW COUNTY--Continued

343609077171301. Local number, On-293; Sneads Ferry Road Well

LOCATION.--Lat 34°36'09", long 77°17'13", Hydrologic Unit 03030001, from main gate of Camp Lejeune take Holcomb Boulevard to Sneads Ferry Road, approximately 6.0 mi south on Sneads Ferry Road. Well is at tree line on left side of road just past a small power sub-station. Owner: U.S. Geological Survey.

AQUIFER.--Castle Hayne aquifer.

WELL CHARACTERISTICS.--Drilled observation well, depth 235.0 ft, diameter 4 in., cased to 225.0 ft, screened interval from 225.0 to 235.0 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 40 ft above sea level, from topographic map. Measuring point: Top of shelter floor, 2.30 ft above land-surface datum.

REMARKS.--Well is part of Marine Corps Base, Camp Lejeune, North Carolina, Water Resources Network project.

PERIOD OF RECORD.--October 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 7.50 ft below land-surface datum, Aug. 12, 13, 1996; lowest water level recorded, 13.28 ft below land-surface datum, Sept. 10, 11, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

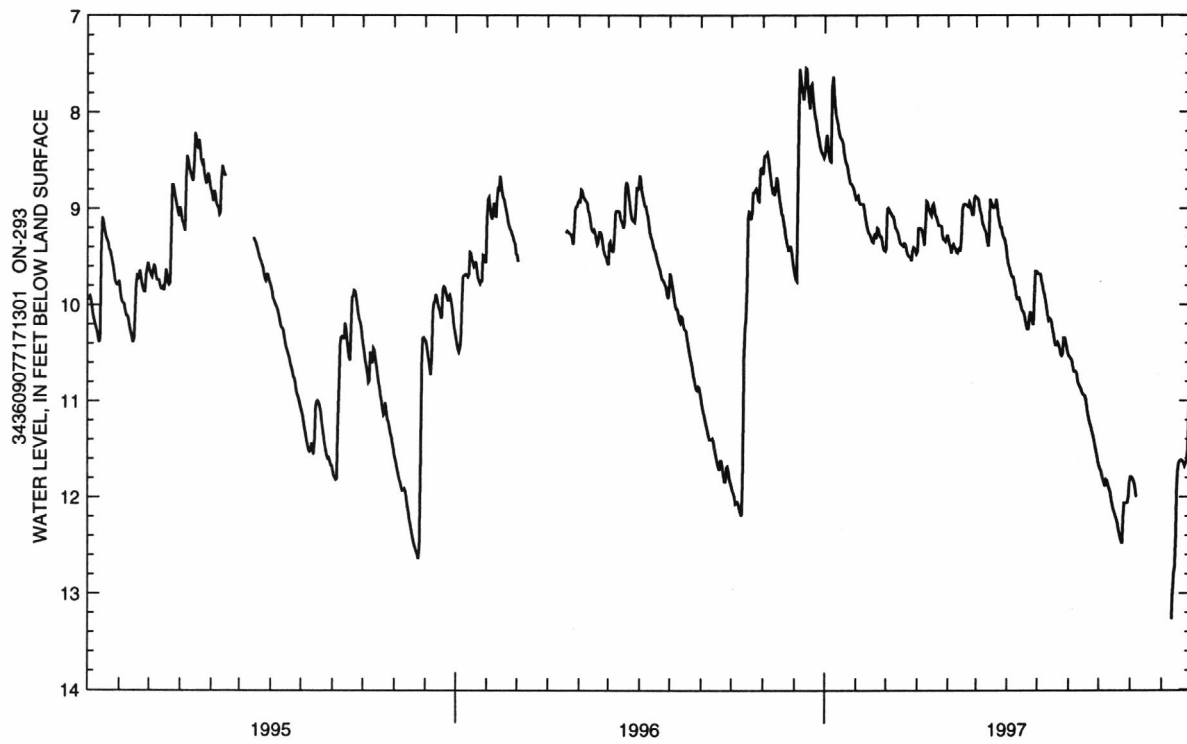
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.43	8.90	9.40	9.44	9.31	8.88	9.51	9.66	10.53	11.68	11.79	---
2	8.28	8.89	9.00	9.20	9.37	8.89	9.58	9.68	10.54	11.71	11.79	---
3	8.23	8.87	8.99	9.20	9.40	8.90	9.61	9.68	10.56	11.73	11.80	---
4	8.36	8.93	9.01	9.20	9.46	8.97	9.65	9.68	10.57	11.78	11.83	---
5	8.45	8.95	9.04	9.21	9.39	9.03	9.69	9.75	10.64	11.82	11.86	---
6	8.50	8.95	9.05	9.25	9.37	9.06	9.71	9.79	10.69	11.86	11.92	---
7	8.51	8.95	9.08	9.30	9.40	9.15	9.71	9.85	10.69	11.89	12.00	---
8	7.76	8.95	9.08	9.38	9.41	9.17	9.77	9.90	10.69	11.82	---	---
9	7.63	9.00	9.14	9.17	9.45	9.21	9.82	9.95	10.72	11.83	---	---
10	7.80	9.09	9.20	8.92	9.46	9.23	9.90	10.02	10.80	11.88	---	---
11	7.93	9.15	9.21	8.93	9.42	9.26	9.94	10.10	10.83	11.92	---	13.27
12	8.02	9.20	9.24	8.98	9.41	9.33	9.94	10.16	10.85	11.95	---	13.01
13	8.08	9.24	9.27	9.02	9.44	9.39	9.93	10.14	10.88	12.02	---	12.79
14	8.13	9.26	9.32	9.05	9.28	9.25	9.98	10.15	10.91	12.07	---	12.72
15	8.20	9.28	9.36	9.07	9.01	8.90	10.03	10.18	10.93	12.13	---	12.43
16	8.25	9.31	9.37	8.97	8.96	8.93	10.06	10.26	10.94	12.15	---	11.92
17	8.27	9.34	9.38	8.95	8.95	8.96	10.07	10.31	10.95	12.19	---	11.73
18	8.29	9.35	9.39	9.00	8.95	8.99	10.10	10.38	11.00	12.22	---	11.65
19	8.32	9.27	9.36	9.07	8.96	8.99	10.16	10.42	11.08	12.26	---	11.63
20	8.42	9.26	9.37	9.08	8.97	8.98	10.22	10.42	11.14	12.32	---	11.62
21	8.49	9.31	9.43	9.13	8.98	8.90	10.25	10.39	11.20	12.37	---	11.62
22	8.53	9.20	9.47	9.17	8.93	8.96	10.25	10.41	11.24	12.42	---	11.63
23	8.55	9.21	9.49	9.17	8.96	9.07	10.12	10.45	11.27	12.46	---	11.65
24	8.61	9.26	9.50	9.18	9.02	9.12	10.07	10.52	11.32	12.48	---	11.68
25	8.68	9.29	9.50	9.18	9.06	9.19	10.11	10.53	11.36	12.20	---	11.65
26	8.73	9.29	9.54	9.28	9.06	9.19	10.18	10.51	11.41	12.06	---	11.63
27	8.74	9.35	9.44	9.32	8.89	9.25	10.21	10.34	11.47	12.06	---	11.52
28	8.75	9.41	9.40	9.32	8.87	9.29	9.92	10.34	11.52	12.06	---	11.11
29	8.78	9.43	9.41	9.34	---	9.31	9.65	10.38	11.58	12.06	---	10.94
30	8.81	9.44	9.44	9.31	---	9.35	9.65	10.43	11.64	12.01	---	10.92
31	8.86	---	9.47	9.27	---	9.41	---	10.49	---	11.85	---	---

WTR YR 1997

MEAN 9.92

HIGH 7.63

LOW 13.27



ONslow COUNTY--Continued

343842077241501. Local number, On-294; Town Creek Well 1

LOCATION.--Lat 34°38'42", long 77°24'15", Hydrologic Unit 03030001, at U.S. Highway 17, in Verona, turn east onto Town Point Road, go 4 mi to dirt road, turn left go 0.4 mi, well is on left side in field 200 yards off road. Owner: U.S. Geological Survey.

AQUIFER.--Surficial Aquifer.

WELL CHARACTERISTICS.--Drilled observation well.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 65 ft above sea level, from topographic map. Measuring point: Top of shelter floor, 2.43 ft above land-surface datum.

REMARKS.--Well is part of Marine Corps Base, Camp Lejeune, North Carolina, Water Resources Network project.

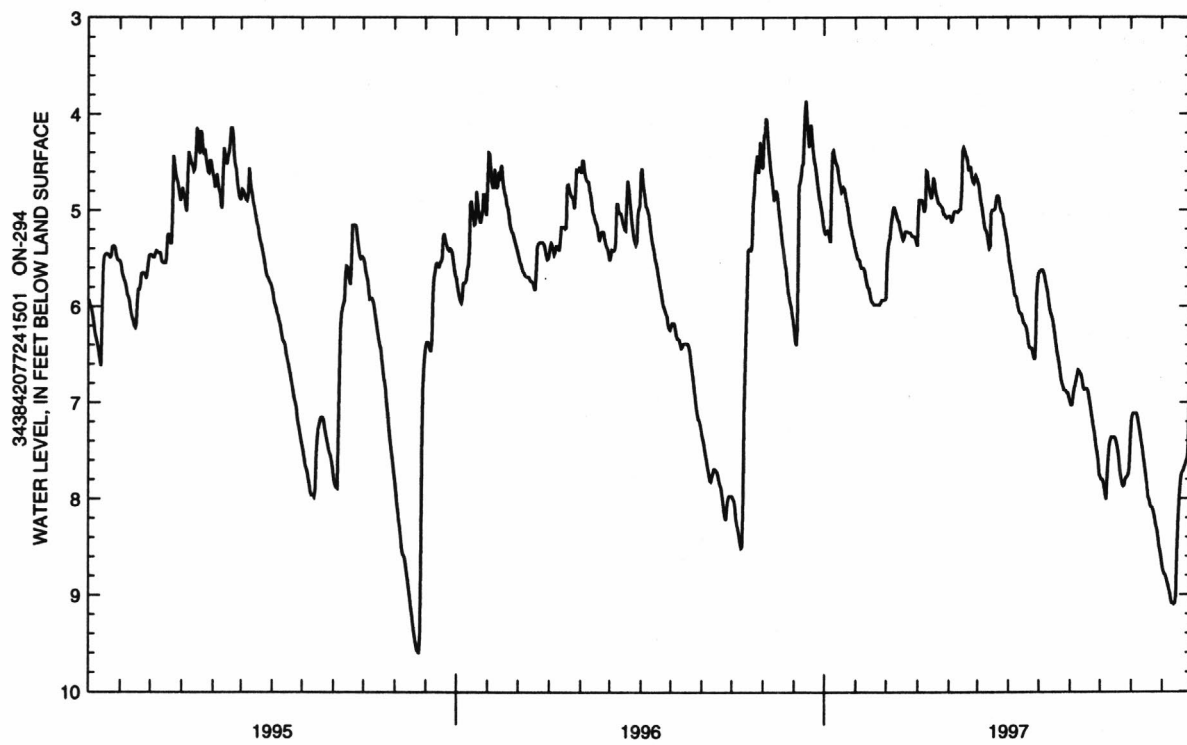
PERIOD OF RECORD.--October 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 3.85 ft below land-surface datum, Sept. 12, 13, 1996; lowest water level recorded, 9.64 ft below land-surface datum, Aug. 26, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.22	5.41	5.91	5.37	5.06	4.67	5.41	5.66	7.00	7.77	7.19	8.70
2	5.24	5.46	5.57	5.04	5.06	4.71	5.53	5.64	7.03	7.80	7.13	8.75
3	5.22	5.50	5.40	4.89	5.08	4.74	5.58	5.63	7.03	7.80	7.11	8.78
4	5.21	5.51	5.32	4.89	5.13	4.83	5.64	5.62	6.94	7.82	7.11	8.79
5	5.24	5.52	5.29	4.89	5.10	4.92	5.71	5.62	6.85	7.89	7.11	8.82
6	5.28	5.58	5.16	4.90	5.03	4.97	5.79	5.64	6.82	7.95	7.11	8.86
7	5.33	5.60	5.09	4.96	5.01	5.06	5.88	5.68	6.77	8.01	7.14	8.90
8	4.82	5.60	5.00	5.02	5.01	5.13	5.89	5.75	6.72	7.76	7.21	8.94
9	4.40	5.60	4.96	4.96	5.01	5.20	5.90	5.80	6.66	7.58	7.27	8.99
10	4.38	5.63	5.01	4.59	5.02	5.21	5.98	5.85	6.67	7.45	7.34	9.06
11	4.43	5.70	5.03	4.60	5.01	5.24	6.03	5.94	6.69	7.39	7.41	9.09
12	4.49	5.75	5.08	4.72	4.99	5.32	6.06	6.03	6.71	7.36	7.48	9.09
13	4.52	5.80	5.11	4.79	4.99	5.40	6.07	6.07	6.76	7.36	7.57	9.10
14	4.54	5.81	5.12	4.84	4.76	5.38	6.08	6.10	6.84	7.36	7.64	9.09
15	4.62	5.86	5.19	4.88	4.38	5.04	6.13	6.14	6.86	7.36	7.72	9.01
16	4.70	5.92	5.23	4.82	4.35	5.00	6.17	6.22	6.85	7.37	7.81	8.56
17	4.75	5.95	5.28	4.66	4.38	5.00	6.18	6.29	6.85	7.41	7.90	8.22
18	4.81	5.96	5.31	4.70	4.43	5.00	6.20	6.38	6.86	7.46	7.99	8.00
19	4.79	5.98	5.29	4.79	4.45	4.99	6.24	6.46	6.89	7.53	8.01	7.86
20	4.76	5.98	5.22	4.84	4.50	4.90	6.30	6.52	6.96	7.63	8.07	7.76
21	4.78	5.98	5.22	4.89	4.59	4.85	6.39	6.58	7.03	7.73	8.09	7.72
22	4.85	5.98	5.22	4.93	4.55	4.85	6.43	6.66	7.11	7.79	8.09	7.71
23	4.91	5.98	5.23	4.93	4.55	4.88	6.43	6.74	7.17	7.85	8.12	7.67
24	4.96	5.98	5.23	4.95	4.65	4.97	6.43	6.80	7.24	7.87	8.17	7.65
25	5.04	5.98	5.23	4.96	4.70	5.01	6.47	6.83	7.30	7.86	8.23	7.60
26	5.12	5.95	5.25	4.98	4.72	5.03	6.53	6.87	7.39	7.80	8.29	7.58
27	5.18	5.93	5.27	5.04	4.67	5.06	6.55	6.87	7.47	7.78	8.32	7.43
28	5.22	5.93	5.27	5.04	4.64	5.15	6.36	6.88	7.52	7.77	8.41	6.91
29	5.28	5.93	5.27	5.07	---	5.20	5.90	6.90	7.61	7.75	8.50	6.58
30	5.31	5.93	5.29	5.08	---	5.26	5.74	6.90	7.75	7.68	8.54	6.46
31	5.37	---	5.33	5.07	---	5.33	---	6.95	---	7.37	8.61	---
WTR YR 1997	MEAN 6.15		HIGH 4.35		LOW 9.10							



ONslow COUNTY--Continued

344203077182001. Local number, On-295; Wallace Creek Well

LOCATION.--Lat 34°42'03", long 77°18'20", Hydrologic Unit 03030001, from Highway 24 enter Camp Lejeune Piney Green gate, proceed 0.8 mi to dirt road, turn left, go 1.0 mi to dirt road, turn right and proceed 0.3 mi, well is on right 75 ft into clearing. Owner: U.S. Geological Survey.

AQUIFER.--Castle Hayne aquifer.

WELL CHARACTERISTICS.--Drilled observation well, depth 253.0 ft, diameter 4 in., cased to 243.0 ft, screened interval from 243.0 to 253.0 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of shelter, 2.38 ft above land-surface datum.

REMARKS.--Well is part of Marine Corps Base, Camp Lejeune, North Carolina, Water Resources Network project.

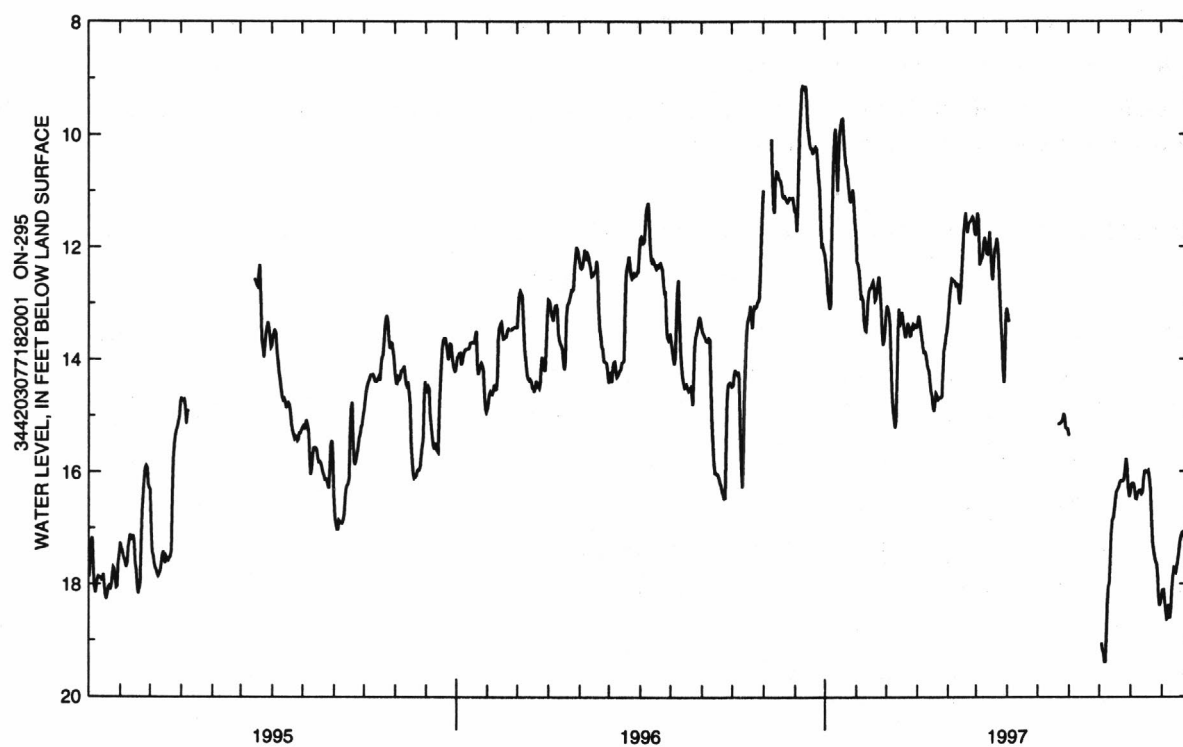
PERIOD OF RECORD.--October 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 9.07 ft below land-surface datum, Sept. 12, 1996; lowest water level recorded, 19.45 ft below land-surface datum, July 7, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.14	11.74	13.19	13.43	13.34	11.80	13.09	---	15.36	---	16.38	18.18
2	12.30	12.28	13.05	13.31	13.08	11.60	13.25	---	---	---	16.23	18.11
3	12.48	12.30	13.10	13.23	12.85	11.40	13.34	---	---	19.05	16.21	18.10
4	12.81	12.42	13.19	13.35	12.71	11.50	---	---	---	19.17	16.21	18.30
5	12.99	12.61	13.37	13.51	12.57	12.32	---	---	---	19.23	16.29	18.48
6	13.11	12.94	14.02	13.64	12.59	12.25	---	---	---	19.39	16.48	18.63
7	13.01	12.90	14.60	13.79	12.61	12.22	---	---	---	19.39	16.49	18.61
8	11.87	12.95	14.94	13.88	12.62	12.16	---	---	---	18.87	16.40	18.37
9	11.04	13.32	15.07	13.87	12.69	11.92	---	---	---	18.34	16.36	18.61
10	10.36	13.48	15.22	13.92	12.66	11.83	---	---	---	18.07	16.34	18.46
11	10.01	13.50	15.11	14.04	12.67	11.97	---	---	---	17.96	16.33	18.11
12	9.90	13.28	14.33	14.16	12.91	12.12	---	---	---	17.52	16.40	17.89
13	10.54	12.98	13.54	14.21	13.02	12.13	---	---	---	17.09	16.38	17.72
14	11.01	12.79	13.11	14.41	12.76	11.91	---	---	---	16.88	16.16	17.75
15	10.40	12.74	13.42	14.57	12.39	11.73	---	---	---	16.82	16.00	17.79
16	10.00	12.73	13.27	14.64	12.05	12.03	---	---	---	16.68	15.99	17.68
17	9.83	12.67	13.16	14.86	11.73	12.49	---	---	---	16.52	16.02	17.58
18	9.73	12.62	13.28	14.93	11.52	12.59	---	---	---	16.37	16.01	17.45
19	9.72	12.72	13.45	14.78	11.39	12.31	---	---	---	16.33	15.99	17.28
20	10.00	12.96	13.60	14.61	11.61	12.06	---	---	---	16.30	16.15	17.17
21	10.34	12.93	13.60	14.65	11.75	11.99	---	15.16	---	16.25	16.34	17.10
22	10.54	12.78	13.44	14.74	11.60	11.85	---	15.16	---	16.18	16.87	17.08
23	10.59	12.64	13.36	14.69	11.56	11.94	---	15.15	---	16.16	17.27	17.10
24	10.74	12.53	13.43	14.68	11.55	12.25	---	15.13	---	16.17	17.44	17.24
25	10.97	12.72	13.59	14.69	11.51	12.91	---	15.11	---	16.17	17.54	17.26
26	11.16	13.08	13.58	14.67	11.47	13.32	---	15.06	---	16.10	17.61	17.32
27	11.21	13.53	13.44	14.25	11.50	13.65	---	14.97	---	15.92	17.65	17.07
28	11.10	13.75	13.39	13.87	11.73	14.14	---	15.05	---	15.77	17.88	16.73
29	10.98	13.68	13.44	13.74	---	14.42	---	15.23	---	15.95	18.26	16.61
30	11.21	13.44	13.40	13.59	---	13.99	---	15.24	---	16.29	18.39	16.64
31	11.57	---	13.43	13.50	---	13.18	---	15.24	---	16.45	18.33	---
WTR YR 1997	MEAN 14.24		HIGH 9.72		LOW 19.39							



WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

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 periodically with steel tape.

DATUM.--Land-surface datum is 511.50 ft above sea level. Measuring point: Top of shelf, 3.27 ft above land-surface datum (since July 21, 1981).

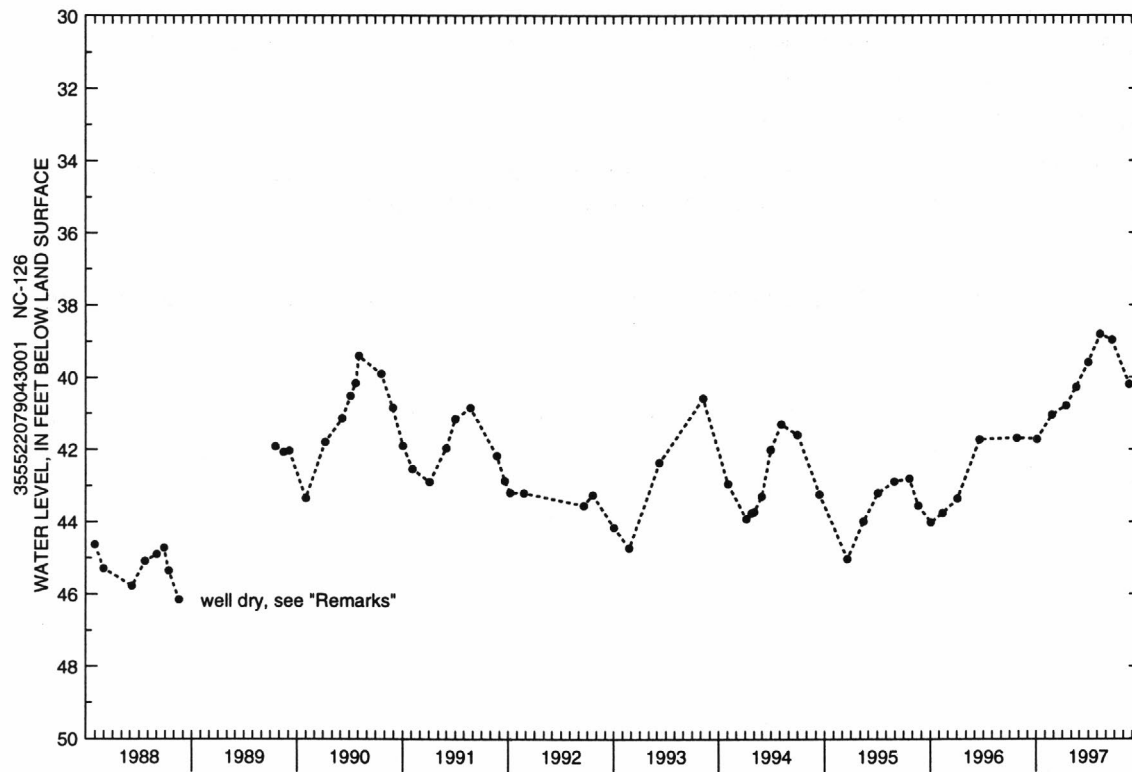
REMARKS.-- Well is part of terrane-effects network. Well found dry from October 13, 1988 to January 24, 1989. No periodic measurements made from January 24 to July 19, 1989.

PERIOD OF RECORD.--August 1938 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 35.22 ft below land-surface datum, May 14, 1984; lowest water level occurred during periods when well was dry, Oct. 11 to Dec. 31, 1940, and Oct. 13 to Jan. 24, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	41.71	JAN 14	40.78	APR 1	39.59	MAY 13	38.81	JUN 23	38.97	AUG 22	40.19
NOV 25	41.04	FEB 18	40.27								



PAMLICO COUNTY

350523076392206. Local number, NC-169; DENR Whortonville Research Station well S15y6.

LOCATION.--Lat 35°05'23", long 76°39'22", Hydrologic Unit 03020204, 0.5 mi northeast of intersection of Secondary Roads 1321 and 1322, and 3.4 mi east of Merritt on Secondary Road 1321. Owner: DENR (North Carolina Department of Environment and Natural Resources).

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.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 7.54 ft above sea level (levels by DENR). Measuring point: Top of instrument shelf, 2.53 ft above land-surface datum; revised from 2.64 ft above land-surface datum, October 1987.

REMARKS.--Well is part of areal-effects network.

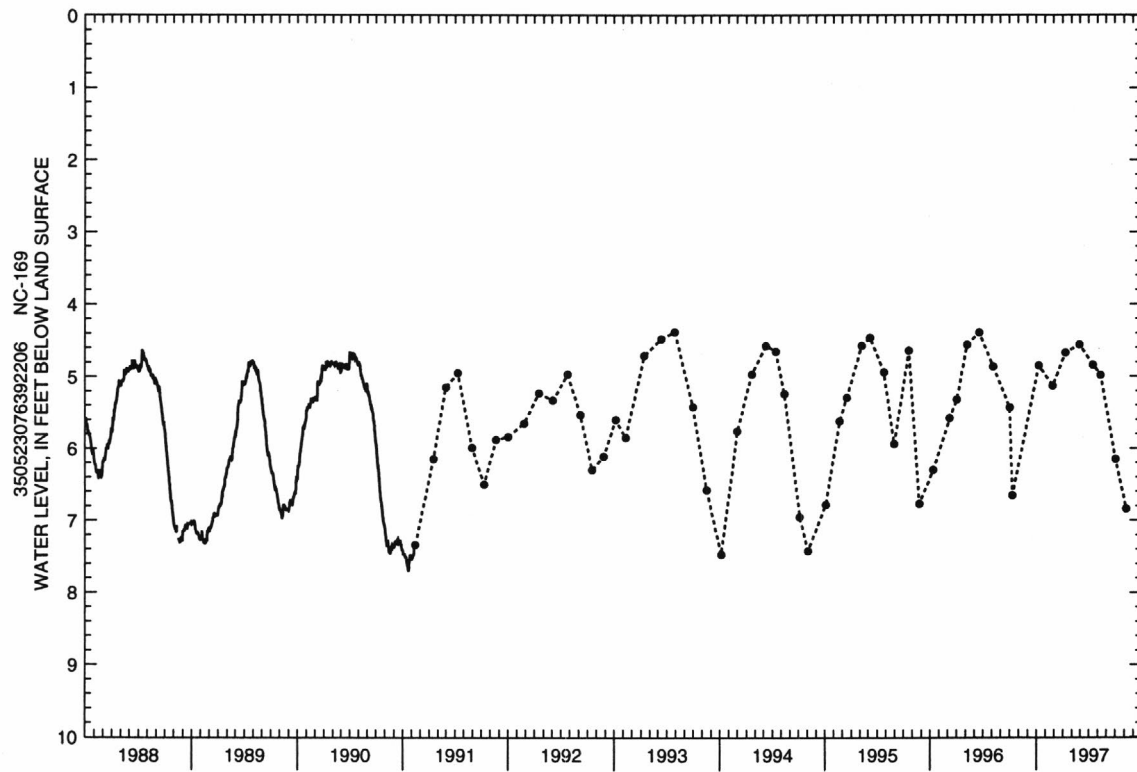
PERIOD OF RECORD.--February 1978 to current year. Continuous record December 1986 to November 1990. Records from February 1978 to November 1986 are unpublished and available in the files of the Groundwater Section, DENR.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 4.00 ft below land-surface datum, May 10, 1978; lowest water level recorded, 7.69 ft below land-surface datum, Oct. 20, 21, 22, and 23, 1990.

REVISIONS.--Water-level mean values and extremes for period of record published in Water Resources Data, North Carolina, NC-87-1, should be adjusted by +0.11 ft.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	4.85	JAN 10	4.67	APR 15	4.84	MAY 12	4.98	JUL 2	6.15	AUG 8	6.84
NOV 27	5.13	FEB 27	4.56								



PASQUOTANK COUNTY

362050076163705. Local number, NC-150; DENR 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: DENR (North Carolina Department of Environment and Natural Resources).

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.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 7.14 ft above sea level (levels by DENR). Measuring point: Top of instrument shelf, 3.48 ft above land-surface datum; revised from 3.13 ft above land-surface datum, October 1987.

REMARKS.--Well is part of areal-effects network.

PERIOD OF RECORD.--July 1975 to current year. Records from July 1975 to November 1986 are unpublished and available in the files of the Groundwater Section, DENR. U.S. Geological Survey continuous record began November 1986.

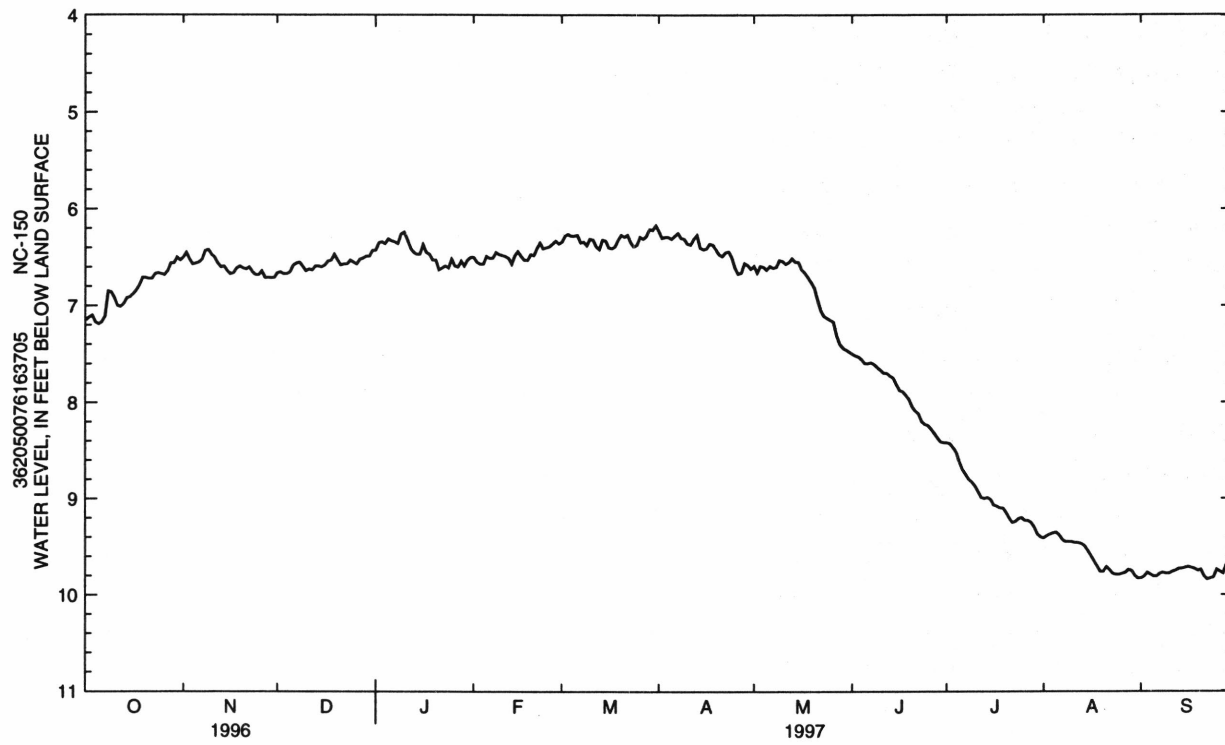
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 3.22 ft below land-surface datum, June 26, 1979; lowest water level recorded, 10.29 ft below land-surface datum, Aug. 26, 1995.

REVISIONS.--Water-level mean values and extremes for period of record published in Water Resources Data, North Carolina, NC-87-1, should be adjusted by -0.35 ft.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.15	6.50	6.66	6.43	6.50	6.34	6.23	6.59	7.50	8.42	9.41	9.83
2	7.12	6.45	6.65	6.35	6.55	6.28	6.30	6.66	7.52	8.43	9.39	9.81
3	7.10	6.52	6.67	6.34	6.57	6.26	6.29	6.59	7.53	8.47	9.37	9.77
4	7.17	6.57	6.67	6.36	6.57	6.28	6.29	6.60	7.56	8.52	9.36	9.79
5	7.19	6.56	6.65	6.31	6.49	6.28	6.31	6.63	7.60	8.62	9.35	9.81
6	7.17	6.55	6.58	6.33	6.51	6.27	6.28	6.59	7.60	8.70	9.38	9.81
7	7.11	6.52	6.56	6.34	6.51	6.35	6.25	6.61	7.59	8.75	9.43	9.78
8	6.85	6.43	6.55	6.36	6.45	6.34	6.30	6.60	7.61	8.80	9.45	9.77
9	6.86	6.42	6.59	6.26	6.47	6.38	6.31	6.53	7.64	8.83	9.45	9.78
10	6.92	6.47	6.64	6.24	6.48	6.31	6.36	6.54	7.67	8.87	9.45	9.78
11	7.00	6.50	6.62	6.32	6.49	6.32	6.37	6.57	7.70	8.93	9.46	9.76
12	7.01	6.56	6.63	6.41	6.51	6.39	6.31	6.55	7.70	8.99	9.46	9.75
13	6.98	6.60	6.59	6.45	6.57	6.42	6.27	6.51	7.73	9.00	9.47	9.73
14	6.92	6.59	6.59	6.47	6.48	6.32	6.40	6.55	7.75	8.99	9.49	9.73
15	6.91	6.64	6.60	6.47	6.44	6.33	6.42	6.55	7.82	9.01	9.54	9.72
16	6.88	6.67	6.58	6.37	6.49	6.40	6.41	6.63	7.88	9.07	9.59	9.71
17	6.84	6.66	6.54	6.45	6.53	6.41	6.36	6.66	7.89	9.08	9.65	9.72
18	6.79	6.61	6.53	6.47	6.53	6.39	6.37	6.71	7.93	9.10	9.70	9.73
19	6.71	6.59	6.47	6.53	6.47	6.32	6.42	6.76	7.97	9.10	9.76	9.75
20	6.71	6.61	6.53	6.53	6.48	6.27	6.47	6.82	8.05	9.15	9.76	9.74
21	6.72	6.62	6.58	6.63	6.41	6.29	6.49	6.94	8.09	9.21	9.71	9.81
22	6.72	6.60	6.57	6.61	6.35	6.27	6.45	7.05	8.12	9.25	9.74	9.84
23	6.67	6.65	6.57	6.59	6.41	6.35	6.44	7.11	8.20	9.24	9.78	9.83
24	6.66	6.68	6.53	6.61	6.40	6.39	6.50	7.13	8.23	9.21	9.79	9.82
25	6.67	6.68	6.55	6.52	6.39	6.37	6.61	7.15	8.24	9.20	9.79	9.74
26	6.68	6.64	6.57	6.59	6.36	6.29	6.67	7.17	8.28	9.23	9.78	9.76
27	6.64	6.71	6.52	6.60	6.33	6.31	6.66	7.31	8.32	9.23	9.77	9.78
28	6.56	6.71	6.51	6.54	6.36	6.28	6.56	7.40	8.37	9.25	9.74	9.69
29	6.56	6.71	6.49	6.59	---	6.21	6.58	7.44	8.41	9.30	9.75	9.67
30	6.50	6.71	6.49	6.53	---	6.22	6.62	7.46	8.42	9.37	9.80	9.69
31	6.53	---	6.43	6.50	---	6.17	---	7.48	---	9.40	9.83	---
WTR YR	1997	MEAN 7.40		HIGH 6.17		LOW 9.84						



PASQUOTANK COUNTY--Continued

361829076163201. Local number, NC-195.

LOCATION.--Lat 36°18'29", long 76°16'32", Hydrologic Unit 03010205, northwest of Elizabeth City, 1.2 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 13.0 ft, diameter 4 in., cased to 2.4 ft, screened interval from 2.4 to 12.4 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 15 ft above sea level (from topographic map). Measuring point: Top of instrument shelf, 3.38 ft above land-surface datum.

REMARKS.--In October 1991, well replaced nearby NC-143. Well is part of climatic-effects network. Negative values of water levels in feet below land surface indicate ground-water levels that are above land surface.

PERIOD OF RECORD.--October 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.70 ft above land-surface datum, Jan. 4, 1992; lowest water level recorded, 5.90 ft below land-surface datum, Sept. 21, 22, 1997.

REVISIONS.--The measuring point description published in annual data reports prior to 1995 was in error. The measuring point description given above supersedes the description published for water years 1992, 1993, and 1994.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

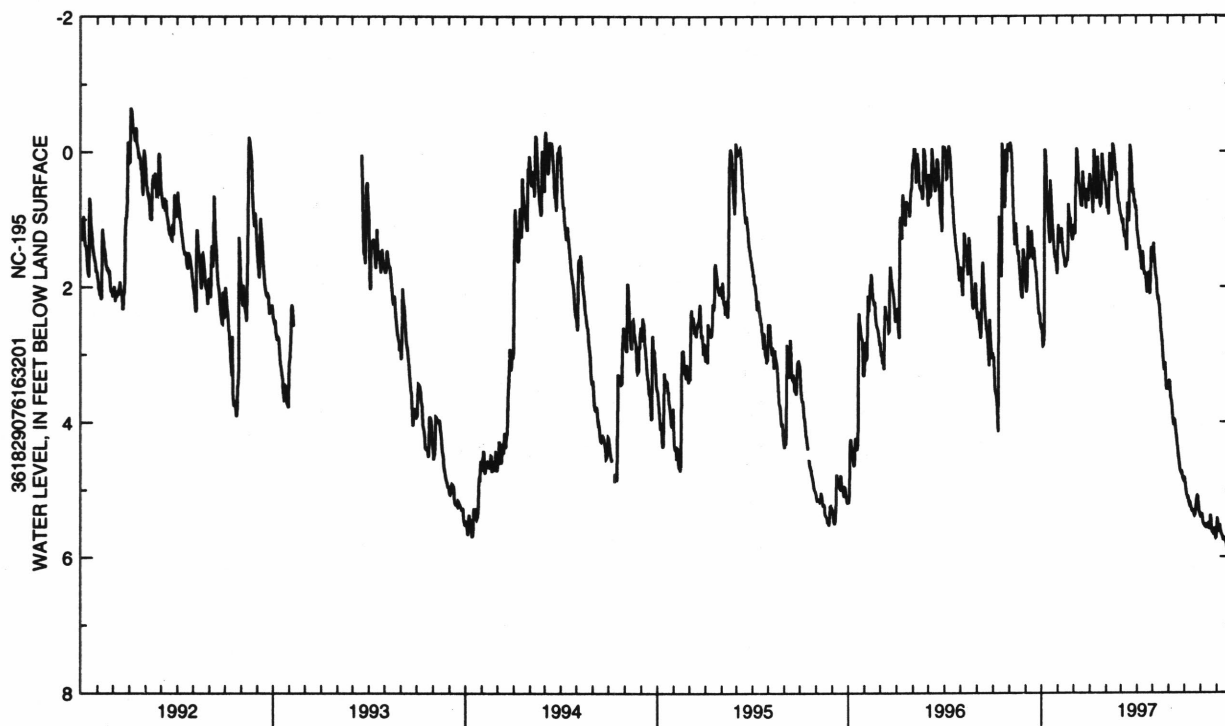
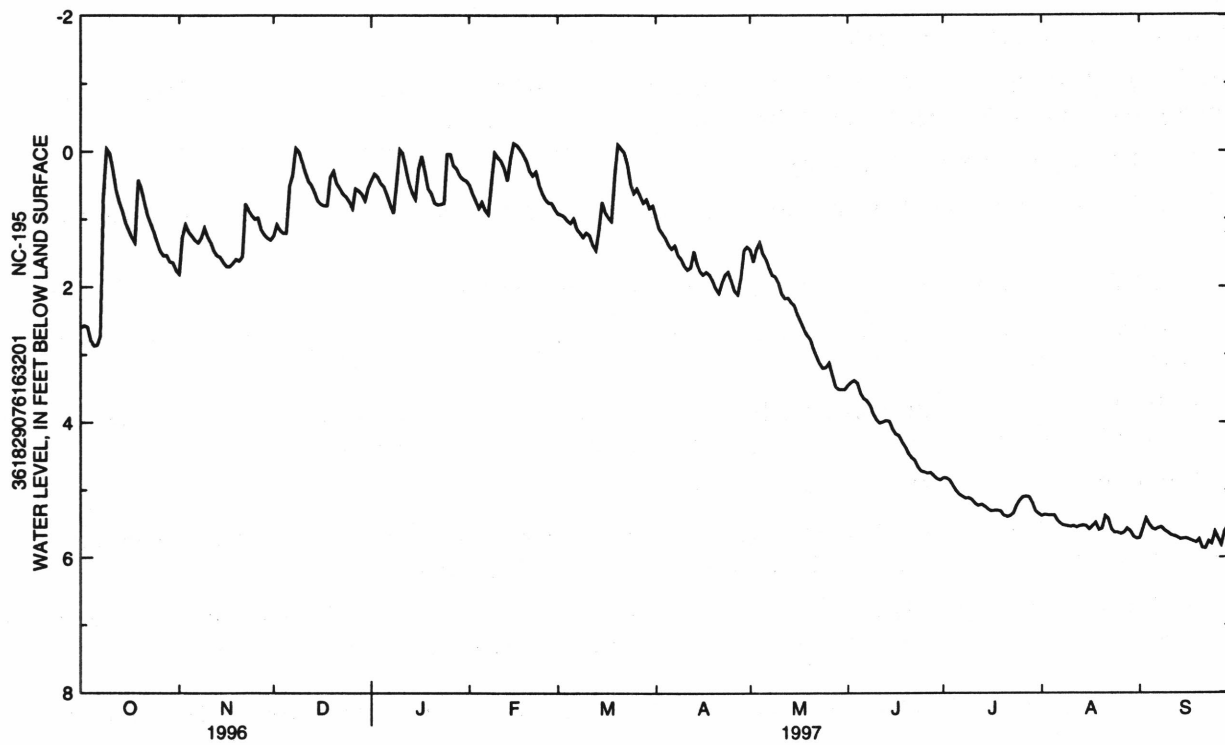
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.59	1.81	1.25	.43	.49	.92	.97	1.45	3.45	4.82	5.38	5.71
2	2.57	1.26	1.08	.33	.63	.93	1.14	1.63	3.41	4.82	5.36	5.57
3	2.59	1.08	1.16	.37	.73	.96	1.21	1.45	3.38	4.85	5.37	5.42
4	2.79	1.19	1.21	.47	.84	1.02	1.28	1.35	3.42	4.93	5.37	5.50
5	2.87	1.25	1.21	.52	.75	1.06	1.38	1.51	3.57	5.01	5.37	5.57
6	2.86	1.31	.51	.65	.87	.99	1.44	1.59	3.65	5.06	5.45	5.59
7	2.73	1.35	.35	.79	.93	1.15	1.39	1.72	3.68	5.09	5.50	5.56
8	.69	1.28	-.05	.91	.43	1.20	1.53	1.83	3.75	5.12	5.52	5.55
9	-.04	1.13	.00	.48	.02	1.27	1.59	1.85	3.87	5.11	5.53	5.60
10	.03	1.26	.15	-.03	.09	1.20	1.69	1.95	3.96	5.14	5.54	5.63
11	.26	1.35	.30	.03	.14	1.24	1.75	2.10	4.01	5.20	5.53	5.67
12	.56	1.47	.44	.26	.26	1.38	1.71	2.17	3.99	5.23	5.55	5.68
13	.75	1.54	.50	.47	.43	1.46	1.47	2.16	3.97	5.21	5.53	5.70
14	.88	1.56	.61	.61	.10	1.16	1.65	2.23	3.98	5.24	5.52	5.73
15	1.05	1.64	.73	.70	-.12	.75	1.77	2.27	4.09	5.28	5.53	5.72
16	1.16	1.70	.78	.26	-.09	.90	1.82	2.41	4.17	5.31	5.58	5.72
17	1.27	1.70	.80	.07	-.03	.98	1.78	2.51	4.19	5.30	5.53	5.74
18	1.35	1.65	.80	.30	.05	1.03	1.82	2.62	4.29	5.30	5.48	5.76
19	.42	1.59	.38	.55	.14	.34	1.91	2.71	4.36	5.31	5.59	5.78
20	.55	1.62	.29	.62	.29	-.10	2.02	2.77	4.46	5.37	5.57	5.73
21	.75	1.55	.47	.76	.36	-.04	2.09	2.91	4.52	5.39	5.38	5.86
22	.94	.77	.55	.79	.30	.02	1.94	3.03	4.56	5.38	5.42	5.87
23	1.07	.87	.63	.78	.49	.20	1.82	3.13	4.66	5.34	5.58	5.76
24	1.19	.94	.67	.77	.62	.48	1.78	3.20	4.72	5.23	5.63	5.80
25	1.35	1.00	.74	.04	.71	.62	1.92	3.19	4.73	5.15	5.63	5.62
26	1.47	.98	.84	.04	.76	.55	2.06	3.12	4.75	5.10	5.65	5.72
27	1.54	1.16	.55	.21	.76	.66	2.11	3.30	4.74	5.09	5.63	5.82
28	1.53	1.23	.58	.26	.85	.76	1.87	3.47	4.79	5.10	5.57	5.62
29	1.63	1.28	.63	.36	---	.71	1.46	3.51	4.83	5.19	5.61	5.54
30	1.64	1.31	.73	.41	---	.84	1.41	3.51	4.85	5.31	5.69	5.57
31	1.76	---	.54	.43	---	.80	---	3.51	---	5.35	5.72	---

WTR YR 1997

MEAN 2.48

HIGH -.12

LOW 5.87



361744076274402. Local number, NC-151; DENR Parkville Research Station well E13m2.

AQUIFER.--Lower Cape Fear aquifer of Late Cretaceous age.

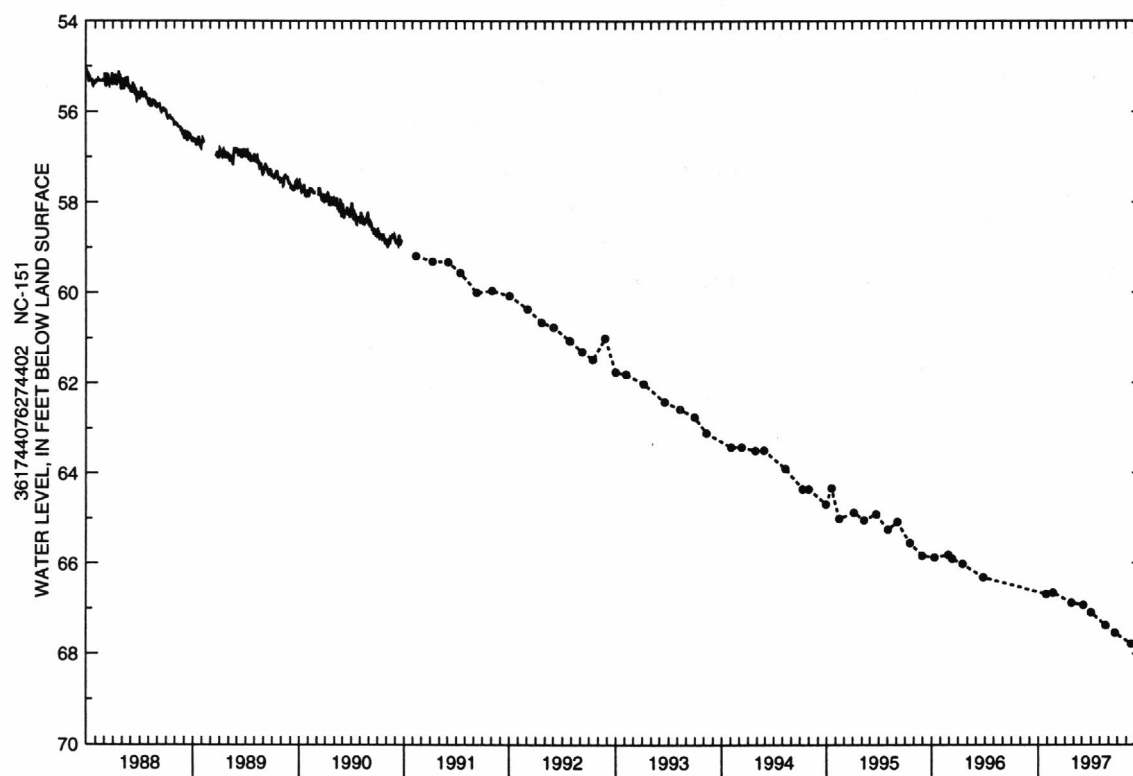
INSTRUMENTATION.--Measured periodically with steel tape.

REMARKS.--Well is part of areal-effects network.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 40.17 ft below land-surface datum, Dec. 7, 1977; lowest water level measured, 66.51 ft below land-surface datum, June 17 and Aug. 13, 1996.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE		WATER LEVEL		DATE		WATER LEVEL		DATE		WATER LEVEL	
OCT 29	66.68	JAN 24	66.87	APR 2	67.08	MAY 21	67.37	JUN 24	67.54	AUG 18	67.78
NOV 21	66.65	MAR 6	66.92								



PERQUIMANS COUNTY--Continued

361744076274403. Local number, NC-152; DENR 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: DENR (North Carolina Department of Environment and Natural Resources).

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.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 16.73 ft above sea level (levels by DENR). Measuring point: Top of casing, 2.90 ft above land-surface datum; revised from 3.00 ft above land-surface datum, July 11, 1994.

REMARKS.--Well is part of areal-effects network.

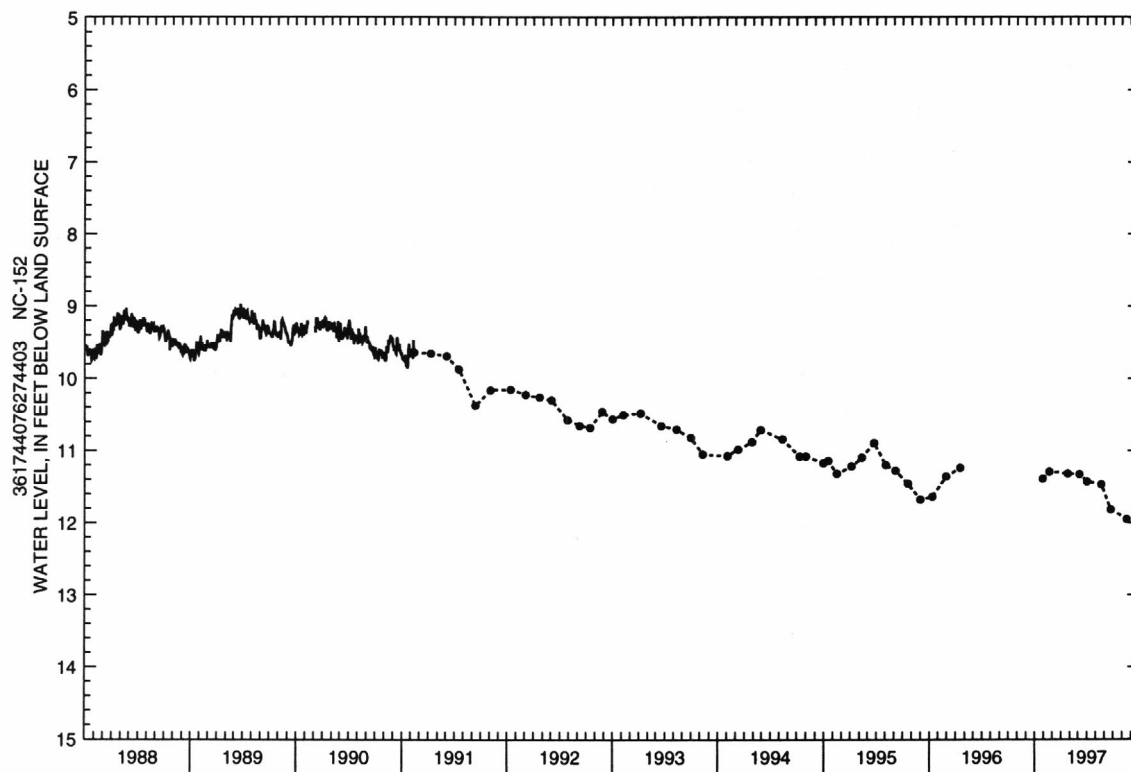
PERIOD OF RECORD.--December 1977 to current year. Continuous record November 1986 to November 1990. Records from December 1977 to July 1986 are unpublished and available in the files of the Groundwater Section, DENR.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 6.46 ft below land-surface datum, Dec. 20, 1978; lowest water level measured, 11.95 ft below land-surface datum, Aug. 18, 1997.

REVISIONS.--Water-level mean values and extremes for period of record published in Water Resources Data, North Carolina, NC-87-1, should be adjusted by +0.49 ft.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29	11.39	JAN 24	11.32	APR 2	11.43	MAY 21	11.47	JUN 24	11.82	AUG 18	11.95
NOV 21	11.29	MAR 6	11.33								



PITT COUNTY

353219077153801. Local number, NC-160; USGS well PI-532.

LOCATION.--Lat 35°32'19", long 77°15'38", Hydrologic Unit 03020103, 2.7 mi southwest of Simpson in southeast corner of intersection of Secondary Roads 1755 and 1769. Owner: U.S. Geological Survey.

AQUIFER.--Surficial aquifer of post-Miocene age.

WELL CHARACTERISTICS.--Bored observation well, augered to 12 ft, diameter 6 in., cased to 5.9 ft, screened interval from 5.9 ft to 10.9 ft.

INSTRUMENTATION.--Satellite telemetry with a 60-minute recording interval.

DATUM.--Land-surface datum is 56.27 ft above sea level (levels by Soil Conservation Service). Measuring point: Top of instrument shelf, 3.72 ft above land-surface datum; revised from 1.04 ft above land-surface datum, Oct. 4, 1990.

REMARKS.--Well is part of climatic-effects network.

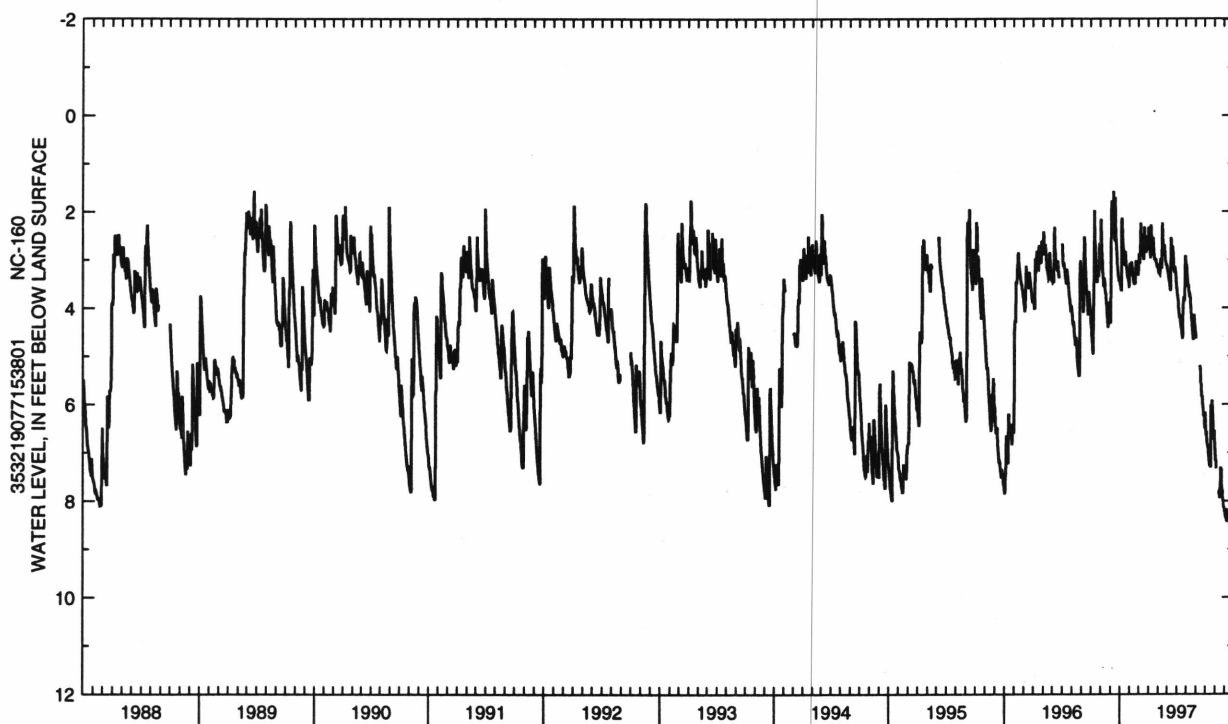
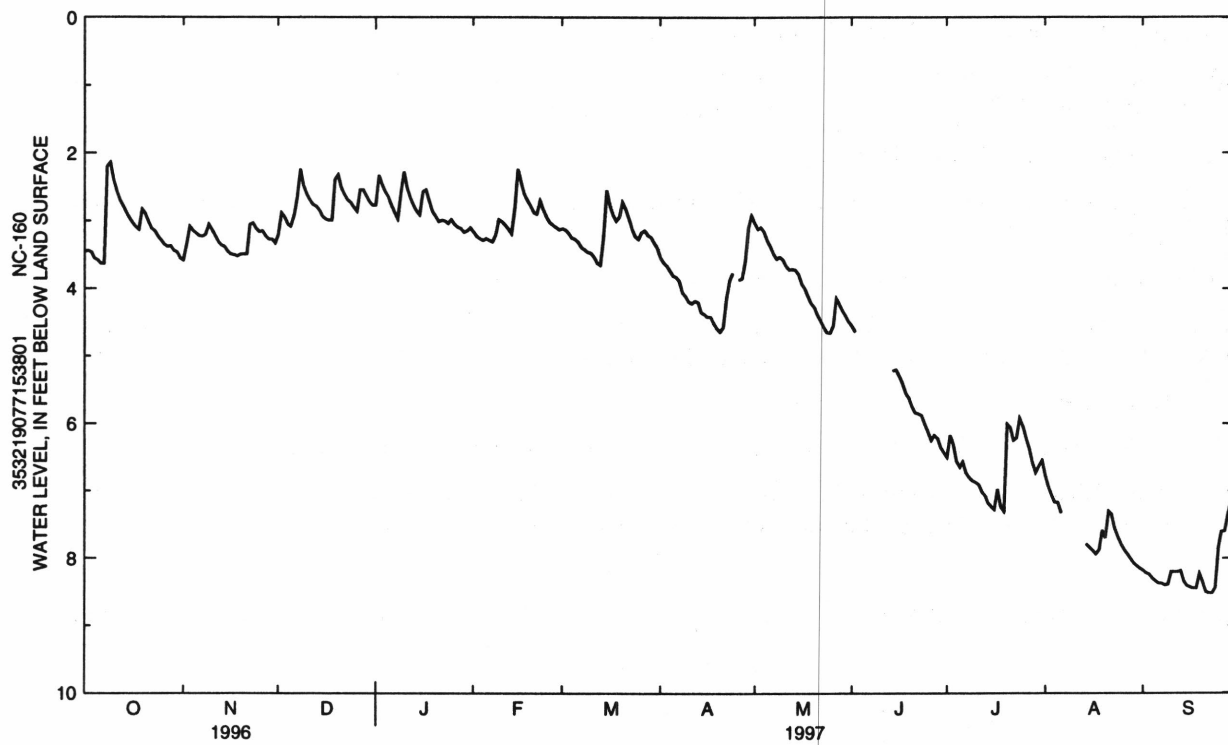
PERIOD OF RECORD.--December 1976 to current year. Prior to October 1986, published as Local number, PI-532.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.97 ft below land-surface datum, Sept. 12, 1996; lowest water level recorded, 8.84 ft below land-surface datum, Nov. 6, 7, and 8, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.45	3.58	3.21	2.77	3.16	3.11	3.54	3.03	4.55	6.50	6.78	8.18
2	3.44	3.35	2.88	2.33	3.23	3.13	3.61	3.12	4.64	6.17	6.93	8.22
3	3.46	3.08	2.94	2.46	3.26	3.18	3.66	3.09	---	6.32	7.06	8.24
4	3.55	3.14	3.05	2.57	3.29	3.25	3.73	3.16	---	6.56	7.17	8.30
5	3.58	3.18	3.08	2.64	3.26	3.27	3.81	3.29	---	6.65	7.17	8.34
6	3.63	3.22	2.91	2.77	3.29	3.31	3.83	3.38	---	6.57	7.33	8.37
7	3.63	3.23	2.65	2.87	3.31	3.39	3.89	3.48	---	6.73	---	8.38
8	2.20	3.20	2.24	2.97	3.20	3.42	4.06	3.56	---	6.80	---	8.40
9	2.14	3.05	2.47	2.60	2.98	3.46	4.11	3.53	---	6.85	---	8.39
10	2.39	3.13	2.60	2.28	3.01	3.47	4.19	3.57	---	6.87	---	8.20
11	2.56	3.22	2.69	2.51	3.06	3.53	4.22	3.66	---	6.91	---	8.21
12	2.69	3.31	2.76	2.66	3.12	3.62	4.18	3.72	---	7.02	---	8.21
13	2.78	3.36	2.78	2.77	3.19	3.65	4.20	3.71	---	7.07	---	8.19
14	2.87	3.38	2.84	2.86	2.80	3.23	4.35	3.72	5.22	7.18	7.79	8.35
15	2.96	3.45	2.93	2.91	2.24	2.55	4.38	3.79	5.20	7.24	7.84	8.41
16	3.03	3.49	2.97	2.57	2.43	2.76	4.42	3.93	5.30	7.28	7.89	8.43
17	3.09	3.50	2.99	2.54	2.60	2.91	4.42	4.00	5.40	6.98	7.94	8.45
18	3.13	3.52	2.99	2.71	2.70	3.00	4.51	4.12	5.55	7.24	7.88	8.45
19	2.83	3.49	2.39	2.86	2.78	2.94	4.59	4.22	5.62	7.31	7.59	8.23
20	2.89	3.49	2.32	2.93	2.88	2.72	4.64	4.28	5.75	6.01	7.70	8.36
21	3.01	3.49	2.51	3.01	2.90	2.83	4.57	4.39	5.84	6.06	7.31	8.50
22	3.11	3.05	2.61	2.99	2.70	2.96	4.15	4.48	5.85	6.25	7.35	8.52
23	3.15	3.03	2.69	3.00	2.83	3.12	3.88	4.57	5.88	6.21	7.56	8.52
24	3.23	3.11	2.73	3.04	2.94	3.23	3.77	4.65	6.01	5.92	7.69	8.44
25	3.29	3.16	2.80	2.98	3.02	3.27	---	4.66	6.12	6.05	7.79	7.84
26	3.35	3.15	2.86	3.05	3.06	3.17	3.87	4.55	6.25	6.21	7.88	7.61
27	3.38	3.23	2.54	3.09	3.09	3.14	3.85	4.14	6.17	6.37	7.94	7.60
28	3.37	3.27	2.54	3.11	3.13	3.21	3.60	4.23	6.22	6.58	8.01	7.37
29	3.44	3.27	2.63	3.17	---	3.24	3.10	4.33	6.35	6.73	8.07	7.16
30	3.46	3.33	2.72	3.15	---	3.32	2.92	4.41	6.43	6.63	8.11	7.31
31	3.55	---	2.77	3.10	---	3.40	---	4.49	---	6.55	8.15	---
WTR YR 1997	MEAN 4.42		HIGH 2.14		LOW 8.52							



PITT COUNTY--Continued

354457077215504. Local number, NC-183; DENR Bethel Research Station well L24b4.

LOCATION.--Lat 35°44'57", long 77°21'55", Hydrologic Unit 03020103, 4.2 mi south of Bethel on U.S. Highway 13 and State Highway 11 at North Pitt High School. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Upper Cape Fear aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation well, drilled to 370 ft, diameter 4 in., cased to 360 ft, screened interval from 360 to 370 ft.

INSTRUMENTATION.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 55.31 ft above sea level (levels by DENR). Measuring point: Top of instrument shelf, 1.87 ft above land-surface datum.

REMARKS.--Well is part of areal-effects network.

PERIOD OF RECORD.--April 1980 to current year. Continuous record October 1983 to November 1990. Records from April 1980 to September 1983 are unpublished and available in the files of the Groundwater Section, DENR.

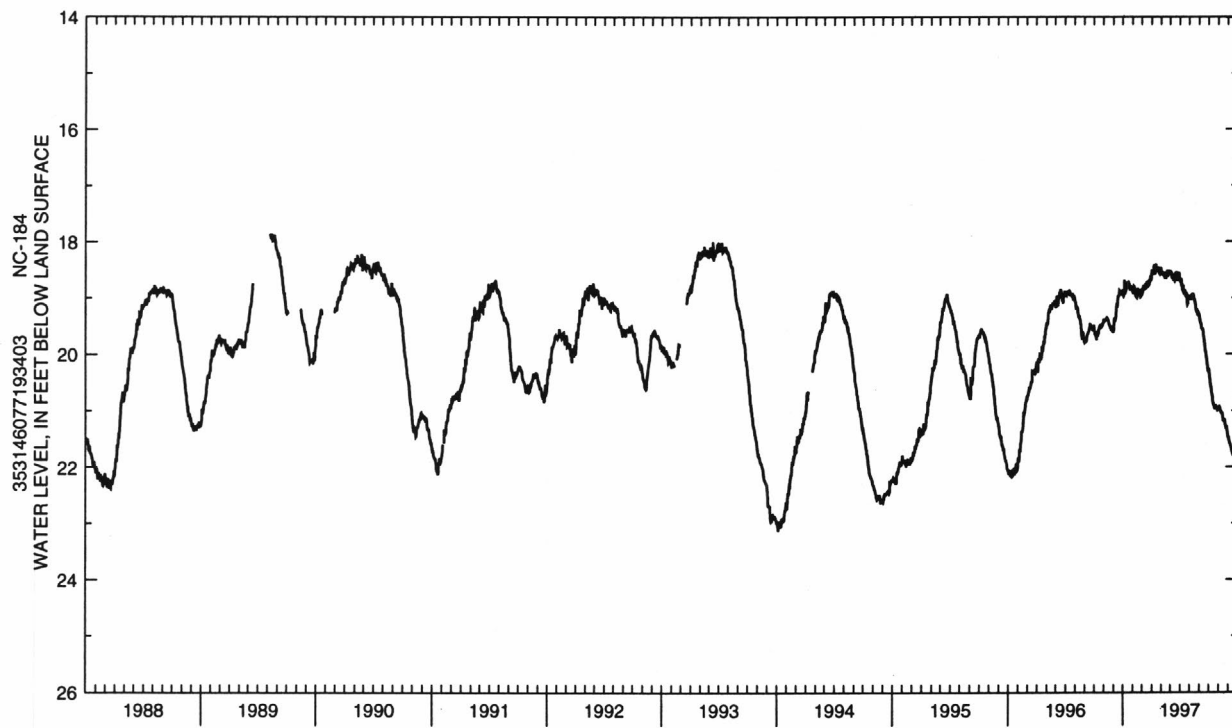
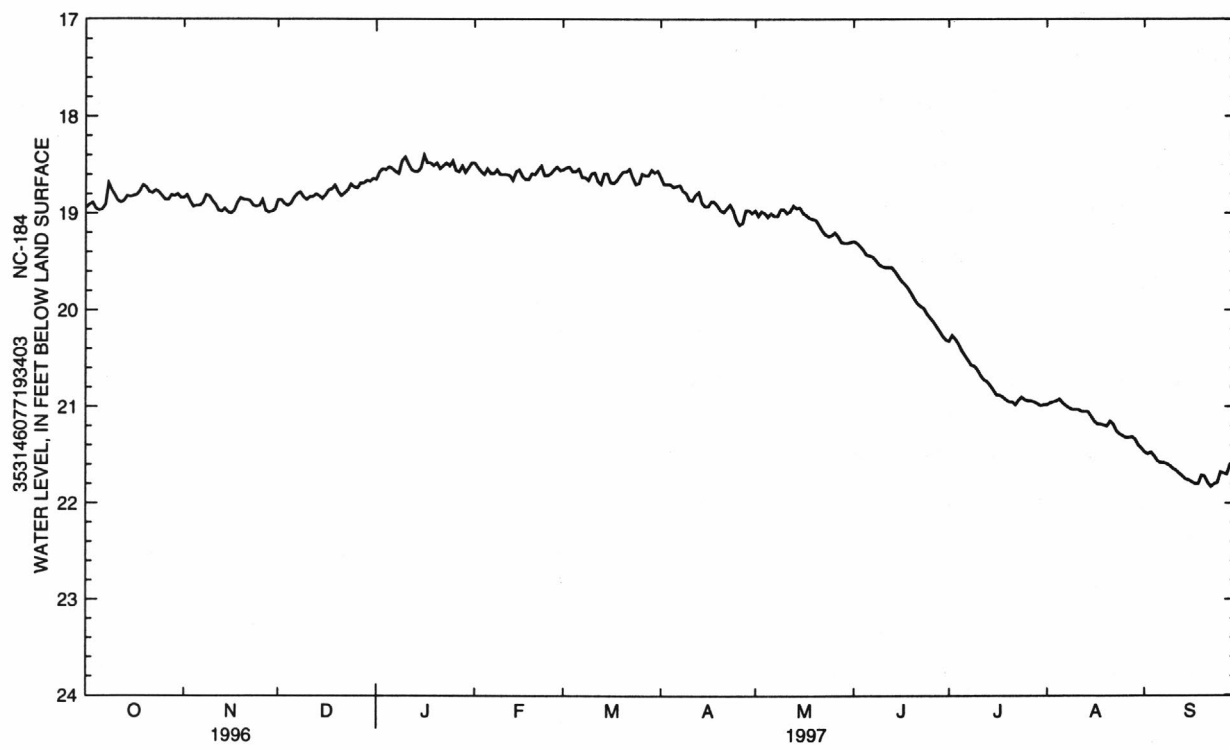
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 56.33 ft below land-surface datum, Apr. 17, 1980; lowest water level measured, 80.44 ft below land-surface datum, Aug. 22, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	80.05	JAN 21	79.80	APR 14	79.54	MAY 22	79.57	JUN 27	79.82	AUG 22	80.44
NOV 21	80.01	MAR 4	79.61								



DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.94	18.84	18.86	18.65	18.48	18.55	18.63	18.97	19.29	20.32	20.98	21.47
2	18.91	18.81	18.86	18.57	18.53	18.53	18.70	19.03	19.31	20.26	20.96	21.49
3	18.89	18.88	18.90	18.54	18.57	18.52	18.70	18.98	19.34	20.30	20.95	21.47
4	18.95	18.93	18.92	18.55	18.60	18.57	18.70	19.00	19.38	20.35	20.94	21.51
5	18.97	18.92	18.90	18.52	18.54	18.57	18.73	19.04	19.43	20.42	20.92	21.55
6	18.96	18.92	18.84	18.54	18.59	18.54	18.72	19.00	19.44	20.47	20.96	21.58
7	18.91	18.89	18.80	18.57	18.59	18.63	18.71	19.03	19.45	20.52	20.99	21.58
8	18.69	18.81	18.78	18.59	18.55	18.63	18.77	19.03	19.49	20.57	21.01	21.59
9	18.76	18.82	18.83	18.46	18.60	18.66	18.79	18.96	19.53	20.58	21.03	21.61
10	18.81	18.87	18.86	18.42	18.60	18.59	18.86	18.96	19.55	20.62	21.03	21.64
11	18.87	18.91	18.83	18.49	18.60	18.58	18.87	19.00	19.56	20.68	21.03	21.66
12	18.89	18.97	18.83	18.55	18.61	18.67	18.81	18.98	19.56	20.72	21.05	21.69
13	18.87	18.98	18.80	18.57	18.66	18.70	18.78	18.92	19.56	20.74	21.05	21.72
14	18.82	18.95	18.82	18.57	18.57	18.59	18.89	18.95	19.60	20.78	21.05	21.75
15	18.83	18.99	18.85	18.53	18.55	18.59	18.93	18.94	19.65	20.83	21.10	21.76
16	18.82	19.00	18.81	18.40	18.62	18.68	18.93	19.00	19.70	20.88	21.15	21.78
17	18.81	18.97	18.76	18.48	18.65	18.69	18.88	19.02	19.73	20.88	21.18	21.80
18	18.77	18.89	18.75	18.48	18.65	18.66	18.88	19.05	19.77	20.90	21.18	21.80
19	18.71	18.84	18.71	18.51	18.59	18.61	18.92	19.06	19.82	20.93	21.19	21.71
20	18.73	18.86	18.78	18.48	18.60	18.57	18.97	19.07	19.88	20.95	21.20	21.72
21	18.78	18.86	18.82	18.54	18.55	18.57	18.99	19.12	19.93	20.95	21.15	21.79
22	18.79	18.87	18.79	18.51	18.51	18.54	18.95	19.18	19.96	20.98	21.18	21.83
23	18.76	18.92	18.76	18.48	18.61	18.63	18.91	19.22	19.98	20.93	21.25	21.80
24	18.78	18.93	18.70	18.51	18.61	18.70	18.97	19.24	20.04	20.90	21.28	21.79
25	18.82	18.92	18.73	18.46	18.59	18.69	19.07	19.23	20.08	20.93	21.30	21.68
26	18.86	18.86	18.74	18.56	18.55	18.59	19.12	19.20	20.12	20.94	21.32	21.69
27	18.86	18.97	18.69	18.57	18.52	18.61	19.10	19.24	20.17	20.94	21.32	21.70
28	18.81	18.99	18.69	18.51	18.56	18.61	18.97	19.30	20.22	20.95	21.31	21.60
29	18.82	18.98	18.66	18.58	---	18.55	18.97	19.31	20.27	20.97	21.34	21.58
30	18.80	18.96	18.67	18.53	---	18.58	19.00	19.31	20.31	20.99	21.40	21.58
31	18.84	---	18.64	18.48	---	18.56	---	19.30	---	20.98	21.43	---
WTR YR 1997		MEAN	19.46	HIGH	18.40	LOW 21.83						



RICHMOND COUNTY

350122079325006. Local number, NC-171; DENR Hoffman Research Station well T50r6.

LOCATION.--Lat 35°01'22", long 79°32'50", Hydrologic Unit 03040203, 0.6 mi south of Hoffman on Secondary Road 1474.
Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Unconfined sands in the upper Black Creek aquifer.

WELL CHARACTERISTICS.--Drilled observation well, drilled to 60 ft, diameter 4 in., cased to 45 ft, screened interval from 45 to 60 ft.

INSTRUMENTATION.--Digital recorder with a 60-minute punch interval January 1987 to November 1988; measured periodically with steel tape since November 1988.

DATUM.--Land-surface datum in 413 ft above sea level (from topographic map). Measuring point: Top of casing, 1.80 ft above land-surface datum (since January 1989).

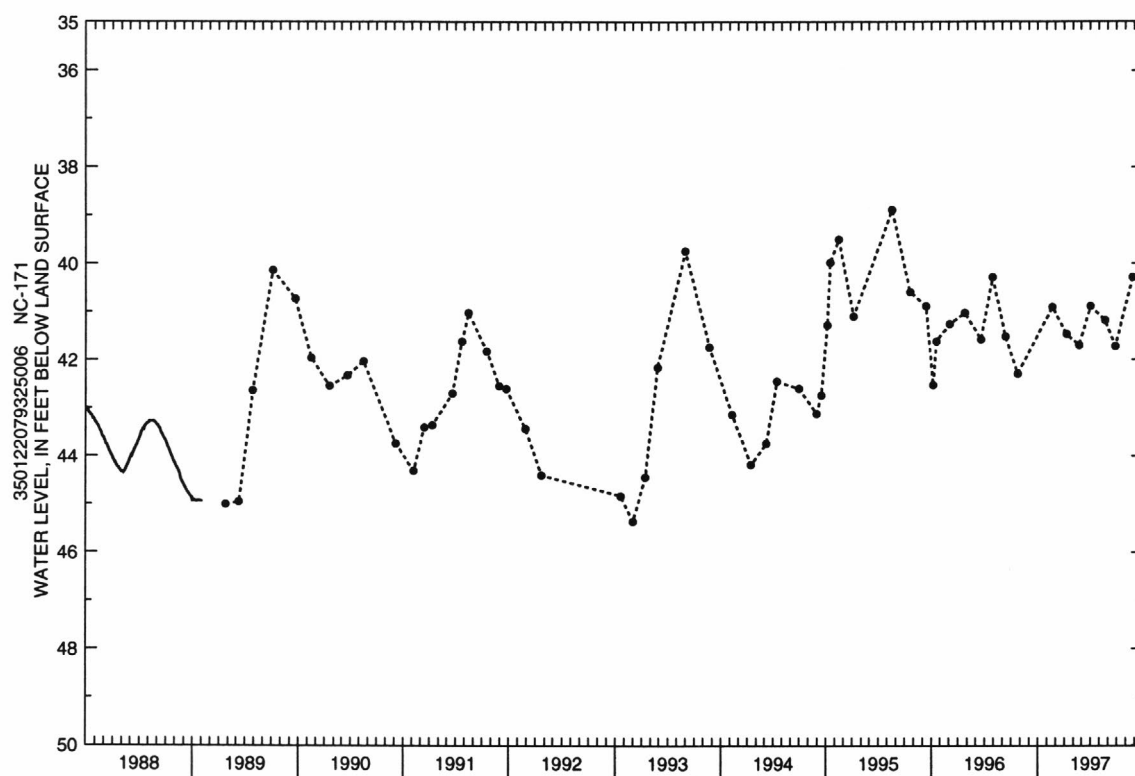
REMARKS.--Well is part of terrane-effects network.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded 38.55 ft below land-surface datum, Apr. 8, 9, and 10, 1987; lowest water level measured 45.36 ft below land-surface datum, Dec. 1, 1992.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

[illegible]



ROBESON COUNTY

343840078550009. Local number, NC-177; USGS well Rb-183; DENR Littlefield School Research Station well Y42f9.

LOCATION.--Lat 34°38'40", long 78°55'00", Hydrologic Unit 03040203, 6 mi east of Lumberton on State Highway 41 at Littlefield School. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Upper Cape Fear aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation well, drilled to 468 ft, diameter 6 in., cased to 390 ft and from 395 to 429 ft and 434 to 444 ft, screened intervals from 390 to 395 ft, 429 to 434 ft, and 444 to 449 ft; measured depth 462 ft, December 1987.

INSTRUMENTATION.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 142 ft above sea level (from topographic map). Measuring point: Top of instrument shelf, 1.40 ft above land-surface datum.

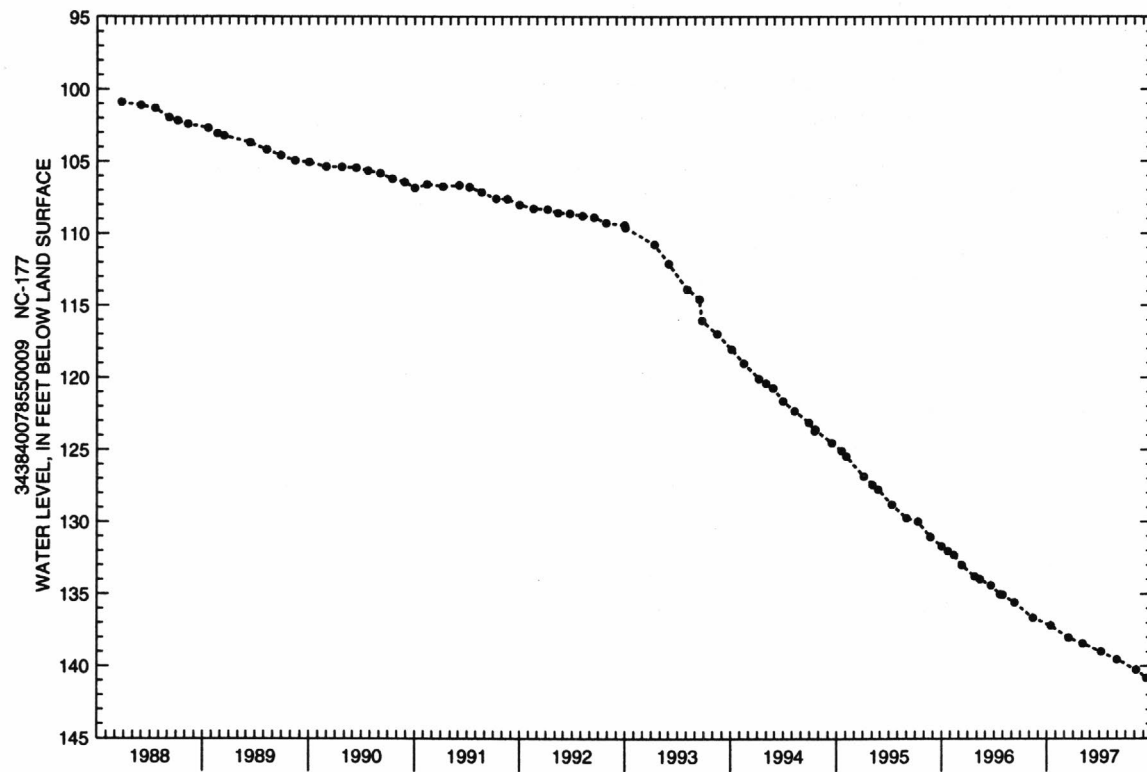
REMARKS.--Well is part of areal-effects network. Records prior to July 1985 are from Littlefield School Research Station well Y42f3 which was adjacent to and of similar construction to well Y42f9. Well Y42f3 was destroyed in September 1987.

PERIOD OF RECORD.--October 1970 to current year. Records for well Y42f3 from October 1970 to June 1985 are unpublished and available in the files of the Groundwater Section, DENR.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 76.40 ft below land-surface datum, Jan. 5, 1971; lowest water level measured, 140.81 ft below land-surface datum, Sep. 11, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	137.19	FEB 3	138.42	APR 8	138.98	JUN 2	139.53	AUG 7	140.25	SEP 11	140.81
DEC 16	138.03										



ROBESON COUNTY--Continued

343156079174702. Local number, Rb-148; DENR Rowland Research Station well Z47m2.

LOCATION.--Lat 34°31'55", long 79°17'47", Hydrologic Unit 03040204, in Rowland, southwest of corner of West Elm and South Railroad Streets. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Black Creek aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation well, depth 263 ft, diameter 4 in., cased to 247 ft and from 252 to 258 ft, screened intervals from 247 to 252 ft and 258 to 263 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 143.15 ft above sea level (levels by DENR). Measuring point: Top of flange attached to floor of instrument shelter, 2.1 ft above land-surface datum (since December 1995).

REMARKS.--Well is part of southern Coastal Plain ground-water level monitoring study.

PERIOD OF RECORD.--April 1971 to current year. Continuous record since December 1995. Records from April 1971 to January 1984 are unpublished and available in the files of the Groundwater Section, DENR.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 23.80 ft below land-surface datum, Apr. 30, 1971; lowest, 40.70 ft below land-surface datum, Sept. 30, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

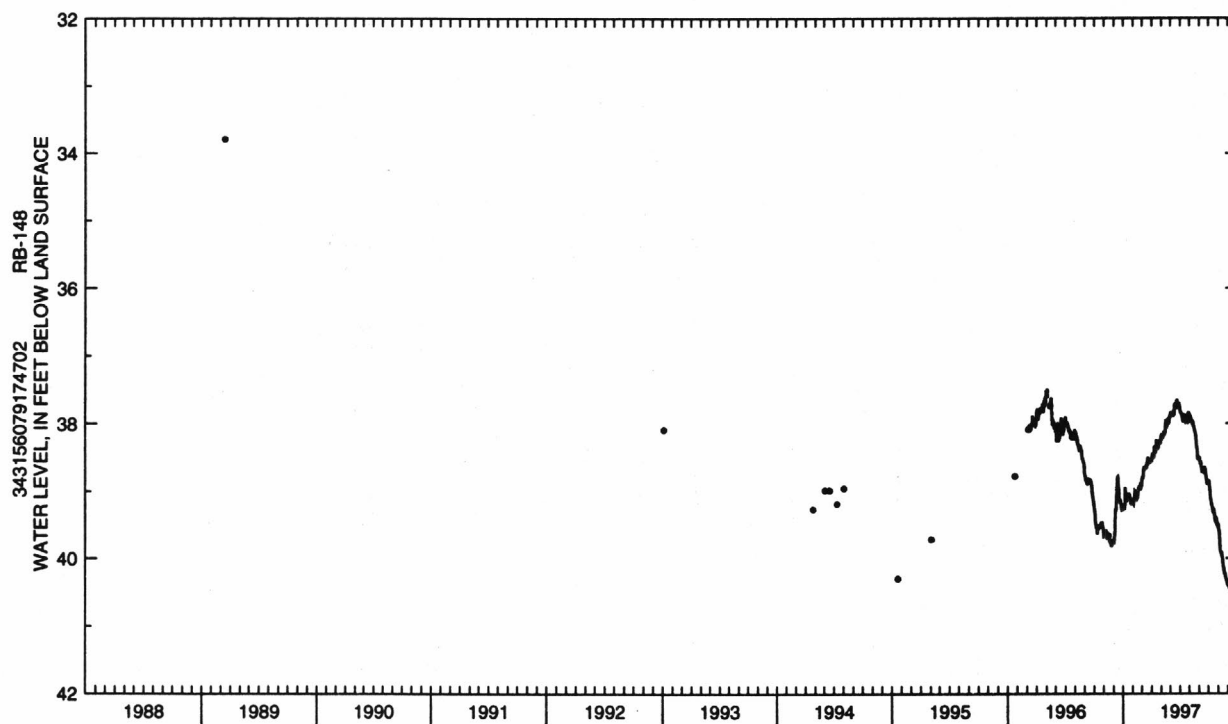
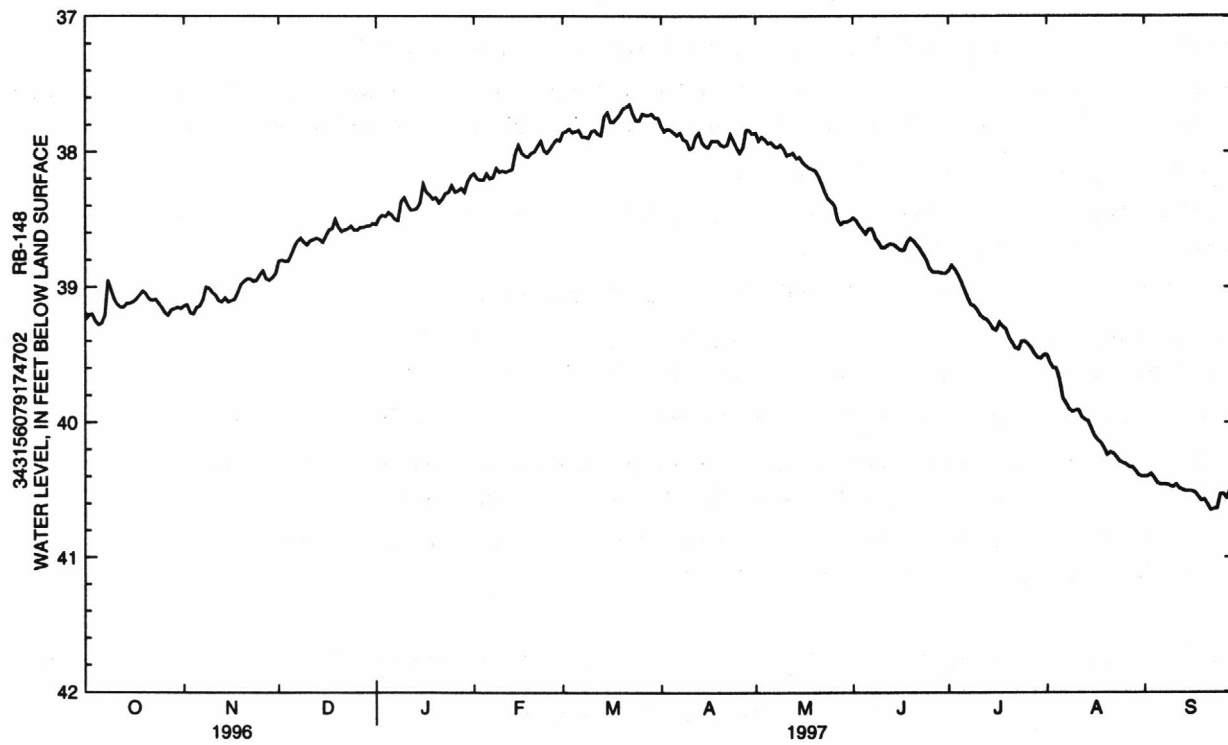
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39.24	39.14	38.81	38.54	38.16	37.86	37.81	37.86	38.49	38.88	39.50	40.40
2	39.21	39.13	38.80	38.49	38.20	37.85	37.85	37.92	38.51	38.84	39.56	40.40
3	39.20	39.19	38.81	38.47	38.21	37.83	37.83	37.89	38.55	38.87	39.60	40.38
4	39.25	39.20	38.81	38.48	38.21	37.86	37.84	37.91	38.58	38.91	39.60	40.41
5	39.28	39.15	38.76	38.45	38.16	37.85	37.86	37.94	38.61	38.96	39.69	40.45
6	39.27	39.14	38.70	38.47	38.20	37.84	37.88	37.93	38.57	39.02	39.82	40.46
7	39.21	39.09	38.66	38.50	38.19	37.89	37.86	37.96	38.57	39.08	39.86	40.46
8	38.95	39.00	38.64	38.51	38.12	37.89	37.91	37.97	38.64	39.13	39.90	40.46
9	39.02	39.01	38.67	38.37	38.15	37.90	37.92	37.95	38.67	39.14	39.92	40.47
10	39.09	39.04	38.69	38.34	38.14	37.85	37.98	37.98	38.71	39.17	39.91	40.48
11	39.13	39.06	38.66	38.39	38.15	37.84	37.97	38.03	38.71	39.21	39.91	40.46
12	39.15	39.10	38.65	38.43	38.14	37.87	37.89	38.02	38.69	39.23	39.96	40.49
13	39.15	39.11	38.64	38.43	38.13	37.88	37.86	38.01	38.68	39.24	39.98	40.50
14	39.12	39.08	38.65	38.42	38.01	37.74	37.93	38.05	38.69	39.27	39.99	40.51
15	39.12	39.11	38.67	38.38	37.95	37.71	37.96	38.04	38.71	39.31	40.05	40.51
16	39.11	39.10	38.62	38.24	38.01	37.78	37.97	38.08	38.73	39.32	40.10	40.51
17	39.09	39.09	38.58	38.30	38.03	37.78	37.92	38.10	38.73	39.26	40.13	40.52
18	39.06	39.04	38.57	38.32	38.04	37.75	37.92	38.12	38.67	39.29	40.15	40.55
19	39.03	38.98	38.50	38.35	38.01	37.72	37.92	38.13	38.64	39.31	40.19	40.58
20	39.05	38.96	38.56	38.34	38.00	37.68	37.95	38.14	38.66	39.37	40.24	40.57
21	39.09	38.94	38.59	38.38	37.96	37.67	37.96	38.18	38.69	39.41	40.22	40.61
22	39.10	38.94	38.58	38.35	37.92	37.65	37.95	38.24	38.72	39.45	40.23	40.65
23	39.09	38.96	38.57	38.31	37.99	37.72	37.87	38.30	38.76	39.46	40.26	40.64
24	39.12	38.95	38.55	38.30	38.01	37.77	37.92	38.35	38.80	39.40	40.29	40.64
25	39.15	38.91	38.58	38.25	37.98	37.77	37.97	38.37	38.86	39.40	40.30	40.53
26	39.19	38.88	38.58	38.30	37.94	37.72	38.01	38.40	38.89	39.42	40.31	40.53
27	39.21	38.94	38.56	38.29	37.91	37.73	37.97	38.50	38.89	39.45	40.33	40.56
28	39.17	38.95	38.56	38.27	37.92	37.73	37.84	38.54	38.89	39.49	40.33	40.51
29	39.16	38.93	38.55	38.30	---	37.72	37.84	38.52	38.90	39.52	40.36	40.57
30	39.15	38.90	38.55	38.22	---	37.75	37.87	38.52	38.90	39.53	40.39	40.66
31	39.16	---	38.53	38.18	---	37.75	---	38.51	---	39.50	40.40	---

WTR YR 1997

MEAN 38.80

HIGH 37.65

LOW 40.66



343840078550010. Local number, Rb-184; DENR Littlefield School Research Station well Y42f10.

AQUIFER.--Black Creek aquifer of Late Cretaceous age.

INSTRUMENTATION.--Measured periodically with steel tape.

REMARKS.--Well is part of southern Coastal Plain ground-water level monitoring study.

PERIOD OF RECORD.--August 1981, to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.48 ft below land-surface datum, Aug. 18, 1981; lowest, 42.76 ft below land-surface datum, Sept. 11, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL
SEP 30	38.57

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE		WATER LEVEL	DATE		WATER LEVEL	DATE		WATER LEVEL	DATE		WATER LEVEL
JAN 12	38.43	MAR 11	38.65	JUN 16	39.01	JUN 25	39.10	JUL 29	39.03	AUG 17	39.23
MAR 9	39.60	MAY 5	38.81								

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE		WATER LEVEL		DATE		WATER LEVEL		DATE		WATER LEVEL	
OCT 4	39.28	DEC 15	39.20	JAN 24	39.34	FEB 24	39.25	MAY 10	39.62	JUL 21	39.71
NOV 16	39.35	JAN 7	38.82	JAN 31	39.30	MAR 31	40.42	JUN 29	39.59	SEP 15	39.90

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

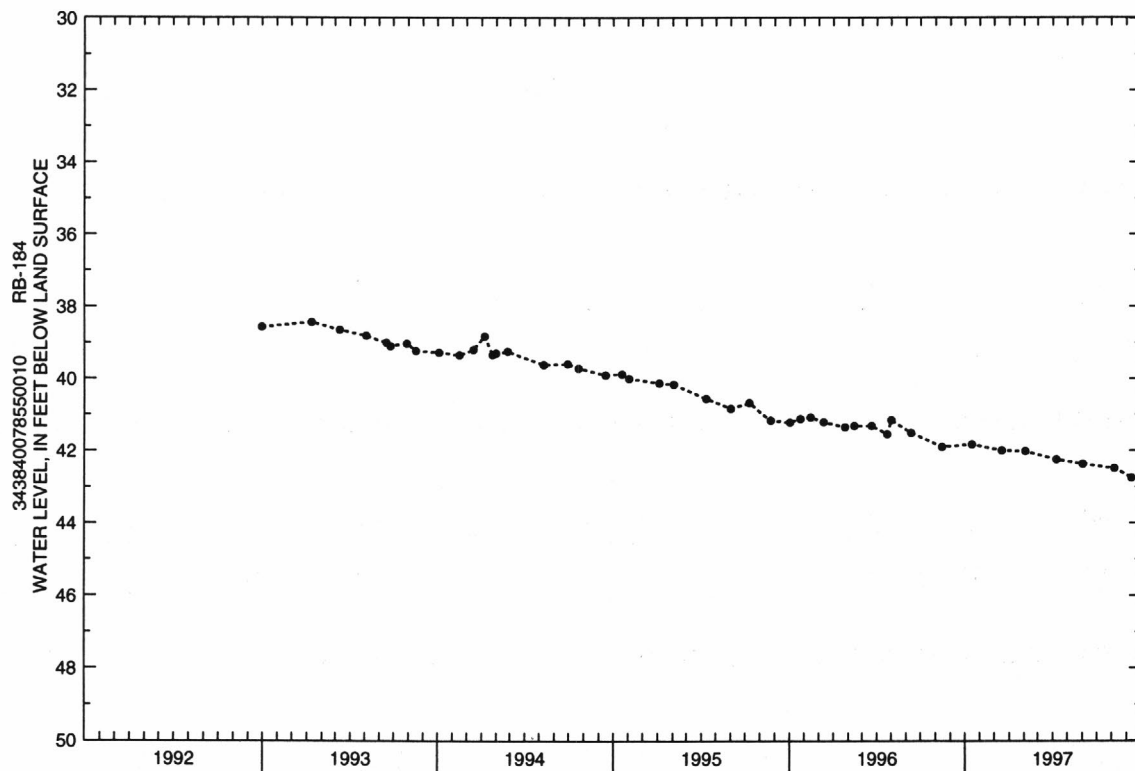
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	39.88	JAN 4	40.12	APR 11	40.56	JUN 1	40.83	JUL 10	40.68	AUG 23	41.17
NOV 3	40.00	FEB 3	40.16								

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 2	41.22	NOV 14	41.07	JAN 25	41.35	MAR 21	41.32	MAY 1	41.16	AUG 14	41.90
OCT 24	41.12	DEC 11	41.21	FEB 13	41.31	APR 22	41.54	JUN 11	41.51		

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	41.83	FEB 3	42.02	APR 8	42.25	JUN 2	42.37	AUG 7	42.49	SEP 11	42.76
DEC 16	42.00										



ROBESON COUNTY--Continued

343840078550011. Local number, Rb-185; DENR Littlefield School Research Station well Y42f11.

LOCATION.--Lat 34°38'39", long 78°54'59", Hydrologic Unit 03040203, 4 mi east of Lumberton on State Highway 41 at Littlefield School. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Black Creek aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation well, depth 155 ft, diameter 6 in., cased to 140 ft and from 145 to 150 ft, screened intervals from 140 to 145 ft and 150 to 155 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 142 ft above sea level (from topographic map). Measuring point: Top of instrument shelf, 1.05 ft above land-surface datum.

REMARKS.--Well is part of southern Coastal Plain ground-water level monitoring study.

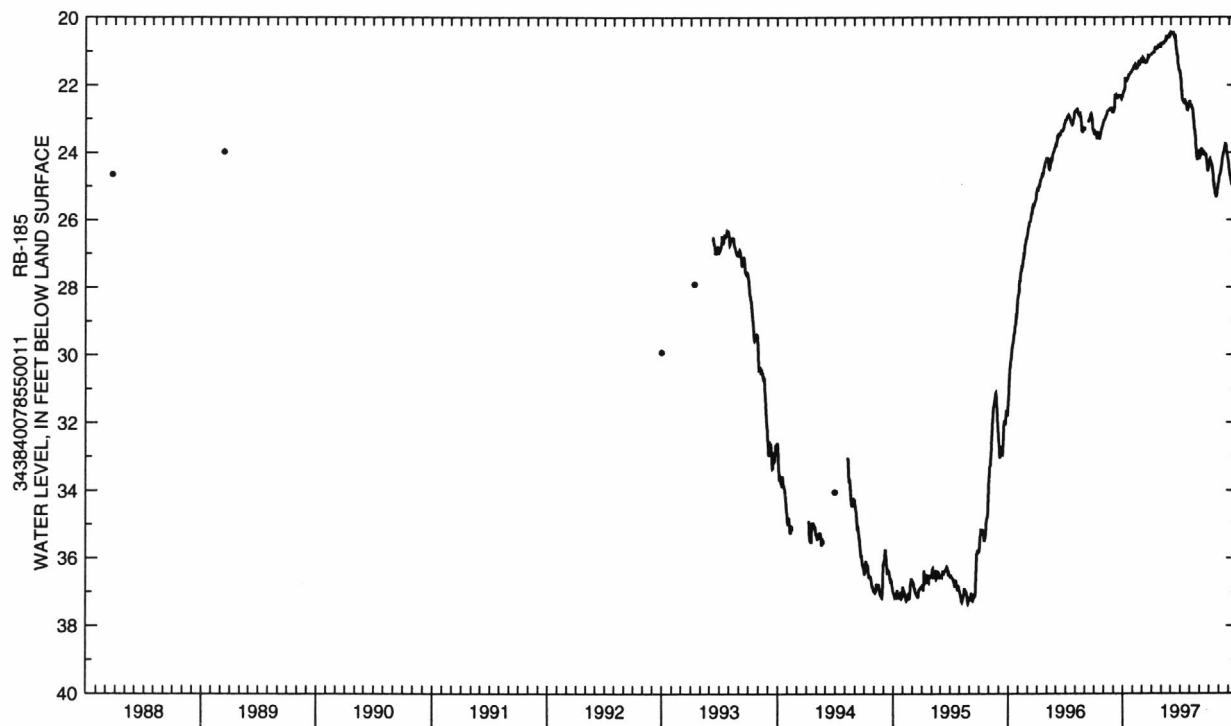
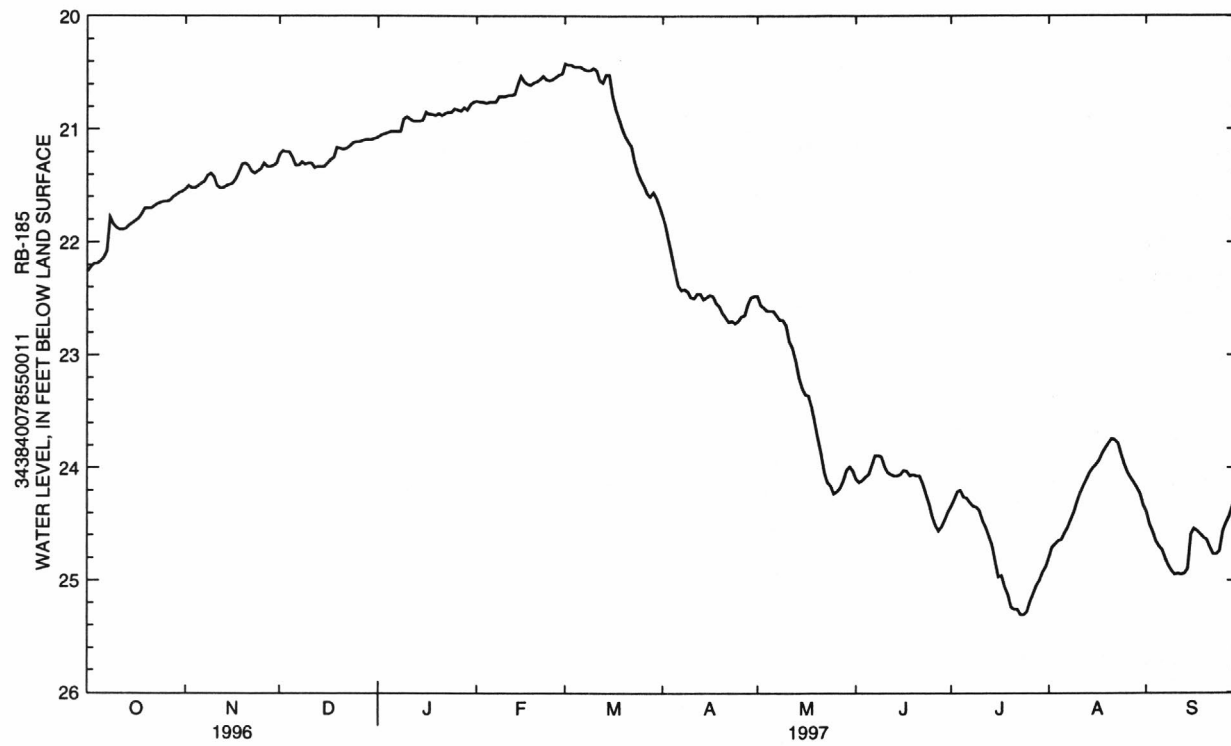
PERIOD OF RECORD.--August 1981 to current year. Continuous record since March 1993.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 20.41 ft below land-surface datum, Feb. 28 and Mar. 1, 1997; lowest, 37.36 ft below land-surface datum, May 27 and 28, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.26	21.53	21.22	21.07	20.75	20.42	21.77	22.48	24.10	24.34	24.80	24.39
2	22.22	21.50	21.19	21.05	20.76	20.43	21.86	22.56	24.13	24.28	24.71	24.50
3	22.19	21.52	21.20	21.04	20.76	20.43	22.00	22.58	24.11	24.21	24.68	24.57
4	22.19	21.52	21.20	21.03	20.77	20.45	22.13	22.61	24.08	24.20	24.65	24.65
5	22.17	21.50	21.25	21.02	20.76	20.45	22.27	22.61	24.06	24.26	24.64	24.70
6	22.14	21.48	21.32	21.02	20.76	20.45	22.39	22.61	23.97	24.27	24.58	24.73
7	22.08	21.46	21.32	21.02	20.76	20.47	22.43	22.65	23.89	24.31	24.53	24.81
8	21.78	21.41	21.29	21.02	20.71	20.48	22.42	22.69	23.89	24.34	24.46	24.87
9	21.84	21.39	21.31	20.91	20.71	20.48	22.44	22.69	23.90	24.35	24.39	24.92
10	21.87	21.42	21.30	20.89	20.71	20.46	22.49	22.74	23.99	24.38	24.30	24.95
11	21.89	21.50	21.30	20.91	20.70	20.48	22.50	22.88	24.04	24.47	24.22	24.94
12	21.89	21.52	21.34	20.93	20.70	20.57	22.46	22.94	24.06	24.53	24.16	24.95
13	21.88	21.52	21.33	20.93	20.69	20.59	22.46	23.05	24.07	24.61	24.10	24.94
14	21.85	21.50	21.33	20.93	20.60	20.52	22.51	23.20	24.07	24.69	24.04	24.90
15	21.83	21.49	21.33	20.92	20.53	20.52	22.49	23.29	24.06	24.84	24.00	24.59
16	21.81	21.48	21.30	20.85	20.58	20.70	22.47	23.35	24.02	24.97	23.97	24.54
17	21.79	21.44	21.27	20.87	20.60	20.82	22.48	23.36	24.03	24.96	23.93	24.56
18	21.75	21.38	21.25	20.87	20.61	20.90	22.54	23.46	24.07	25.06	23.87	24.59
19	21.70	21.31	21.16	20.88	20.59	20.99	22.57	23.59	24.06	25.13	23.82	24.62
20	21.70	21.30	21.17	20.86	20.58	21.06	22.63	23.74	24.07	25.24	23.78	24.64
21	21.70	21.32	21.18	20.88	20.56	21.11	22.67	23.87	24.07	25.26	23.74	24.71
22	21.68	21.37	21.17	20.86	20.53	21.15	22.71	24.04	24.14	25.26	23.75	24.77
23	21.66	21.39	21.15	20.85	20.56	21.29	22.70	24.13	24.23	25.31	23.78	24.77
24	21.65	21.37	21.12	20.85	20.57	21.38	22.72	24.16	24.32	25.31	23.88	24.74
25	21.64	21.35	21.11	20.82	20.56	21.45	22.70	24.23	24.43	25.28	23.97	24.56
26	21.64	21.30	21.11	20.83	20.54	21.50	22.66	24.21	24.51	25.19	24.04	24.49
27	21.63	21.33	21.10	20.84	20.52	21.57	22.65	24.18	24.56	25.12	24.09	24.43
28	21.60	21.33	21.09	20.81	20.51	21.60	22.55	24.11	24.52	25.05	24.13	24.34
29	21.58	21.32	21.09	20.83	---	21.56	22.49	24.02	24.46	25.00	24.18	24.29
30	21.56	21.30	21.09	20.78	---	21.61	22.48	23.99	24.39	24.93	24.23	24.26
31	21.55	---	21.08	20.76	---	21.69	---	24.03	---	24.88	24.33	---
WTR YR 1997		MEAN	22.55	HIGH	20.42	LOW 25.31						



ROBESON COUNTY--Continued

342620078581801. Local number, Rb-188; DENR Boardman Research Station well AA43q1.

LOCATION.--Lat 34°26'22", long 78°58'19", Hydrologic Unit 03040203, west of Boardman, 0.6 mi southwest of U.S. Highway 74 on Secondary Road 2245. Owner: DENR (North Carolina Department of Environment and Natural Resources).

AQUIFER.--Upper Cape Fear aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation well, depth 497 ft, diameter 4 in., cased to 445 ft and from 455 to 497 ft, screened interval from 445 to 455 ft.

INSTRUMENTATION.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 80.46 ft above sea level (levels by DENR). Measuring point: Top of collar on 4-inch casing, 4.46 ft above land-surface datum.

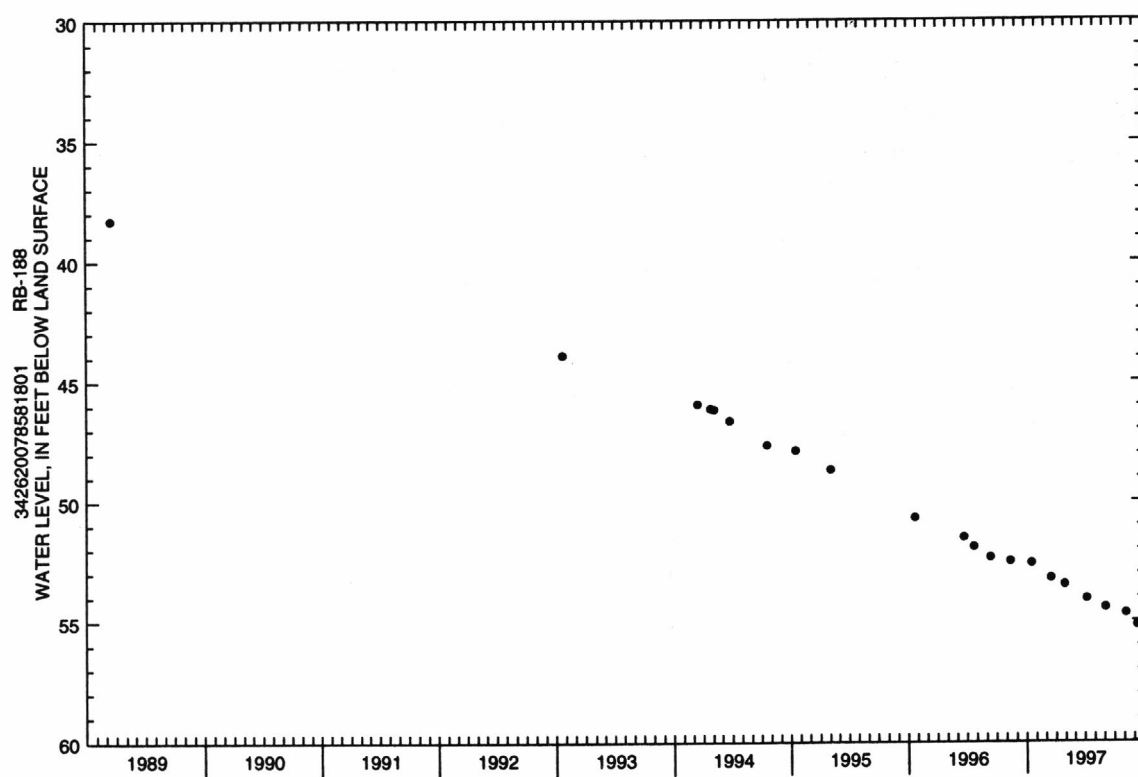
REMARKS.--Well is part of southern Coastal Plain ground-water level monitoring study.

PERIOD OF RECORD.--August 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 29.75 ft below land-surface datum, Aug. 18, 1981; lowest, 55.18 ft below land-surface datum, Sept. 10, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

[illegible]



WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

ROBESON COUNTY--Continued

343800079015201. Local number, Rb-202.

LOCATION.--Lat 34°37'58", long 79°01'57", Hydrologic Unit 03040203, in Lumberton at McMillan's Beach City Park.
Owner: City of Lumberton.

AQUIFER.--Black Creek aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled monitoring well, depth 98 ft, diameter 2.4 in., cased to 45.4 ft, screened interval from 45.4 to 98 ft.

INSTRUMENTATION.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 105 ft above sea level (from topographic map). Measuring point: Top of 2.4-inch casing, 1.45 ft above land-surface datum.

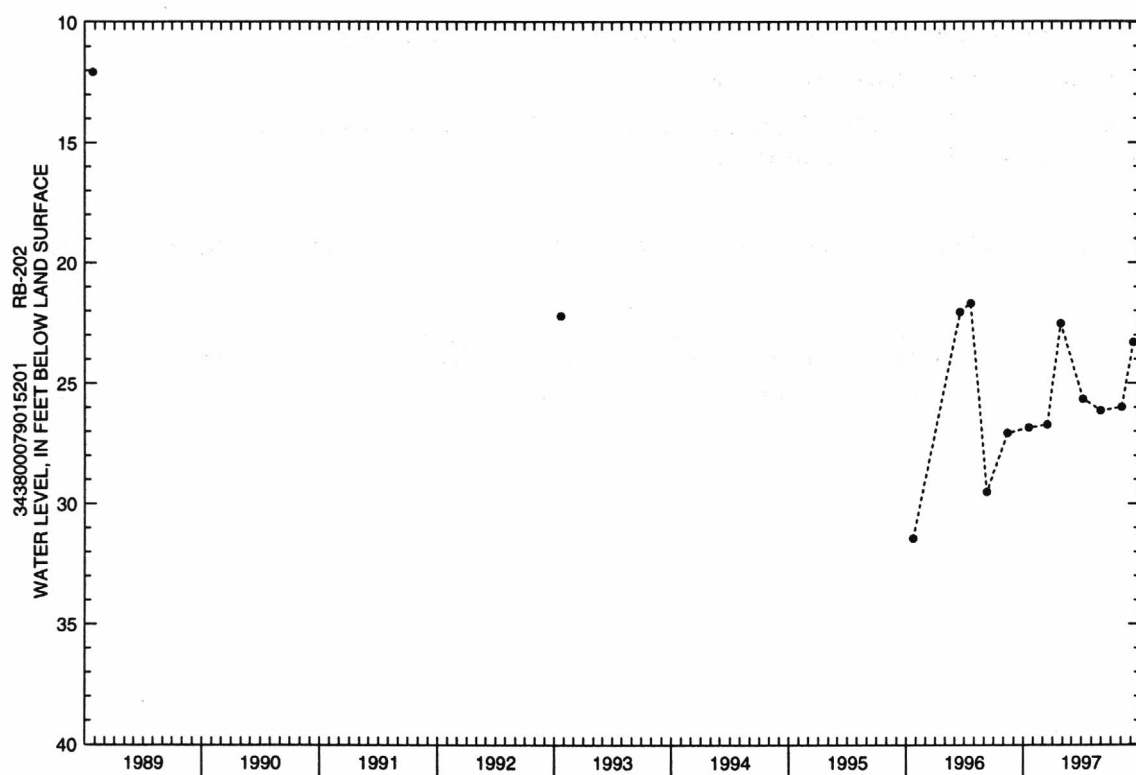
REMARKS.--Well is part of southern Coastal Plain ground-water level monitoring study.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.07 ft below land-surface datum, Oct. 25, 1988;
lowest, 31.44 ft below land-surface datum, Oct. 24, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	26.84	JAN 28	22.51	APR 8	25.65	JUN 2	26.13	AUG 6	25.99	SEP 11	23.31
DEC 17	26.72										



WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

ROBESON COUNTY--Continued

344621079192401. Local number, Rb-264.

LOCATION.--Lat 34°46'21", long 79°19'24", Hydrologic Unit 03040203, on State Highway 71 at Campbell Soup Company's plant near Maxton. Owner: Campbell Soup Company.

AQUIFER.--Black Creek aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled well, measured depth 84.3 ft, diameter 4 in., cased to 59 ft, screened interval from 59 to 79 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 30-minute intervals.

DATUM.--Land-surface datum is 195 ft above sea level (from topographic map). Measuring point: Top of instrument shelf, 1.37 ft above land-surface datum (since August 1996).

REMARKS.--Well is part of southern Coastal Plain ground-water level monitoring study.

PERIOD OF RECORD.--December 1993 to current year. Continuous record since August 1996.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 4.90 ft below land-surface datum, Mar. 31, 1997; lowest, 12.12 ft below land-surface datum, Sept. 26, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	8.08
2	---	---	---	---	---	---	---	---	---	---	---	8.00
3	---	---	---	---	---	---	---	---	---	---	---	9.18
4	---	---	---	---	---	---	---	---	---	---	---	10.29
5	---	---	---	---	---	---	---	---	---	---	---	10.47
6	---	---	---	---	---	---	---	---	---	---	---	7.74
7	---	---	---	---	---	---	---	---	---	---	---	8.53
8	---	---	---	---	---	---	---	---	---	---	---	8.51
9	---	---	---	---	---	---	---	---	---	---	---	8.86
10	---	---	---	---	---	---	---	---	---	---	---	9.33
11	---	---	---	---	---	---	---	---	---	---	---	9.31
12	---	---	---	---	---	---	---	---	---	---	---	9.05
13	---	---	---	---	---	---	---	---	---	---	---	9.09
14	---	---	---	---	---	---	---	---	---	---	---	8.58
15	---	---	---	---	---	---	---	---	---	---	---	7.49
16	---	---	---	---	---	---	---	---	---	---	---	8.12
17	---	---	---	---	---	---	---	---	---	---	---	8.85
18	---	---	---	---	---	---	---	---	---	---	---	9.06
19	---	---	---	---	---	---	---	---	---	---	---	8.98
20	---	---	---	---	---	---	---	---	---	---	---	8.88
21	---	---	---	---	---	---	---	---	---	---	10.20	8.61
22	---	---	---	---	---	---	---	---	---	---	10.16	7.60
23	---	---	---	---	---	---	---	---	---	---	10.09	7.81
24	---	---	---	---	---	---	---	---	---	---	9.52	8.80
25	---	---	---	---	---	---	---	---	---	---	8.30	8.73
26	---	---	---	---	---	---	---	---	---	---	9.19	8.83
27	---	---	---	---	---	---	---	---	---	---	10.19	8.92
28	---	---	---	---	---	---	---	---	---	---	10.30	8.15
29	---	---	---	---	---	---	---	---	---	---	10.53	6.90
30	---	---	---	---	---	---	---	---	---	---	10.48	7.97
31	---	---	---	---	---	---	---	---	---	---	8.77	---
WTR YR 1996	MEAN 8.94		HIGH 6.90		LOW 10.53							

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

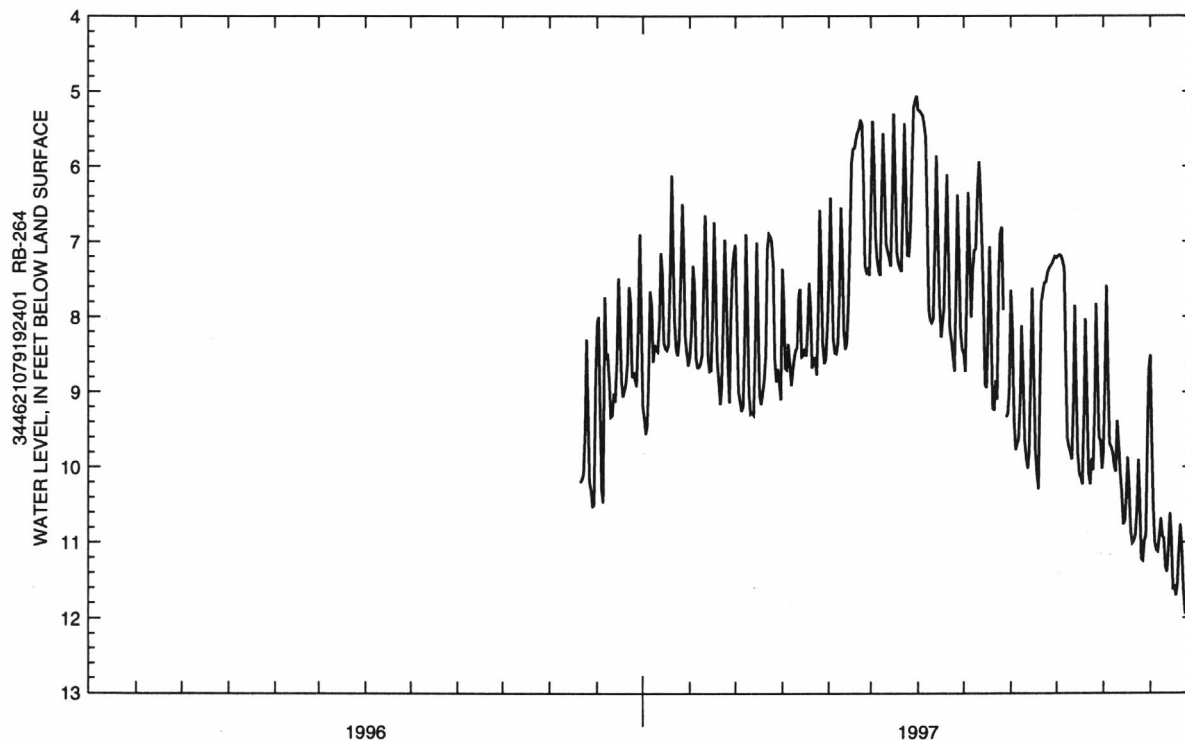
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.19	8.53	7.04	7.36	7.50	6.57	5.25	8.49	7.65	7.22	9.80	8.51
2	9.35	8.20	7.96	7.76	6.42	5.40	5.26	8.73	8.17	7.19	8.86	9.58
3	9.56	7.32	8.99	8.68	7.20	5.93	5.29	7.80	9.40	7.18	7.59	10.51
4	9.45	7.57	9.12	8.70	8.29	6.95	5.32	6.35	9.77	7.19	8.68	11.00
5	8.79	8.54	9.25	8.36	8.48	7.24	5.44	7.11	9.69	7.26	9.69	11.10
6	7.66	8.67	9.19	8.62	8.49	7.39	5.61	8.01	9.64	7.36	9.73	11.12
7	7.86	8.67	8.41	8.91	8.35	7.45	6.64	7.40	9.15	8.46	9.81	10.91
8	8.60	8.62	6.90	8.70	7.71	6.57	7.90	7.12	8.12	9.61	9.99	10.68
9	8.37	8.51	7.76	8.54	6.55	5.56	8.04	7.10	8.71	9.73	10.06	10.92
10	8.43	7.66	9.02	8.44	7.21	6.19	8.08	6.36	9.65	9.80	9.38	10.94
11	8.46	6.65	9.29	8.41	8.20	7.03	8.03	5.94	9.89	9.90	9.69	11.32
12	8.06	7.34	9.27	7.70	8.43	7.13	7.18	6.28	10.02	9.16	10.08	11.39
13	7.15	8.56	9.30	7.63	8.34	7.22	5.86	6.91	9.81	7.85	10.35	11.09
14	7.41	8.72	8.44	8.53	7.81	7.33	6.78	7.74	8.84	8.98	10.76	10.61
15	8.34	8.71	7.01	8.51	6.96	6.42	7.81	8.90	7.62	9.82	10.72	10.93
16	8.42	8.06	8.06	8.42	5.95	5.30	8.27	8.94	8.57	10.09	10.38	11.63
17	8.44	6.74	9.05	8.52	5.77	6.09	8.10	8.15	9.77	10.14	9.87	11.57
18	8.37	7.48	9.16	8.16	5.76	7.14	7.90	7.07	10.09	10.23	10.23	11.71
19	7.43	8.57	9.01	7.55	5.64	7.28	7.05	8.10	10.29	9.32	10.86	11.56
20	6.12	8.87	8.84	7.87	5.55	7.35	6.11	9.22	8.99	8.03	11.01	11.09
21	7.07	9.16	8.51	8.68	5.50	7.40	7.02	9.23	7.81	8.99	10.98	10.76
22	8.06	8.92	7.10	8.55	5.38	6.53	8.17	8.85	7.68	10.08	10.90	11.10
23	8.43	8.06	6.90	8.55	5.45	5.43	8.32	9.10	7.55	10.23	10.59	11.64
24	8.51	6.97	6.94	8.77	6.17	6.16	8.53	7.45	7.54	9.89	9.90	11.95
25	8.31	7.64	7.01	7.93	7.32	7.18	8.72	6.88	7.42	10.04	10.34	11.80
26	7.46	8.61	7.32	6.58	7.41	7.19	7.70	6.81	7.36	9.31	11.22	11.95
27	6.50	9.14	8.56	7.34	7.37	6.88	6.38	7.91	7.33	7.83	11.24	10.98
28	7.17	8.02	8.86	8.35	7.45	6.09	7.16	---	7.30	8.56	10.98	9.49
29	8.25	7.36	8.69	8.62	---	5.22	8.21	9.33	7.25	9.60	10.91	10.53
30	8.48	7.16	8.87	8.56	---	5.12	8.43	9.29	7.20	9.65	9.67	11.66
31	8.65	---	9.10	8.16	---	5.06	---	8.93	---	10.02	8.71	---

WTR YR 1997

MEAN 8.35

HIGH 5.06

LOW 11.95



ROWAN COUNTY

354057080362601. Local number, NC-193; DENR Piedmont Research Station well L63t1.

LOCATION.--Lat 35°40'57", long 80°36'26", Hydrologic Unit 03040102, 0.75 mi south of Secondary Road 1526 on Piedmont Research Station road and 30 ft east of road, and 2.75 mi south of Barber. Owner: NCDA (North Carolina Department of Agriculture), Piedmont Research Station.

AQUIFER.--Unconfined alluvial silt.

WELL CHARACTERISTICS.--Drilled observation well, drilled to 24 ft, diameter 4 in., cased to 9 ft, screened interval from 9 to 19 ft, sand filter pack from 7.2 to 24 ft.

INSTRUMENTATION.--Satellite telemetry with a 60-minute recording interval.

DATUM.--Land-surface datum is 678 ft above sea level (from topographic map). Measuring point: Two saw cuts in top of casing, 3.30 ft above land-surface datum.

REMARKS.--Well is part of climatic-effects network.

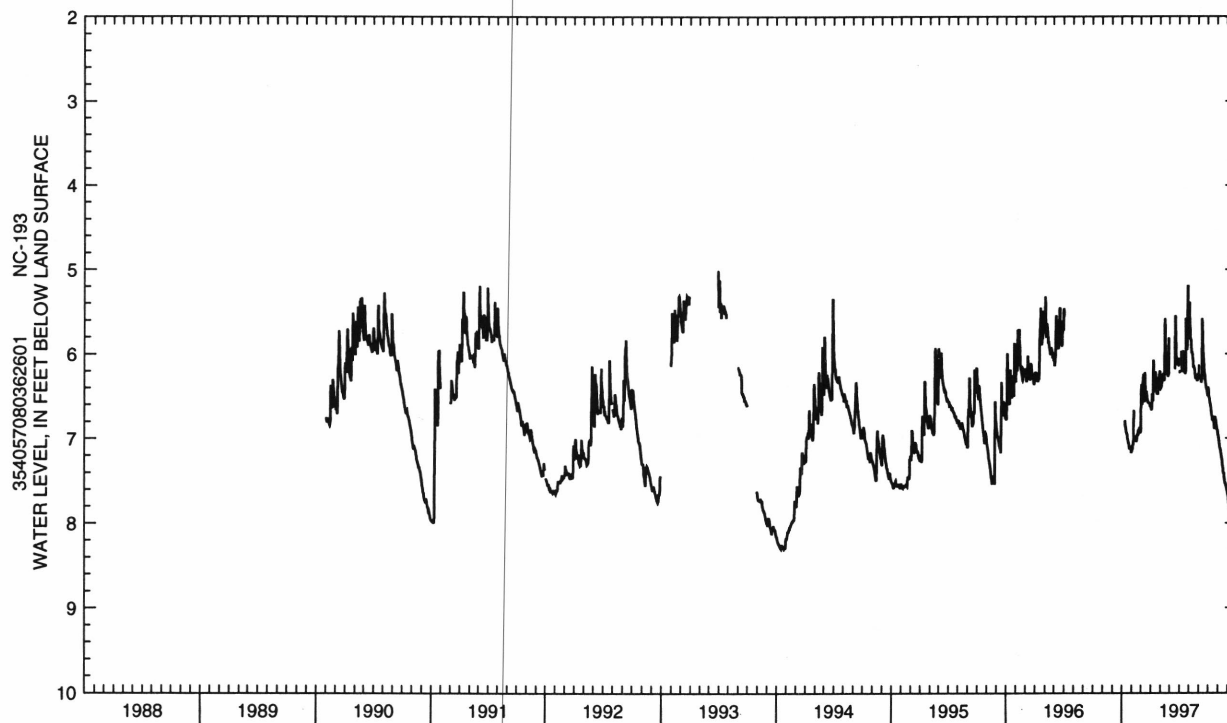
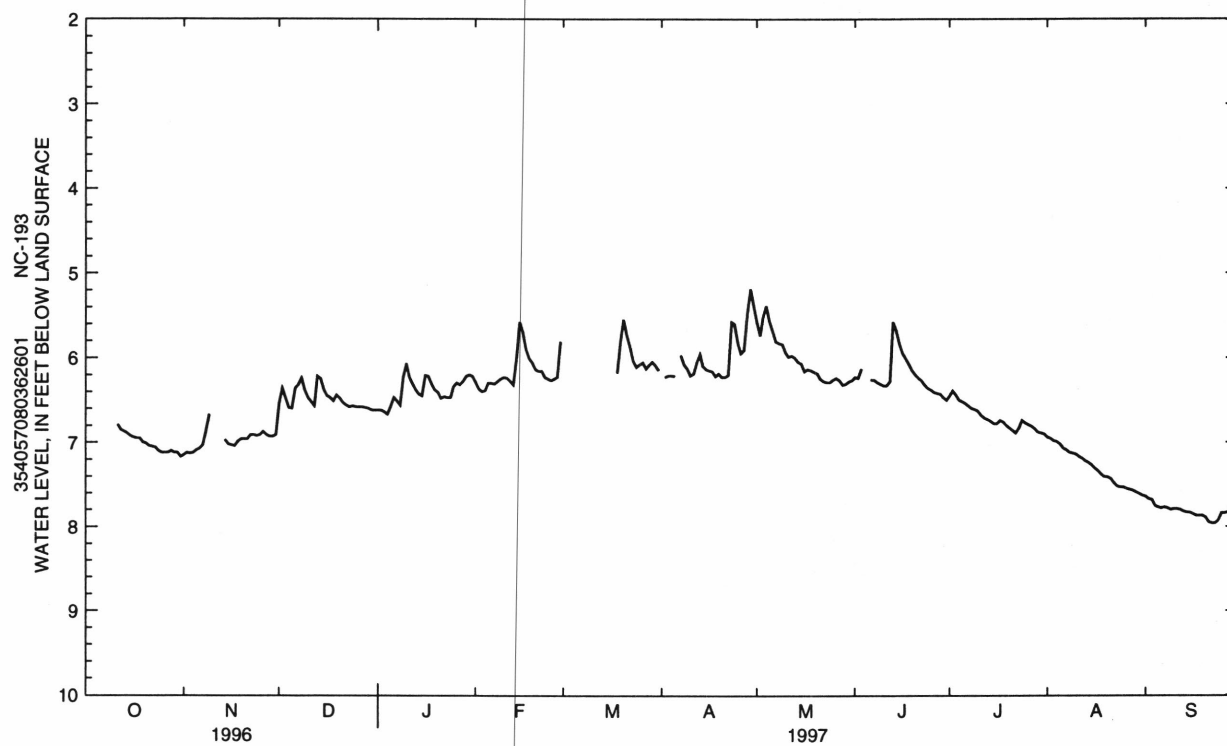
PERIOD OF RECORD.-- November 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 4.97 ft below land-surface datum, Mar. 30, 1993; lowest water level recorded, 8.30 ft below land-surface datum, Oct. 28, 29, and 30, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	7.15	6.54	6.62	6.29	---	---	5.58	6.23	6.45	6.94	7.64
2	---	7.12	6.36	6.62	6.37	---	6.23	5.74	6.24	6.39	6.95	7.67
3	---	7.13	6.47	6.64	6.40	---	6.21	5.52	6.13	6.44	6.98	7.68
4	---	7.12	6.59	6.67	6.39	---	6.21	5.39	---	6.50	6.99	7.75
5	---	7.09	6.60	6.58	6.30	---	6.22	5.57	---	6.52	7.02	7.77
6	---	7.07	6.36	6.47	6.30	---	---	5.69	6.26	6.54	7.07	7.78
7	---	7.03	6.32	6.51	6.31	---	5.97	5.81	6.26	6.57	7.09	7.77
8	---	6.86	6.24	6.56	6.28	---	6.08	5.83	6.29	6.60	7.12	7.78
9	---	6.67	6.38	6.23	6.25	---	6.13	5.84	6.31	6.61	7.13	7.80
10	---	---	6.47	6.07	6.23	---	6.21	5.94	6.33	6.63	7.14	7.79
11	6.79	---	6.52	6.23	6.24	---	6.19	5.99	6.33	6.68	7.17	7.79
12	6.85	---	6.57	6.31	6.28	---	6.06	5.98	6.28	6.71	7.19	7.80
13	6.87	---	6.22	6.38	6.32	---	5.96	6.00	5.58	6.73	7.22	7.82
14	6.89	6.97	6.25	6.43	5.99	---	6.10	6.05	5.68	6.75	7.24	7.83
15	6.92	7.02	6.38	6.45	5.58	---	6.14	6.07	5.83	6.78	7.27	7.83
16	6.94	7.03	6.45	6.21	5.70	---	6.15	6.16	5.95	6.78	7.31	7.85
17	6.95	7.04	6.47	6.22	5.90	---	6.16	6.14	6.01	6.74	7.34	7.87
18	6.95	6.99	6.51	6.31	6.01	6.18	6.22	6.15	6.08	6.76	7.38	7.87
19	7.00	6.96	6.44	6.38	6.06	5.79	6.19	6.17	6.15	6.80	7.41	7.87
20	7.01	6.96	6.48	6.41	6.14	5.55	6.23	6.19	6.20	6.83	7.41	7.89
21	7.04	6.96	6.53	6.48	6.16	5.73	6.23	6.25	6.24	6.86	7.43	7.95
22	7.05	6.91	6.56	6.46	6.16	5.87	6.20	6.28	6.27	6.89	7.48	7.96
23	7.06	6.91	6.58	6.47	6.23	6.04	5.58	6.29	6.32	6.83	7.52	7.96
24	7.10	6.92	6.57	6.47	6.25	6.11	5.60	6.29	6.36	6.74	7.53	7.93
25	7.12	6.91	6.58	6.34	6.27	6.08	5.83	6.26	6.38	6.77	7.53	7.84
26	7.12	6.87	6.58	6.30	6.25	6.06	5.95	6.24	6.41	6.79	7.55	7.84
27	7.12	6.91	6.58	6.32	6.23	6.13	5.91	6.27	6.42	6.81	7.56	7.83
28	7.10	6.93	6.59	6.28	5.81	6.09	5.48	6.32	6.43	6.84	7.57	7.80
29	7.12	6.93	6.60	6.22	---	6.05	5.19	6.31	6.47	6.88	7.59	7.81
30	7.12	6.91	6.62	6.20	---	6.09	5.39	6.28	6.50	6.89	7.61	7.83
31	7.17	---	6.62	6.22	---	6.15	---	6.27	---	6.90	7.63	---
WTR YR 1997	MEAN 6.61		HIGH 5.19		LOW 7.96							



SCOTLAND COUNTY

345812079313401. Local number, NC-194.

LOCATION.--Lat 34°58'17", long 79°31'41", Hydrologic Unit 03040204, in Sandhills Game Management Area, 0.15 mi west of Secondary Road 1328, 3.4 mi east of Marston, 4.8 mi south of Hoffman, and 6.1 mi southwest of Silver Hill. Owner: U.S. Geological Survey.

AQUIFER.--Unconfined sands in the upper Black Creek aquifer.

WELL CHARACTERISTICS.--Drilled observation well, depth 35.6 ft, diameter 4 in., cased to 30.5 ft, screened interval from 30.6 to 35.6 ft. Annular space filled with native clayey sand from 0 to 30 ft below land surface.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 433 ft above sea level, from topographic map. Measuring point: Top of casing, 2.93 ft above land-surface datum.

REMARKS.--Well is part of terrane-effects network.

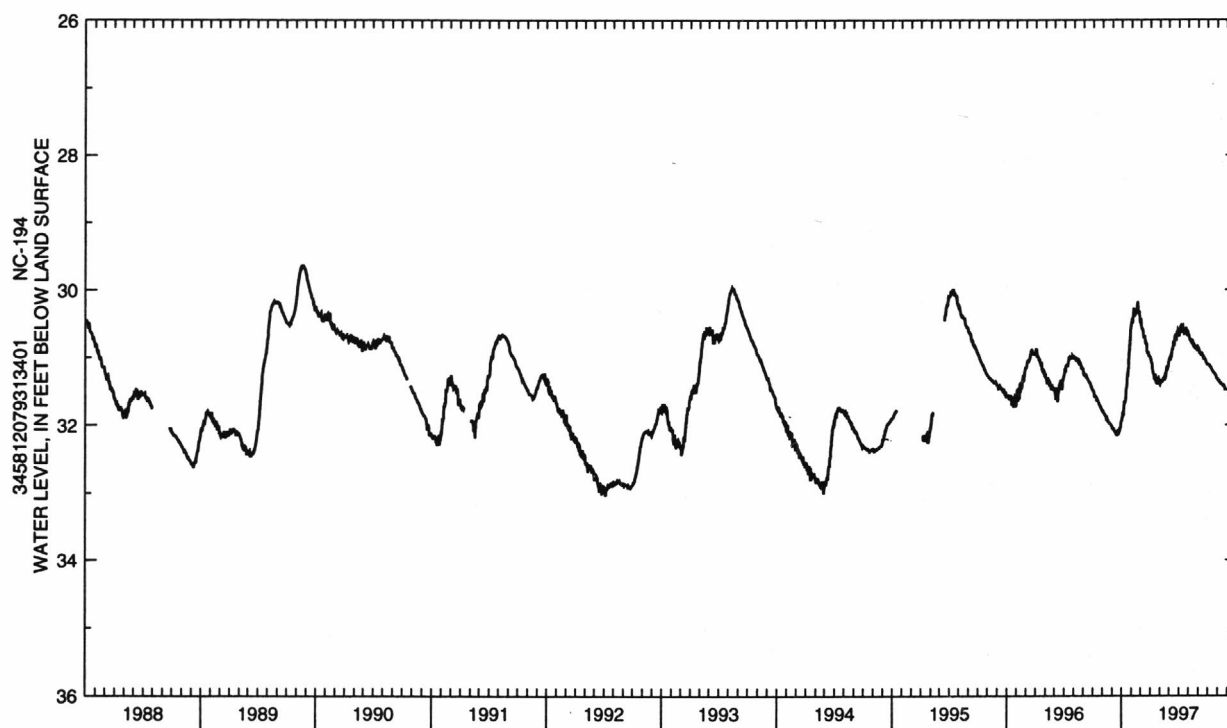
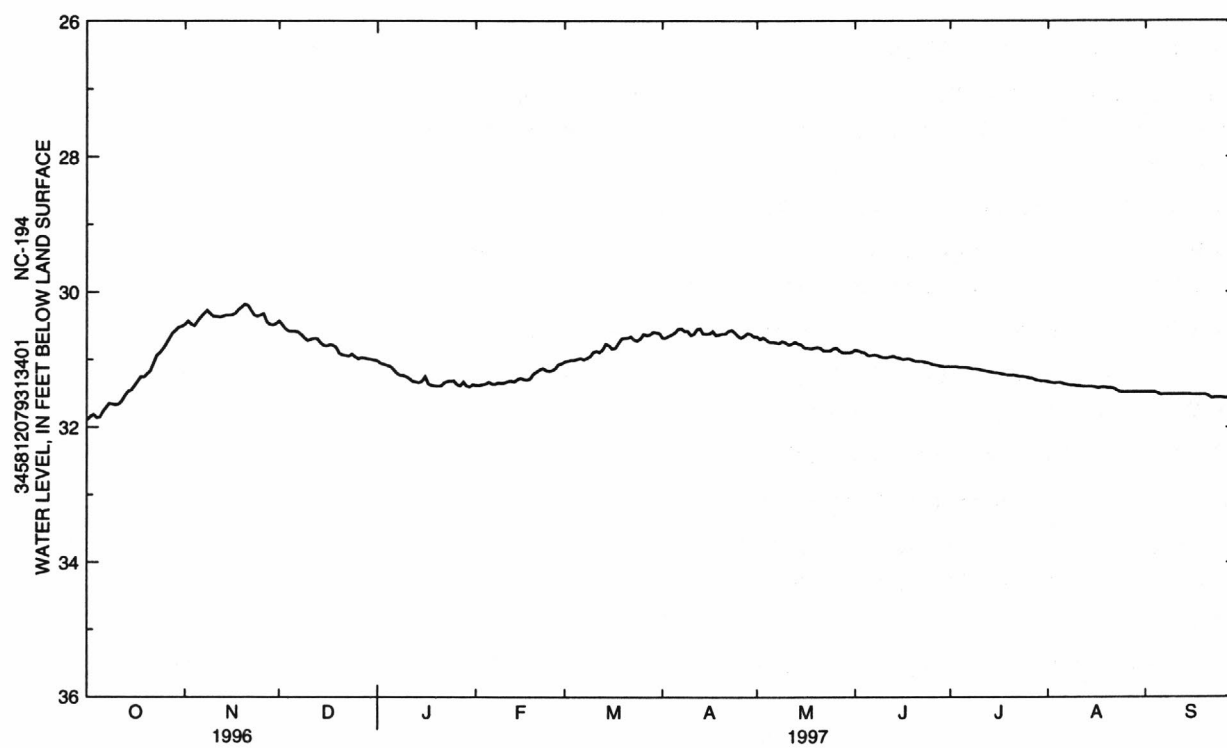
PERIOD OF RECORD.--September 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 29.63 ft below land-surface datum, Aug. 23, 1989; lowest water level recorded, 33.08 ft below land-surface datum, Mar. 24, 1992 and Feb. 27, 1994.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31.89	30.48	30.43	31.02	31.38	31.03	30.68	30.66	30.86	31.11	31.33	31.48
2	31.84	30.43	30.49	31.06	31.38	31.02	30.68	30.70	30.87	31.11	31.34	31.48
3	31.81	30.48	30.55	31.07	31.37	31.01	30.65	30.67	30.89	31.11	31.35	31.48
4	31.86	30.50	30.58	31.09	31.36	31.01	30.63	30.71	30.90	31.12	31.34	31.48
5	31.85	30.43	30.58	31.10	31.33	30.99	30.60	30.74	30.94	31.12	31.34	31.50
6	31.77	30.37	30.58	31.15	31.36	30.98	30.55	30.74	30.94	31.12	31.36	31.52
7	31.71	30.32	30.59	31.20	31.36	31.00	30.54	30.75	30.93	31.13	31.37	31.51
8	31.65	30.27	30.63	31.23	31.34	30.98	30.58	30.76	30.94	31.14	31.38	31.51
9	31.66	30.32	30.68	31.23	31.35	30.95	30.58	30.73	30.96	31.14	31.38	31.51
10	31.67	30.36	30.72	31.25	31.34	30.89	30.64	30.75	30.97	31.15	31.39	31.51
11	31.66	30.36	30.70	31.28	31.32	30.87	30.62	30.78	30.97	31.16	31.39	31.51
12	31.61	30.37	30.69	31.32	31.31	30.89	30.55	30.77	30.96	31.17	31.40	31.51
13	31.53	30.36	30.69	31.33	31.33	30.85	30.54	30.74	30.95	31.18	31.40	31.51
14	31.47	30.34	30.75	31.34	31.29	30.77	30.62	30.77	30.97	31.19	31.40	31.51
15	31.45	30.34	30.79	31.32	31.27	30.79	30.62	30.78	30.98	31.20	31.40	31.51
16	31.39	30.34	30.80	31.25	31.29	30.84	30.62	30.83	31.00	31.20	31.41	31.52
17	31.32	30.31	30.78	31.36	31.30	30.83	30.58	30.83	30.99	31.21	31.42	31.52
18	31.25	30.26	30.79	31.38	31.28	30.76	30.64	30.84	30.99	31.22	31.41	31.52
19	31.26	30.22	30.82	31.39	31.21	30.69	30.63	30.83	31.01	31.23	31.41	31.52
20	31.21	30.18	30.91	31.39	31.18	30.68	30.62	30.82	31.03	31.23	31.42	31.52
21	31.17	30.20	30.93	31.39	31.15	30.68	30.62	30.83	31.03	31.23	31.42	31.54
22	31.06	30.27	30.94	31.34	31.13	30.66	30.58	30.87	31.03	31.24	31.43	31.57
23	30.94	30.34	30.95	31.32	31.16	30.71	30.56	30.87	31.04	31.25	31.46	31.56
24	30.90	30.36	30.92	31.32	31.17	30.72	30.60	30.87	31.05	31.25	31.48	31.56
25	30.84	30.34	30.96	31.31	31.16	30.69	30.65	30.84	31.07	31.26	31.48	31.56
26	30.77	30.32	30.99	31.37	31.13	30.62	30.68	30.83	31.08	31.27	31.48	31.57
27	30.69	30.44	30.97	31.39	31.07	30.64	30.65	30.87	31.09	31.28	31.48	31.57
28	30.61	30.48	30.98	31.33	31.06	30.63	30.61	30.90	31.10	31.30	31.48	31.56
29	30.57	30.49	30.99	31.39	---	30.59	30.62	30.90	31.11	31.31	31.48	31.57
30	30.52	30.47	31.00	31.40	---	30.60	30.66	30.90	31.11	31.32	31.48	31.60
31	30.51	---	31.01	31.37	---	30.61	---	30.89	---	31.32	31.48	---
WTR YR 1997	MEAN 31.03		HIGH 30.18		LOW 31.89							



SCOTLAND COUNTY--Continued

344522079273601. Local number, Sc-68; Laurinburg well 5.

LOCATION.--Lat 34°45'21", long 79°27'37", Hydrologic Unit 03040204, in Laurinburg, southeast of intersection of Baker and Knox Streets. Owner: City of Laurinburg.

AQUIFER.--Black Creek aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled supply well, depth 140 ft, diameter 12 in., cased to 80 ft and from 130 to 140 ft, screened interval from 80 to 130 ft.

INSTRUMENTATION.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 215 ft above sea level (from topographic map). Measuring point: Top of collar on well access pipe in pump pedestal, 1.95 ft above land-surface datum.

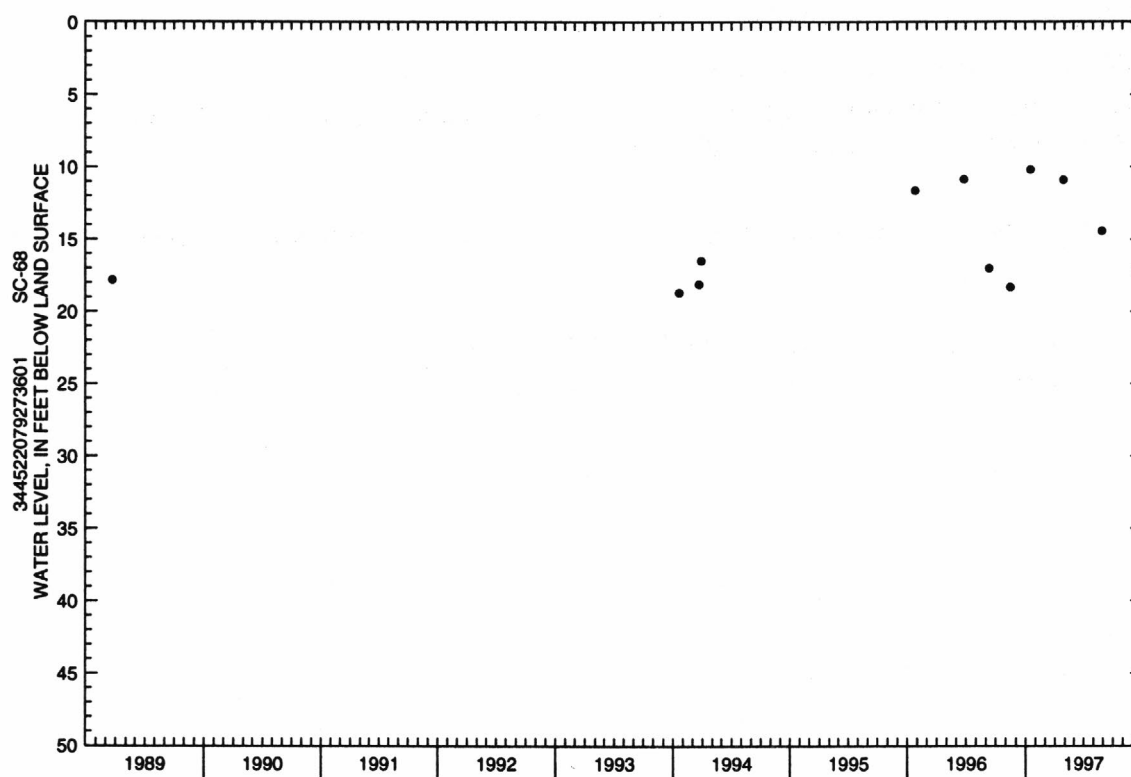
REMARKS.--Well is part of southern Coastal Plain ground-water level monitoring study.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.18 ft below land-surface datum, Oct. 18, 1996; lowest, 18.66 ft below land-surface datum, Oct. 20, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	10.18	JAN 28	10.88	MAY 28	14.43	SEP 11	17.18



SCOTLAND COUNTY--Continued

345313079220901. Local number, Sc-106; Wagram well 3.

LOCATION.--Lat 34°53'13", long 79°22'09", Hydrologic Unit 03040204, in Wagram, northwest of intersection of First and Richmond Streets. Owner: Town of Wagram.

AQUIFER.--Black Creek aquifer of Late Cretaceous age.

WELL CHARACTERISTICS.--Drilled supply well, depth 63 ft, diameter 8 in., cased to 47 ft, screened interval from 47 to 57 ft (reported by owner).

INSTRUMENTATION.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 235 ft above sea level (from topographic map). Measuring point: Top of nipple in well sanitary seal, 1.35 ft above land-surface datum.

REMARKS.--Well is part of southern Coastal Plain ground-water level monitoring study.

PERIOD OF RECORD.--December 1993 to current year.

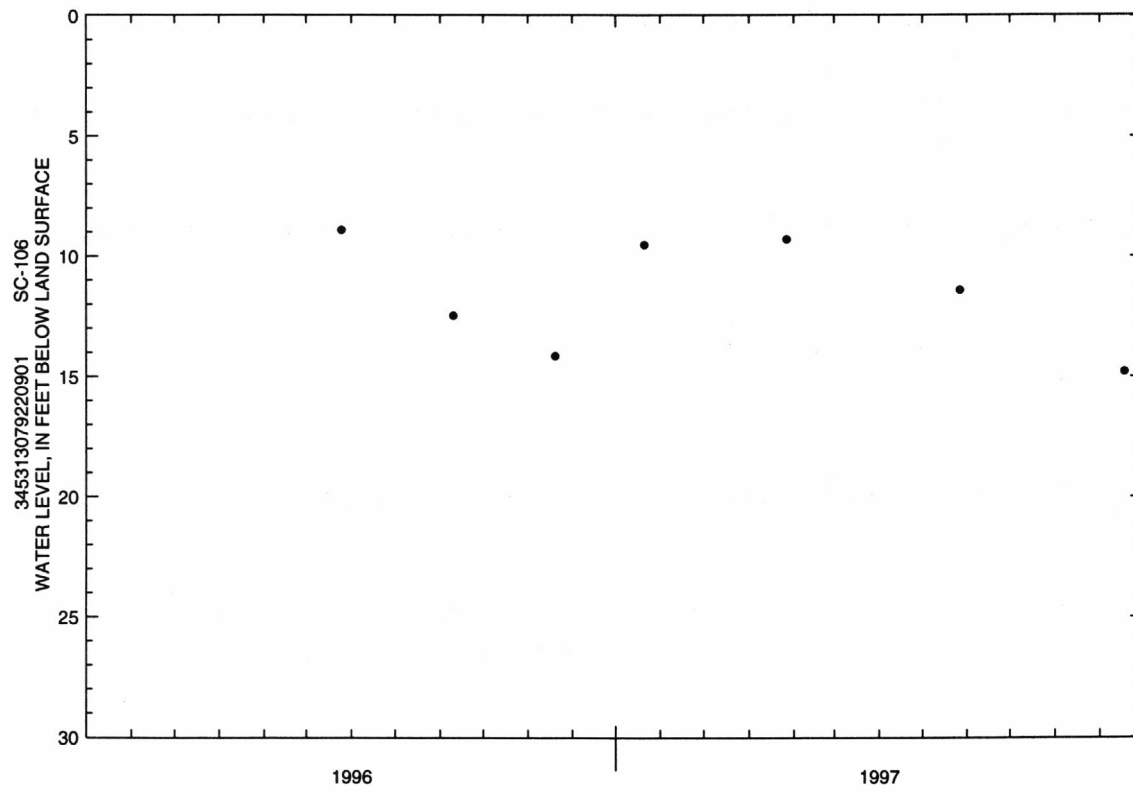
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.90 ft below land-surface datum, Mar. 25, 1996; lowest, 14.80 ft below land-surface datum, Sept. 18, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 25	8.90	JUN 10	12.47	AUG 20	14.15

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	9.52	JAN 27	9.29	MAY 27	11.41	SEP 18	14.80



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 with a 60-minute punch interval. Digital recorder replaced with electronic data logger on Dec. 10, 1996.

DATUM.--Land-surface datum is 2,147.11 ft above sea level. Measuring point: Top of casing, 1.30 ft above land-surface datum.

REMARKS.--In September 1984, well replaced nearby NC-127. Well is part of terrane-effects network.

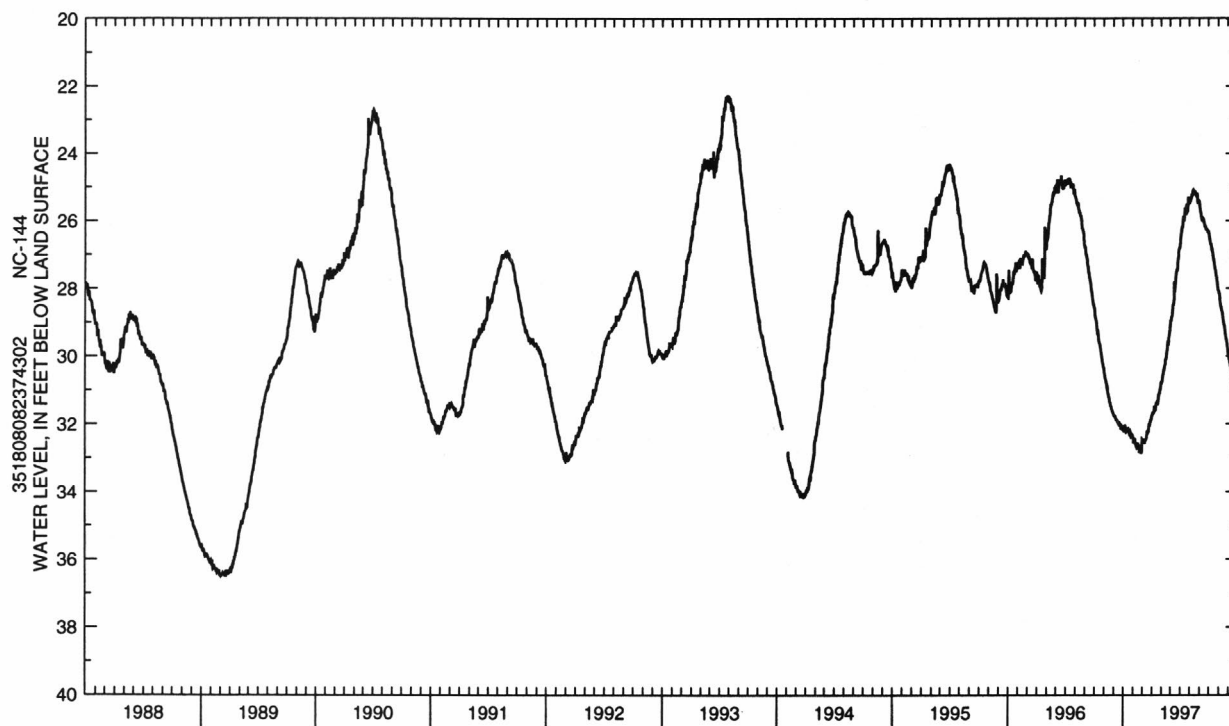
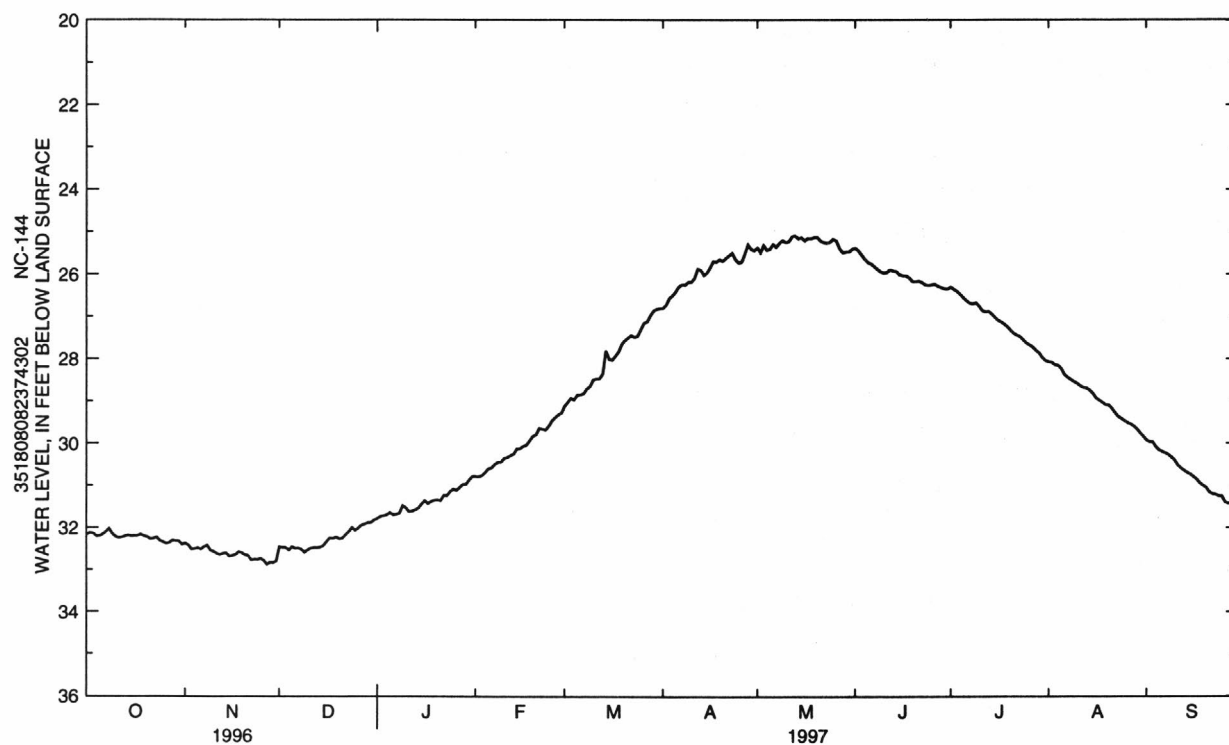
PERIOD OF RECORD.--October 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 22.20 ft below land-surface datum, Apr. 26, 1993; lowest water level recorded, 37.95 ft below land-surface datum, Dec. 23 and 24, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32.16	32.38	32.46	31.79	30.78	29.11	26.80	25.37	25.38	26.30	28.07	29.92
2	32.13	32.42	32.48	31.74	30.79	29.03	26.72	25.49	25.44	26.35	28.08	29.96
3	32.14	32.52	32.48	31.72	30.76	28.93	26.56	25.31	25.54	26.40	28.14	29.96
4	32.21	32.51	32.54	31.70	30.69	28.97	26.50	25.43	25.64	26.47	28.15	30.07
5	32.20	32.49	32.46	31.65	30.60	28.85	26.41	25.41	25.72	26.55	28.23	30.15
6	32.16	32.52	32.50	31.70	30.58	28.85	26.29	25.29	25.75	26.62	28.37	30.19
7	32.10	32.46	32.49	31.69	30.50	28.82	26.24	25.36	25.81	26.68	28.44	30.22
8	32.03	32.43	32.52	31.66	30.44	28.71	26.25	25.26	25.88	26.70	28.49	30.26
9	32.15	32.55	32.59	31.48	30.44	28.65	26.18	25.20	25.94	26.67	28.54	30.32
10	32.22	32.57	32.53	31.53	30.35	28.50	26.18	25.25	25.97	26.75	28.58	30.39
11	32.25	32.62	32.49	31.62	30.33	28.47	26.08	25.23	25.95	26.86	28.64	30.51
12	32.24	32.65	32.48	31.61	30.28	28.47	25.87	25.11	25.89	26.89	28.68	30.58
13	32.21	32.62	32.48	31.58	30.25	28.35	25.90	25.09	25.92	26.88	28.69	30.64
14	32.19	32.61	32.47	31.54	30.12	27.81	26.02	25.16	25.93	26.94	28.74	30.69
15	32.21	32.69	32.43	31.44	30.12	28.01	25.96	25.13	26.01	27.02	28.82	30.73
16	32.20	32.67	32.33	31.36	30.06	28.03	25.84	25.21	26.03	27.09	28.93	30.79
17	32.20	32.65	32.25	31.43	30.04	27.93	25.69	25.15	26.03	27.13	28.98	30.85
18	32.17	32.58	32.26	31.38	29.93	27.83	25.71	25.16	26.08	27.18	29.03	30.94
19	32.21	32.61	32.23	31.35	29.83	27.65	25.65	25.13	26.17	27.24	29.09	31.00
20	32.23	32.66	32.27	31.34	29.79	27.56	25.69	25.13	26.17	27.33	29.09	31.04
21	32.28	32.67	32.25	31.36	29.64	27.50	25.62	25.21	26.16	27.40	29.17	31.15
22	32.27	32.78	32.17	31.23	29.66	27.44	25.56	25.25	26.19	27.44	29.27	31.20
23	32.24	32.76	32.10	31.24	29.68	27.49	25.50	25.26	26.25	27.48	29.36	31.21
24	32.32	32.77	32.00	31.14	29.58	27.46	25.65	25.24	26.26	27.55	29.41	31.25
25	32.35	32.74	32.07	31.08	29.46	27.30	25.73	25.17	26.25	27.63	29.46	31.25
26	32.39	32.79	32.01	31.12	29.38	27.15	25.71	25.21	26.23	27.67	29.51	31.39
27	32.37	32.88	31.94	31.04	29.32	27.12	25.51	25.39	26.28	27.72	29.54	31.43
28	32.31	32.83	31.92	30.97	29.27	26.97	25.30	25.49	26.31	27.80	29.59	31.42
29	32.33	32.84	31.88	30.97	---	26.86	25.41	25.47	26.34	27.86	29.66	31.50
30	32.33	32.80	31.88	30.86	---	26.82	25.44	25.47	26.35	27.97	29.75	31.56
31	32.41	---	31.82	30.78	---	26.80	---	25.41	---	28.04	29.83	---
WTR YR 1997	MEAN 29.21		HIGH 25.09		LOW 32.88							



351709082434101. Local number, NC-147.

AQUIFER.--Unconfined alluvial sand.

INSTRUMENTATION.--Digital recorder with a 60-minute punch interval. Digital recorder replaced with electronic data logger on Dec. 10, 1996.

DATUM.--Land-surface datum is 2,176.70 ft above sea level. Measuring point: Top of casing, 2.24 ft above land-surface datum.

REMARKS.--Well is part of climatic-effects network.

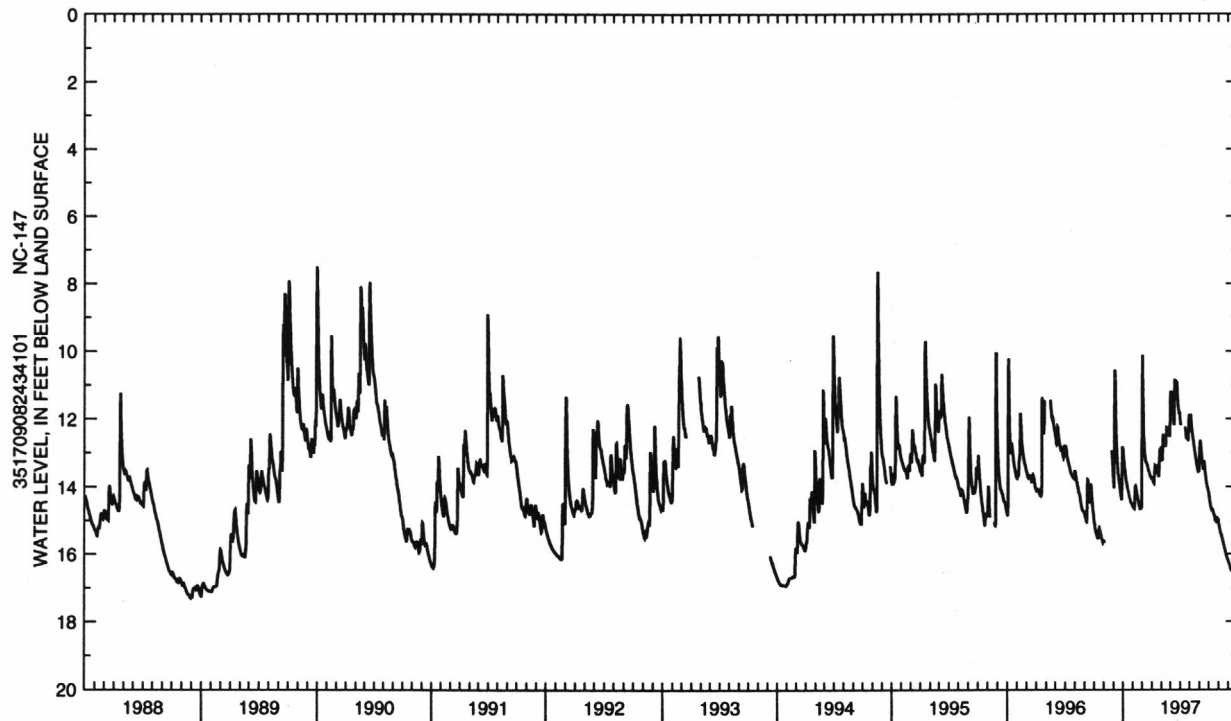
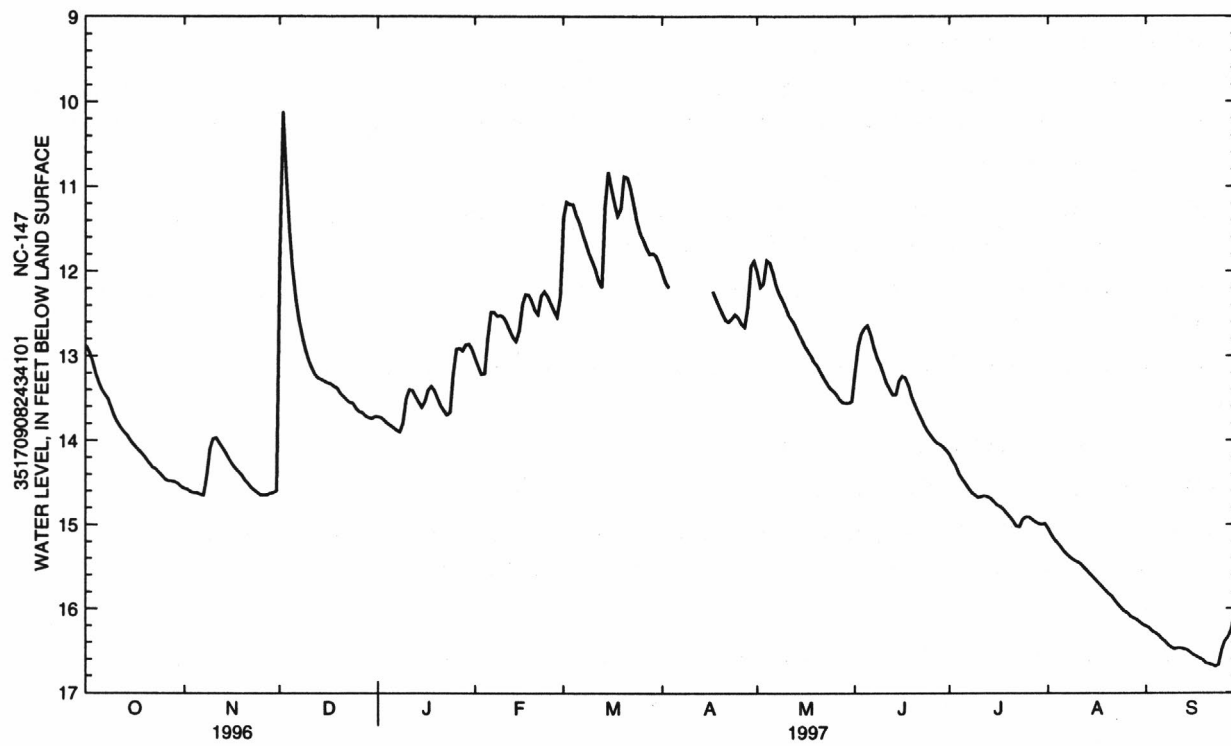
PERIOD OF RECORD.--June 1985 to current year.

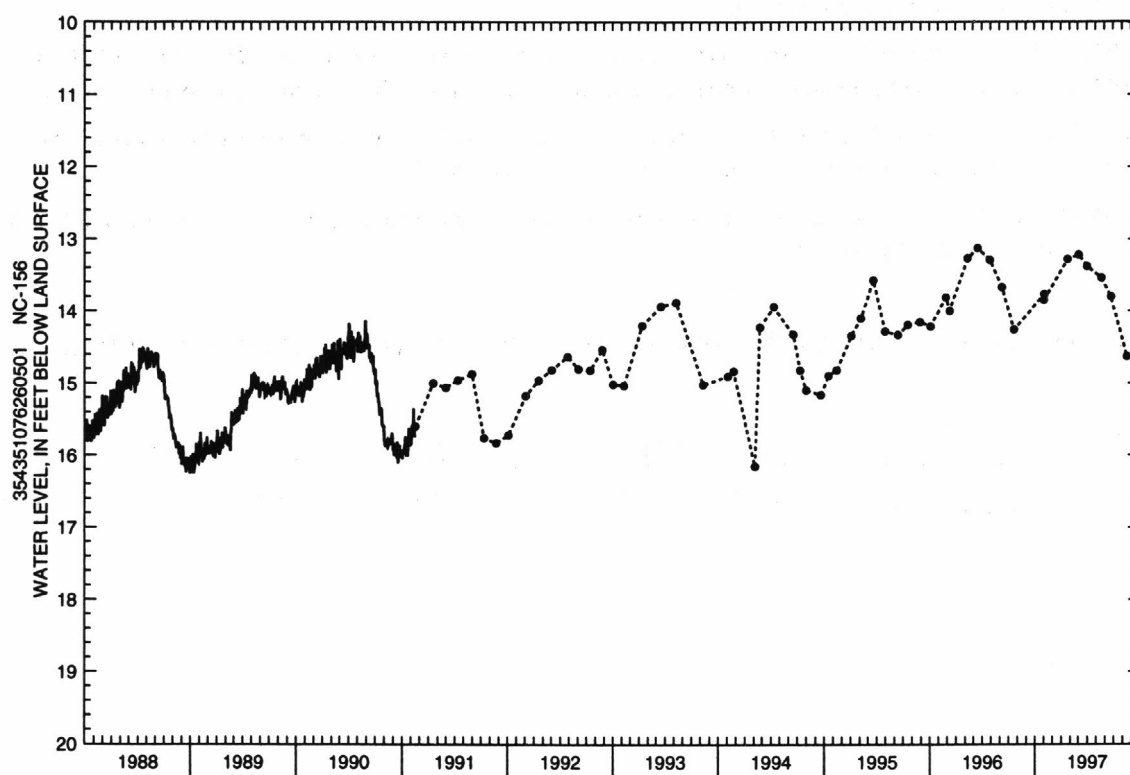
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 7.43 ft below land-surface datum, Oct. 2, 1989; lowest water level recorded, 17.66 ft below land-surface datum, Oct. 8 and 9, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.88	14.57	11.82	13.72	13.03	11.37	12.02	12.01	13.21	14.17	15.05	16.21
2	12.95	14.58	10.12	13.73	13.13	11.18	12.13	12.19	12.89	14.24	15.12	16.23
3	13.06	14.61	10.83	13.76	13.22	11.21	12.19	12.15	12.74	14.31	15.18	16.27
4	13.20	14.62	11.50	13.80	13.21	11.21	---	11.87	12.67	14.40	15.22	16.29
5	13.31	14.62	11.98	13.82	12.79	11.34	---	11.90	12.64	14.46	15.27	16.32
6	13.40	14.64	12.33	13.85	12.48	11.43	---	12.02	12.75	14.51	15.32	16.36
7	13.46	14.65	12.57	13.88	12.48	11.56	---	12.17	12.90	14.57	15.36	16.39
8	13.51	14.43	12.76	13.90	12.53	11.67	---	12.27	13.02	14.62	15.39	16.43
9	13.62	14.10	12.92	13.80	12.52	11.79	---	12.34	13.10	14.65	15.42	16.46
10	13.72	13.98	13.05	13.51	12.54	11.88	---	12.43	13.21	14.68	15.44	16.48
11	13.79	13.97	13.14	13.40	12.61	11.98	---	12.52	13.32	14.67	15.46	16.47
12	13.85	14.03	13.22	13.41	12.70	12.11	---	12.58	13.39	14.66	15.50	16.47
13	13.90	14.09	13.26	13.48	12.78	12.19	---	12.64	13.46	14.67	15.54	16.48
14	13.94	14.15	13.28	13.55	12.83	11.25	---	12.73	13.46	14.69	15.58	16.49
15	14.00	14.22	13.30	13.61	12.70	10.83	---	12.80	13.30	14.73	15.62	16.52
16	14.05	14.28	13.32	13.54	12.39	11.01	---	12.88	13.24	14.77	15.66	16.55
17	14.09	14.33	13.33	13.41	12.27	11.20	12.24	12.94	13.26	14.79	15.70	16.57
18	14.13	14.37	13.36	13.36	12.28	11.35	12.33	13.00	13.35	14.82	15.74	16.59
19	14.17	14.41	13.38	13.41	12.35	11.26	12.42	13.07	13.48	14.87	15.78	16.61
20	14.22	14.47	13.44	13.50	12.46	10.88	12.50	13.12	13.58	14.91	15.82	16.65
21	14.27	14.51	13.48	13.59	12.51	10.90	12.58	13.19	13.66	14.96	15.85	16.66
22	14.32	14.56	13.52	13.65	12.29	11.02	12.60	13.26	13.74	15.02	15.90	16.67
23	14.34	14.59	13.55	13.70	12.24	11.22	12.56	13.32	13.82	15.03	15.95	16.69
24	14.38	14.62	13.56	13.67	12.30	11.41	12.51	13.38	13.89	14.94	15.99	16.67
25	14.42	14.65	13.62	13.21	12.38	11.55	12.55	13.41	13.94	14.91	16.03	16.49
26	14.46	14.65	13.66	12.92	12.47	11.63	12.62	13.45	13.99	14.91	16.05	16.39
27	14.48	14.65	13.67	12.91	12.54	11.73	12.66	13.51	14.03	14.94	16.09	16.34
28	14.48	14.63	13.71	12.94	12.29	11.80	12.43	13.55	14.05	14.97	16.11	16.26
29	14.49	14.62	13.73	12.87	---	11.79	11.94	13.56	14.08	14.99	16.13	16.08
30	14.51	14.60	13.74	12.86	---	11.82	11.88	13.56	14.12	15.00	16.16	15.97
31	14.55	---	13.72	12.93	---	11.91	---	13.54	---	14.99	16.19	---
WTR YR 1997		MEAN	13.69	HIGH 10.12		LOW 16.69						





WASHINGTON COUNTY--Continued

354351076260502. Local number, NC-157; DENR 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: DENR (North Carolina Department of Environment and Natural Resources).

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.--Measured periodically with steel tape.

DATUM.--Land-surface datum is 16.35 ft above sea level (levels by DENR). Measuring point: Top of instrument shelf, 2.84 ft above land-surface datum; revised from 3.20 ft above land-surface datum, October 1987.

REMARKS.--Well is part of areal-effects network.

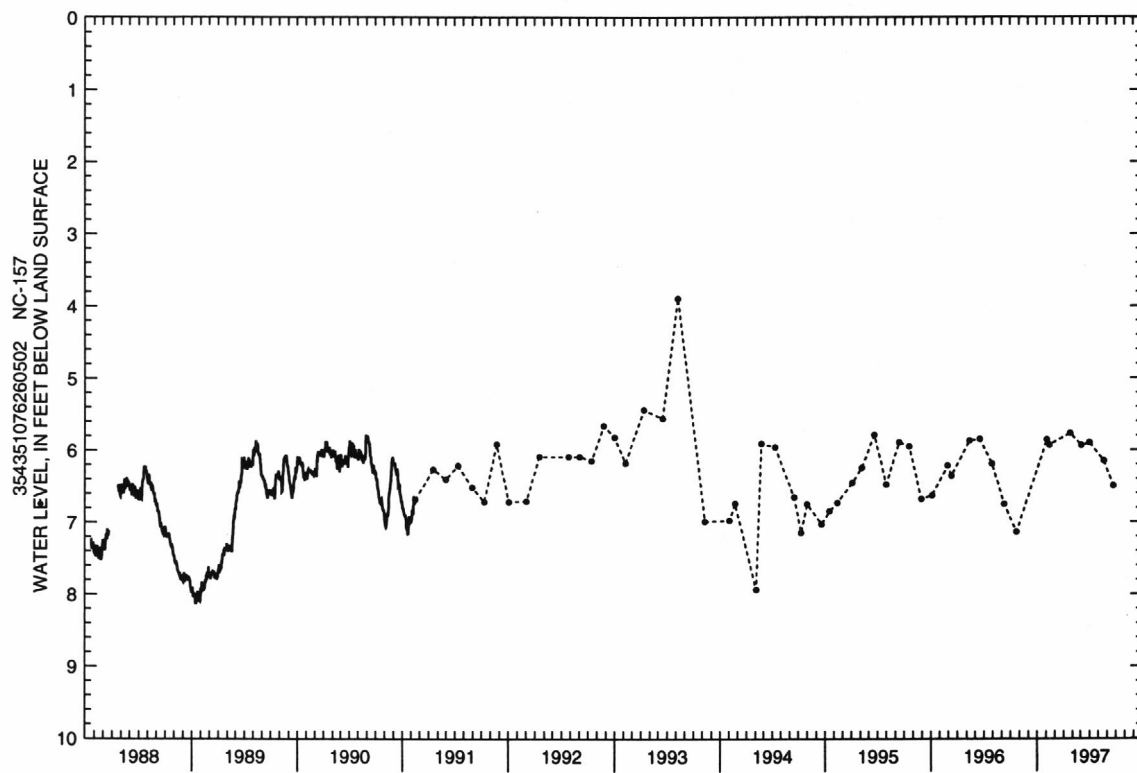
PERIOD OF RECORD.--October 1977 to current year. Continuous record November 1986 to November 1990. Records from October 1977 to July 1986 are unpublished and available in the files of the Groundwater Section, DENR.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.89 ft below land-surface datum, May 10, 1993; lowest water level recorded, 9.35 ft below land-surface datum, Feb. 24, 1981.

REVISIONS.--Water-level mean values and extremes for period of record published in Water Resources Data, North Carolina, NC-87-1, should be adjusted by +0.36 ft.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 4	5.86	JAN 24	5.77	MAR 4	5.94	APR 2	5.90	MAY 21	6.15	JUN 23	6.50
NOV 13	5.93										



WASHINGTON COUNTY--Continued

354418076463601. Local number, NC-158.

LOCATION.--Lat 35°44'18", long 76°46'36", Hydrologic Unit 03020104, 2.4 mi west of State 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.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 35 ft above sea level (from topographic map). Measuring point: Top of instrument shelf, 2.49 ft above land-surface datum.

REMARKS.--Well is part of climatic-effects network.

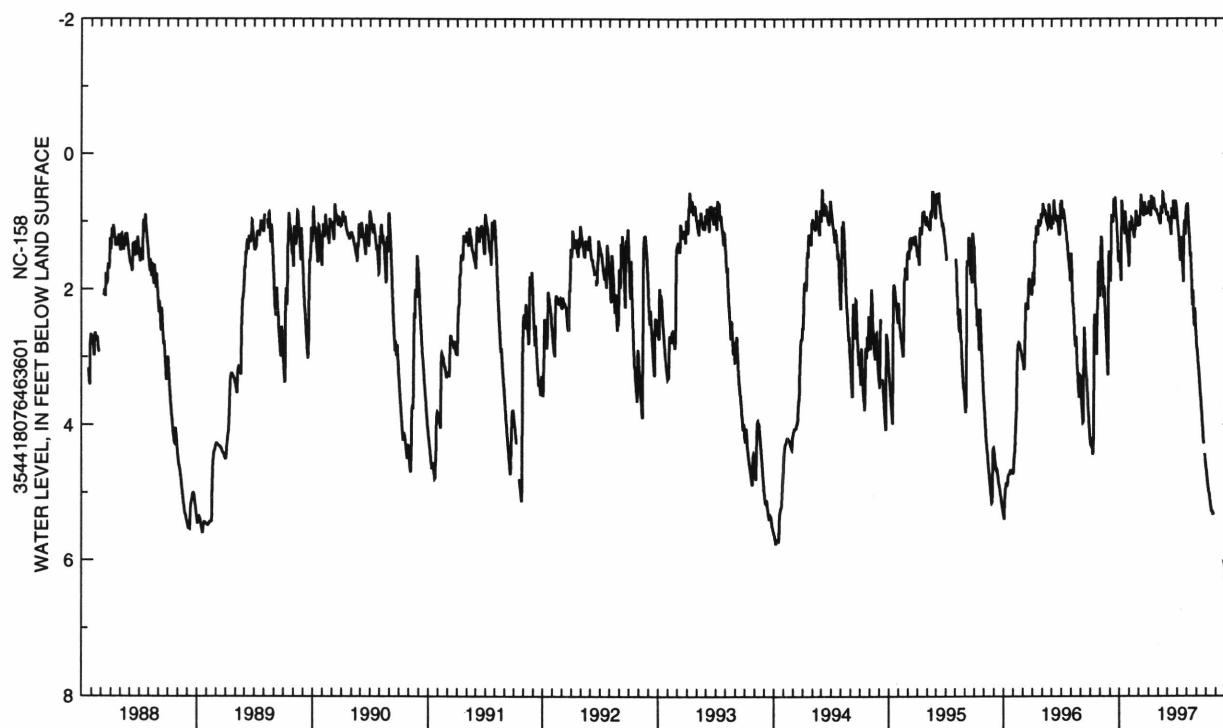
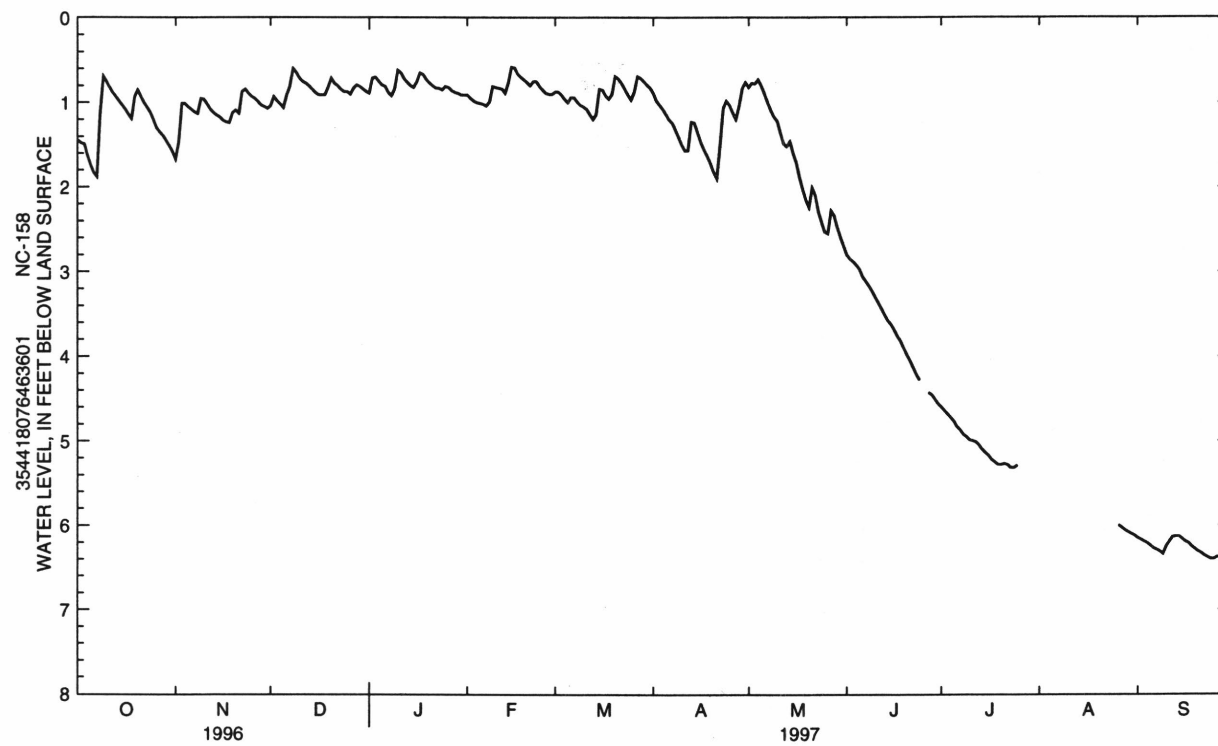
PERIOD OF RECORD.--December 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.50 ft below land-surface datum, Mar. 2, 3, 1994; lowest water level recorded, 6.41 ft below land-surface datum, Sept. 24, 25, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.45	1.67	1.04	.89	.91	.87	.89	.82	2.80	4.60	---	6.15
2	1.48	1.47	.93	.71	.95	.87	.98	.77	2.85	4.64	---	6.17
3	1.49	1.01	.98	.70	.98	.91	1.03	.78	2.88	4.68	---	6.19
4	1.62	1.01	1.02	.75	1.00	.96	1.08	.73	2.92	4.72	---	6.21
5	1.74	1.05	1.06	.79	1.01	1.00	1.14	.80	2.97	4.77	---	6.24
6	1.83	1.08	.91	.81	1.02	.94	1.20	.90	3.06	4.83	---	6.27
7	1.88	1.11	.81	.88	1.04	.94	1.24	1.00	3.11	4.87	---	6.29
8	1.13	1.13	.60	.92	.99	.99	1.32	1.10	3.17	4.92	---	6.31
9	.69	.95	.64	.84	.81	1.03	1.41	1.17	3.23	4.95	---	6.34
10	.75	.96	.71	.62	.82	1.05	1.50	1.22	3.30	4.99	---	6.25
11	.82	1.02	.75	.65	.83	1.08	1.57	1.36	3.37	5.00	---	6.19
12	.88	1.08	.77	.72	.84	1.14	1.57	1.49	3.44	5.01	---	6.14
13	.93	1.12	.80	.76	.89	1.20	1.23	1.52	3.51	5.05	---	6.13
14	.98	1.15	.84	.80	.76	1.14	1.24	1.46	3.58	5.10	---	6.13
15	1.03	1.17	.88	.82	.58	.84	1.36	1.60	3.62	5.14	---	6.16
16	1.08	1.21	.91	.75	.59	.85	1.47	1.72	3.69	5.17	---	6.19
17	1.14	1.23	.91	.65	.66	.92	1.56	1.89	3.76	5.22	---	6.21
18	1.19	1.24	.91	.67	.70	.96	1.63	2.03	3.82	5.25	---	6.25
19	.93	1.12	.82	.73	.73	.90	1.72	2.15	3.90	5.28	---	6.28
20	.85	1.09	.71	.77	.76	.69	1.82	2.24	3.98	5.28	---	6.31
21	.93	1.13	.77	.80	.80	.72	1.90	2.01	4.05	5.27	---	6.33
22	1.00	.87	.80	.83	.75	.77	1.50	2.10	4.13	5.28	---	6.36
23	1.06	.84	.84	.83	.75	.84	1.07	2.29	4.21	5.32	---	6.38
24	1.12	.89	.87	.85	.81	.91	.98	2.42	4.28	5.32	---	6.40
25	1.21	.93	.87	.81	.85	.97	1.03	2.53	---	5.29	---	6.40
26	1.30	.95	.90	.82	.89	.87	1.12	2.55	---	---	6.00	6.38
27	1.35	.99	.83	.86	.90	.69	1.20	2.28	4.43	---	6.03	6.38
28	1.39	1.03	.79	.88	.90	.71	1.04	2.34	4.46	---	6.06	6.33
29	1.45	1.05	.81	.89	---	.75	.83	2.48	4.51	---	6.08	6.19
30	1.51	1.07	.84	.91	---	.79	.76	2.60	4.56	---	6.10	6.14
31	1.58	---	.87	.91	---	.83	---	2.70	---	---	6.12	---
WTR YR 1997	MEAN 2.16		HIGH .58		LOW 6.40							



WAYNE COUNTY

351849078163901. Local number, NC-148.

LOCATION.--Lat 35°18'49", long 78°16'39", Hydrologic Unit 03020201, 0.5 mi south of Johnston County line on Secondary Road 1009, and 6 mi west of Grantham. 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.--Water-level recorder collecting data at 60-minute intervals.

DATUM.--Land-surface datum is 190 ft above sea level (from topographic map). Measuring point: File cut on top of casing, 1.80 ft above land-surface datum.

REMARKS.--Well is part of climatic-effects network.

PERIOD OF RECORD.--February 1980 to current year. Records for June 17 to Sept. 30, 1987, published in Water Resources Data, North Carolina, NC-87-1, are unreliable and should not be used.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.04 ft above land-surface datum, May 2, 1989; lowest water level recorded, 8.65 ft below land-surface datum, Oct. 8, 1996, Sept. 24, 25, 1997.

REVISED RECORD.--See PERIOD OF RECORD.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

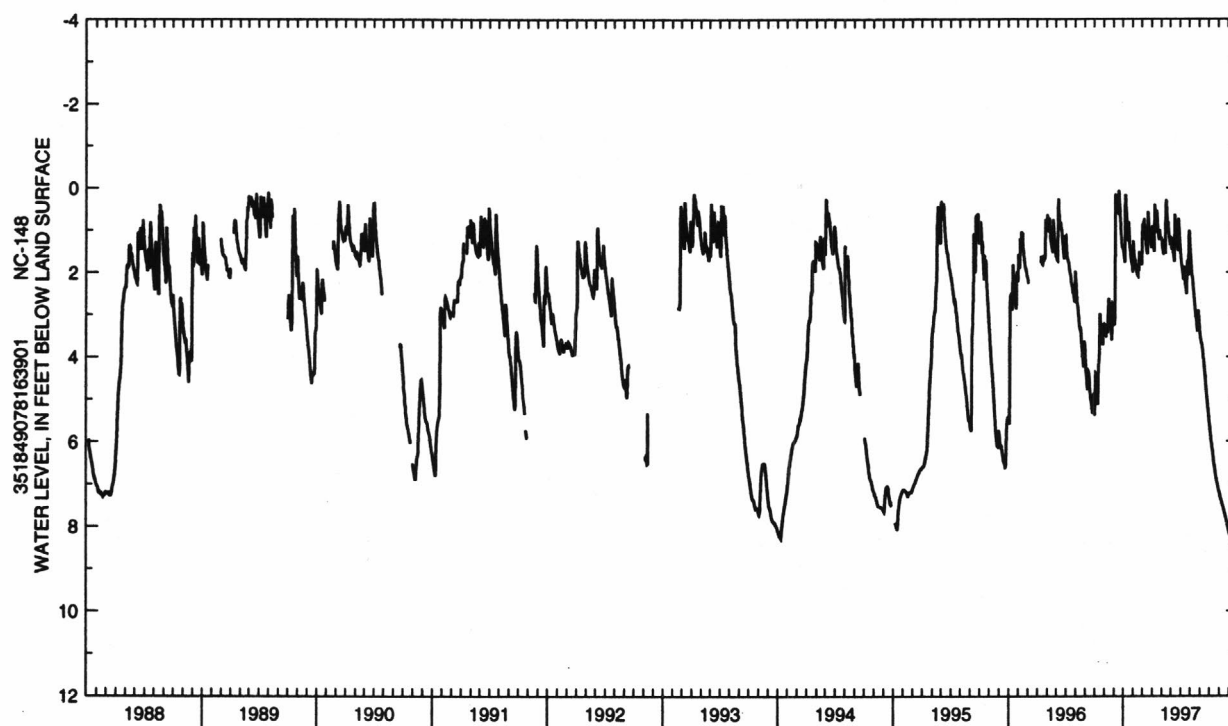
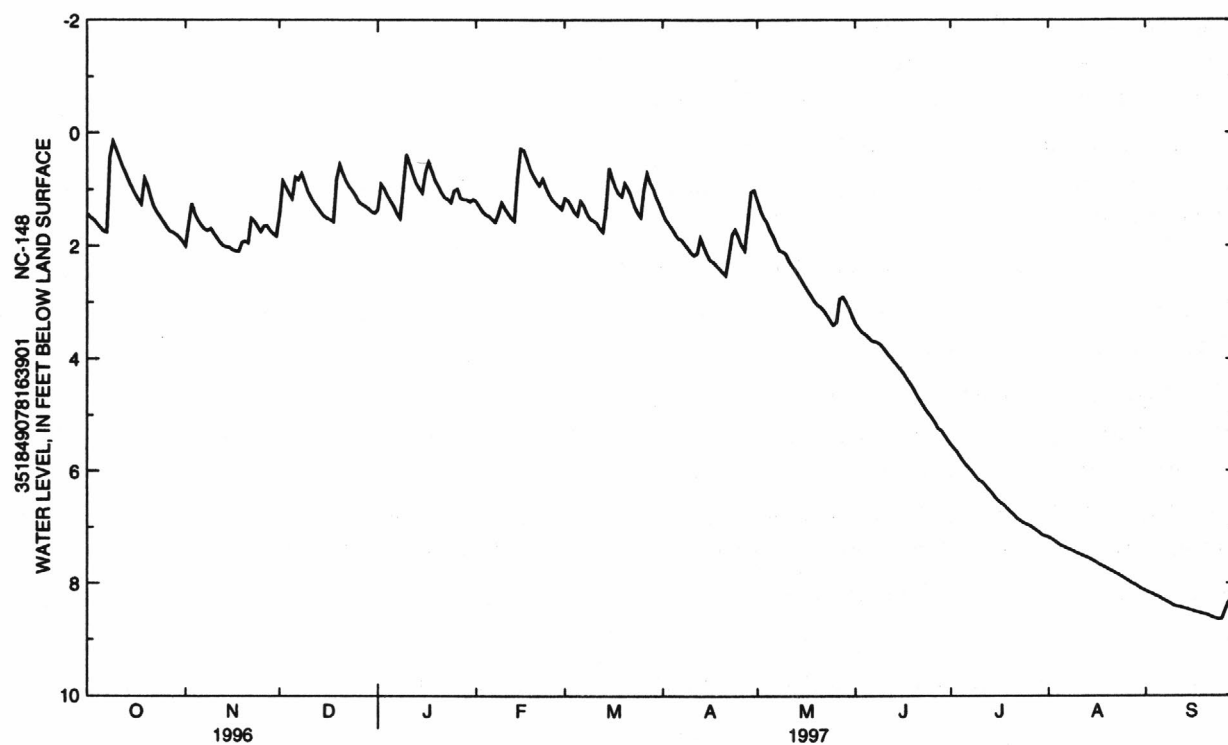
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.44	2.00	1.45	1.36	1.21	1.15	1.42	1.19	3.37	5.53	7.18	8.14
2	1.50	1.62	.85	.90	1.31	1.19	1.54	1.36	3.45	5.59	7.21	8.17
3	1.54	1.25	.95	.98	1.39	1.29	1.62	1.49	3.52	5.66	7.25	8.19
4	1.61	1.43	1.07	1.11	1.45	1.40	1.70	1.58	3.56	5.75	7.29	8.22
5	1.68	1.55	1.16	1.20	1.47	1.46	1.80	1.72	3.61	5.83	7.33	8.24
6	1.74	1.63	.78	1.30	1.53	1.20	1.87	1.83	3.67	5.90	7.35	8.28
7	1.76	1.70	.83	1.42	1.58	1.29	1.89	1.96	3.69	5.96	7.38	8.31
8	.43	1.73	.72	1.51	1.42	1.43	1.97	2.08	3.71	6.03	7.40	8.34
9	.15	1.69	.87	.98	1.23	1.52	2.04	2.10	3.75	6.10	7.43	8.37
10	.29	1.78	1.04	.38	1.34	1.55	2.12	2.14	3.82	6.16	7.46	8.41
11	.44	1.86	1.15	.54	1.42	1.59	2.17	2.26	3.90	6.19	7.48	8.42
12	.59	1.94	1.25	.73	1.51	1.69	2.13	2.35	3.97	6.25	7.51	8.43
13	.72	2.00	1.32	.88	1.56	1.75	1.86	2.43	4.04	6.32	7.53	8.45
14	.85	2.02	1.40	.98	.77	1.36	2.00	2.52	4.11	6.38	7.56	8.46
15	.97	2.03	1.47	1.06	.28	.62	2.14	2.61	4.18	6.46	7.59	8.48
16	1.08	2.07	1.51	.69	.31	.80	2.24	2.71	4.25	6.52	7.62	8.50
17	1.18	2.09	1.53	.52	.47	.96	2.28	2.80	4.34	6.57	7.66	8.52
18	1.26	2.10	1.57	.68	.64	1.07	2.34	2.89	4.43	6.61	7.69	8.53
19	.80	1.94	.82	.84	.75	1.12	2.40	2.98	4.51	6.67	7.72	8.55
20	.93	1.92	.56	.94	.85	.89	2.46	3.05	4.62	6.73	7.75	8.56
21	1.14	1.95	.72	1.05	.93	.99	2.52	3.08	4.72	6.78	7.78	8.58
22	1.31	1.51	.85	1.14	.81	1.12	2.19	3.15	4.81	6.84	7.81	8.61
23	1.41	1.57	.95	1.17	.96	1.29	1.81	3.23	4.90	6.88	7.84	8.63
24	1.49	1.66	1.02	1.23	1.09	1.41	1.71	3.32	4.98	6.92	7.87	8.65
25	1.58	1.75	1.11	1.02	1.18	1.49	1.84	3.40	5.05	6.95	7.91	8.64
26	1.67	1.65	1.22	.99	1.24	1.00	1.99	3.35	5.14	6.97	7.94	8.49
27	1.74	1.64	1.26	1.15	1.29	.72	2.08	2.94	5.24	7.01	7.98	8.35
28	1.76	1.73	1.30	1.18	1.35	.88	1.59	2.90	5.28	7.05	8.01	8.28
29	1.80	1.79	1.34	1.18	---	.99	1.04	2.99	5.36	7.09	8.04	8.21
30	1.85	1.83	1.39	1.22	---	1.15	1.01	3.11	5.45	7.14	8.08	8.17
31	1.92	---	1.42	1.17	---	1.28	---	3.24	---	7.16	8.11	---

WTR YR 1997

MEAN 3.24

HIGH .15

LOW 8.65



WATER-RESOURCES DATA FOR NORTH CAROLINA, 1997

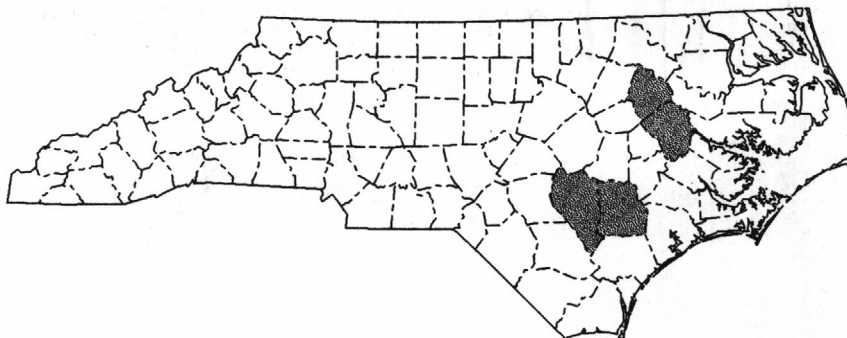
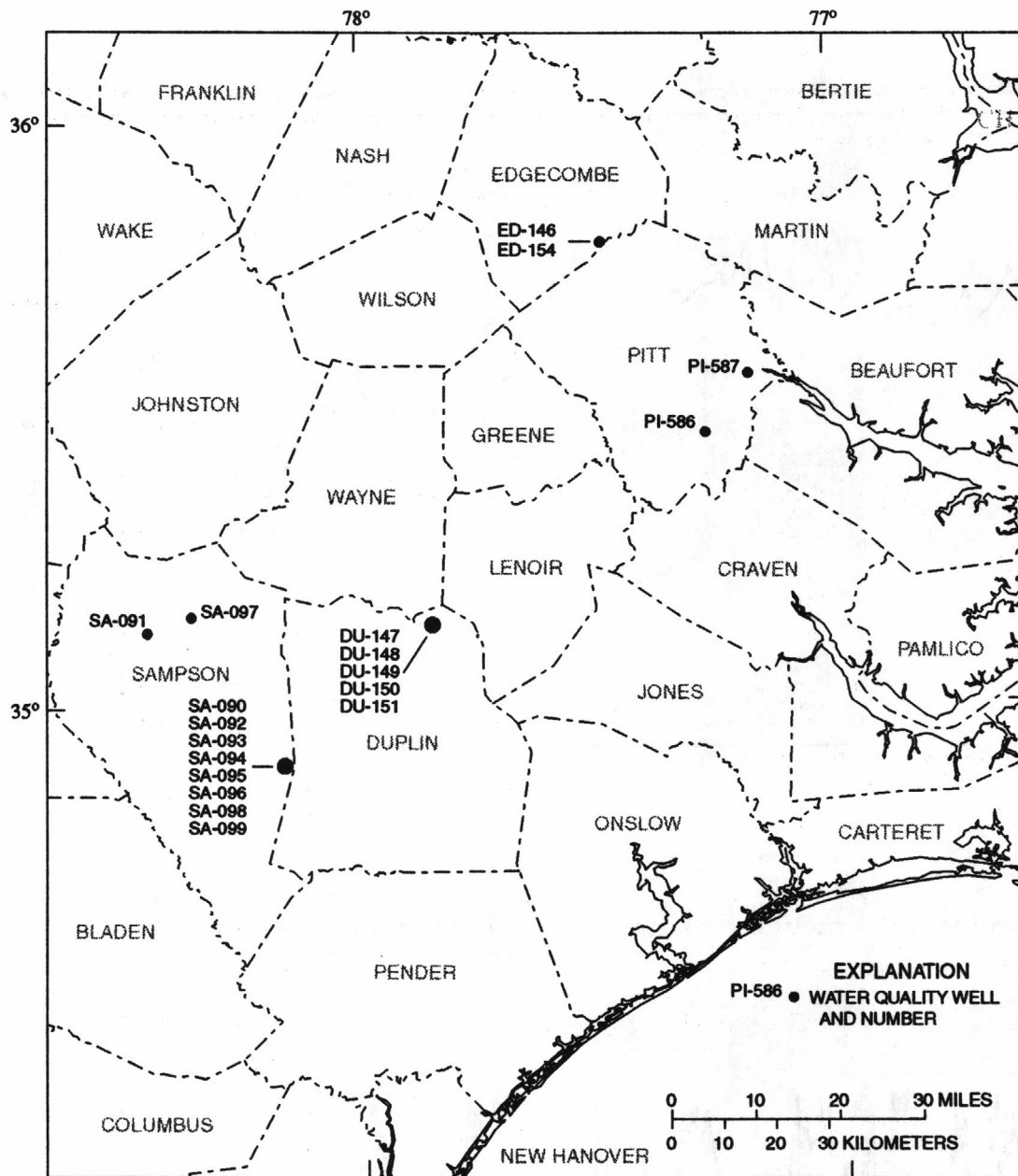


Figure 9.--Location of Sampson, Duplin, Edgecombe, and Pitt Counties in North Carolina.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SAMPLING SITES

Ground water quality data were collected for the North Carolina Department of Environment and Natural Resources and for the National Water Quality Assessment Program during 1996. Objectives of these projects include determination of sources, date, and transport of nutrients in ground water.. Locations for sites listed in the following tables are shown in figure .

WATER QUALITY DATA, AUGUST 1996 TO NOVEMBER 1996

DUPLIN COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
DU-149	350820077511001		08-12-96	1300	15.29	23.50	34	4.8	19.5	762
DU-147	350845077511501		08-08-96	1330	28.53	38.50	115	4.6	20.0	768
DU-148	350845077511502		08-09-96	1130	28.46	38.00	156	4.5	20.0	765
DU-150	350845077513001		08-07-96	1100	7.92	17.00	110	3.8	20.5	768
DU-151	350845077513002		08-07-96	1530	18.75	27.00	95	5.4	19.0	768

LOCAL IDENT- IFIER	DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	ACIDITY (MG/L AS CACO3) (00435)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)
DU-149	08-12-96	5.7	64	--	5	.80	.70	2.3	.5
DU-147	08-08-96	8.4	95	--	33	3.5	6.0	2.6	.2
DU-148	08-09-96	8.1	93	.0	47	4.1	9.0	1.8	.1
DU-150	08-07-96	7.4	84	5.0	22	3.9	3.0	3.9	.4
DU-151	08-07-96	7.3	81	.0	19	2.5	3.0	5.7	.6

LOCAL IDENT- IFIER	DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
DU-149	08-12-96	1.3	3.7	3.4	<.10	3.5	8	<.010	.690	.019
DU-147	08-08-96	1.0	.40	7.4	<.10	4.3	66	<.010	9.20	.016
DU-148	08-09-96	2.6	.90	7.8	<.10	4.3	86	<.010	14.0	.013
DU-150	08-07-96	1.8	.30	8.1	<.10	4.6	66	<.010	8.10	.013
DU-151	08-07-96	.90	.70	5.9	<.10	5.9	60	<.010	7.10	.010

LOCAL IDENT- IFIER	DATE	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
DU-149	08-12-96	<.20	<.020	<.010	<1.0	--	--	3.3	1.9
DU-147	08-08-96	<.20	<.020	<.010	<1.0	--	--	6.3	.60
DU-148	08-09-96	<.20	<.020	<.010	1.8	--	--	12	.50
DU-150	08-07-96	<.20	<.020	<.010	<1.0	5.0	8.0	2.6	.80
DU-151	08-07-96	<.20	<.020	<.010	<1.0	10	9.2	4.5	.30

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SAMPLING SITES

WATER QUALITY DATA, AUGUST 1996 TO NOVEMBER 1996

EDGEcombe COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)
ED-154	354740077293101		08-01-96	1630	--	--	399	4.9	21.0
			10-04-96	1200	--	--	432	4.6	22.0
ED-146	354743077292801		08-05-96	1600	5.37	9.17	457	4.5	23.5
			10-04-96	1400	6.17	9.17	511	4.3	22.5

LOCAL IDENT- I- FIER	DATE	BARO- METRIC PRES- SURE	OXYGEN, DIS- SOLVED	OXYGEN, DIS- SOLVED	ACIDITY	HARD- NESS TOTAL	CALCIUM DIS- SOLVED	MAGNE- SIUM, DIS- SOLVED	SODIUM, DIS- SOLVED
		(MM OF HG) (00025)	(MG/L AS CACO3) (00300)	(PER- CENT SATUR- ATION) (00301)	(MG/L AS CACO3) (00435)	(MG/L AS CACO3) (00900)	(MG/L AS CA) (00915)	(MG/L AS MG) (00925)	(MG/L AS NA) (00930)
ED-154	08-01-96	762	.5	6	--	140	32	15	4.2
	10-04-96	764	1.3	15	--	--	--	--	--
ED-146	08-05-96	770	.7	9	9.9	160	35	17	4.3
	10-04-96	764	.8	9	--	--	--	--	--

LOCAL IDENT- I- FIER	DATE	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
ED-154	08-01-96	6	.2	5.8	86	23	.20	--
	10-04-96	--	--	--	--	--	--	--
ED-146	08-05-96	5	.1	8.0	91	25	.20	13
	10-04-96	--	--	--	--	--	--	--

LOCAL IDENT- I- FIER	DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)
ED-154	08-01-96	276	<.010	16.0	.014	.51	.52	17
	10-04-96	--	.011	20.0	.012	.39	.40	20
ED-146	08-05-96	328	<.010	20.0	.022	.36	.38	20
	10-04-96	--	<.010	28.0	<.010	--	.49	28

LOCAL IDENT- I- FIER	DATE	PHOS- PHORUS ORTHOS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHOS- SOLVED (MG/L AS P) (00671)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
ED-154	08-01-96	<.020	<.010	--	--	--	--	4.3
	10-04-96	<.020	<.010	--	--	--	--	--
ED-146	08-05-96	<.020	<.010	<1.0	64	58	3.5	4.5
	10-04-96	<.020	<.010	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SAMPLING SITES

WATER QUALITY DATA, AUGUST 1996 TO NOVEMBER 1996

PITT COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)
PI-586	352800077163001		08-06-96	1330	6.49	19.50	255	3.9	22.0
			10-07-96	1130	4.58	19.50	252	4.3	21.0
PI-587	353400077110001		08-06-96	1700	6.49	20.00	360	4.9	23.0
			10-07-96	1330	6.00	20.00	372	5.3	23.0

LOCAL IDENT- I- FIER	DATE	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	ACIDITY (MG/L AS CACO3) (00435)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
PI-586	08-06-96	772	1.4	16	9.9	31	5.7	4.0	27
	10-07-96	769	1.2	14	--	--	--	--	--
PI-587	08-06-96	770	1.4	17	--	40	15	.60	52
	10-07-96	769	.9	11	--	--	--	--	--

LOCAL IDENT- I- FIER	DATE	SODIUM AD- SORP- TION RATIO (00932)	SODIUM PERCENT (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
PI-586	08-06-96	62	2	3.6	28	27	.20	16
	10-07-96	--	--	--	--	--	--	--
PI-587	08-06-96	73	4	1.0	33	44	<.10	5.5
	10-07-96	--	--	--	--	--	--	--

LOCAL IDENT- I- FIER	DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)
PI-586	08-06-96	154	<.010	8.70	.014	--	<.20	--
	10-07-96	--	<.010	7.80	<.010	--	<.20	--
PI-587	08-06-96	208	<.010	4.90	.290	.22	.51	5.4
	10-07-96	--	<.010	6.40	.370	.07	.44	6.8

LOCAL IDENT- I- FIER	DATE	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHOS- SOLVED (MG/L AS P) (00671)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
PI-586	08-06-96	<.020	<.010	1.1	300	34	33	.90
	10-07-96	<.020	<.010	--	--	--	--	--
PI-587	08-06-96	<.020	<.010	<1.0	140	17	5.1	11
	10-07-96	<.020	<.010	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SAMPLING SITES

WATER QUALITY DATA, AUGUST 1996 TO NOVEMBER 1996

SAMPSON COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)
SA-098	345352078100802		11-20-96	1400	--	--	192	6.5	13.5
SA-099	345352078100803		11-20-96	1500	--	--	122	6.2	13.0
SA-095	345400078100401		11-20-96	1000	4.89	14.00	220	5.4	17.5
SA-096	345400078100402		11-20-96	1115	5.06	10.00	281	4.7	18.0
SA-090	345400078101501		08-15-96	1630	3.88	12.00	282	4.2	21.5
SA-094	345416078094701		11-19-96	1445	17.85	45.00	38	5.4	18.5
SA-093	345420078094401		11-19-96	1015	5.00	14.00	488	4.2	19.0
SA-092	345420078094402		11-19-96	1315	5.05	19.00	325	4.5	20.0
SA-091	350746078270901		10-29-96	1330	--	--	191	4.2	20.0
SA-097	350924078213701		10-24-96	1528	--	20.00	235	4.4	19.5

LOCAL IDENT- I- FIER	DATE	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	ACIDITY (MG/L AS CACO3) (00435)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
SA-098	11-20-96	--	.4	--	86	28	4.0	5.5
SA-099	11-20-96	--	.4	--	50	17	1.9	5.3
SA-095	11-20-96	--	.3	--	82	28	2.9	5.2
SA-096	11-20-96	--	.6	--	88	25	6.1	8.1
SA-090	08-15-96	767	4.0	48	5.0	44	11	10
SA-094	11-19-96	759	.4	4	--	8	2.3	.50
SA-093	11-19-96	759	6.7	73	--	110	24	11
SA-092	11-19-96	759	6.4	71	--	61	14	6.2
SA-091	10-29-96	764	6.7	78	--	46	10	5.0
SA-097	10-24-96	--	--	--	--	61	13	7.0

LOCAL IDENT- I- FIER	DATE	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
SA-098	11-20-96	12	.3	3.1	<.10	4.2	<.10	16
SA-099	11-20-96	18	.3	1.4	.10	8.0	<.10	21
SA-095	11-20-96	12	.3	3.1	48	17	<.10	13
SA-096	11-20-96	16	.4	4.9	16	22	.20	9.7
SA-090	08-15-96	24	.7	20	20	12	.10	4.5
SA-094	11-19-96	28	.3	1.9	5.4	4.6	<.10	16
SA-093	11-19-96	18	.6	26	.20	20	<.10	4.8
SA-092	11-19-96	18	.6	36	.20	15	<.10	4.1
SA-091	10-29-96	17	.3	3.9	3.8	9.9	<.10	6.3
SA-097	10-24-96	20	.5	7.3	.20	15	<.10	6.9

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SAMPLING SITES

WATER QUALITY DATA, AUGUST 1996 TO NOVEMBER 1996

SAMPSON COUNTY--Continued

LOCAL IDENT- I- FIER	DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L) AS N) (00607)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L) AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L) AS N) (00602)
SA-098	11-20-96	128	<.010	<.050	.500	.10	.60	--
SA-099	11-20-96	99	<.010	<.050	.210	.09	.30	--
SA-095	11-20-96	165	.030	5.00	<.015	--	<.20	--
SA-096	11-20-96	188	.020	21.0	.090	--	<.20	--
SA-090	08-15-96	228	<.010	22.0	<.010	--	.26	22
SA-094	11-19-96	49	<.010	.190	<.015	--	<.20	--
SA-093	11-19-96	335	<.010	52.0	<.015	--	<.20	--
SA-092	11-19-96	232	<.010	33.0	<.015	--	<.20	--
SA-091	10-29-96	128	<.010	16.0	<.010	--	<.20	--
SA-097	10-24-96	164	<.010	19.0	.010	--	<.20	--

LOCAL IDENT- I- FIER	DATE	PHOS- PHORUS DIS- SOLVED (MG/L) AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) AS P) (00671)	COPPER, DIS- SOLVED (UG/L) AS CU) (01040)	IRON, DIS- SOLVED (UG/L) AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L) AS MN) (01056)	ZINC, DIS- SOLVED (UG/L) AS ZN) (01090)	CARBON, ORGANIC DIS- SOLVED (MG/L) AS C) (00681)
SA-098	11-20-96	.220	.270	--	610	76	--	3.2
SA-099	11-20-96	.100	.110	--	170	35	--	3.1
SA-095	11-20-96	.030	.020	--	110	17	--	.50
SA-096	11-20-96	<.010	<.010	--	140	43	--	1.0
SA-090	08-15-96	<.020	<.010	<1.0	--	--	7.2	2.1
SA-094	11-19-96	.110	.110	--	540	17	--	.60
SA-093	11-19-96	<.010	<.010	--	15	260	--	1.0
SA-092	11-19-96	.020	<.010	--	26	120	--	.70
SA-091	10-29-96	<.020	<.010	72	30	23	12	.30
SA-097	10-24-96	<.020	<.010	17	70	32	52	.30

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SAMPLING SITES

Ground water-quality data were collected for the Guilford County ground-water study from November 1996 to February 1997. The objective of the sampling was to provide a ground-water quality database for the county for newly constructed domestic water supply wells. Locations for sites listed in the following tables are shown in figure.

WATER QUALITY DATA, NOVEMBER 1996 TO FEBURARY 1997

GUILFORD COUNTY

LOCAL IDENT- IFIER	STATION	NUMBER	DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	FLOW RATE (G/M) (00059)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)
GU-500	361012079453201		11-04-96	1430	205	--	--	45	2.5	248
GU-501	360953079451201		11-04-96	1630	170	95	160	35	2.1	91
GU-502	360826080003801		11-05-96	1100	198	--	--	30	2.1	122
GU-503	360905079560701		11-05-96	1330	200	120	170	25	2.1	96
GU-504	360952079482901		11-05-96	1600	85	60	--	25	2.1	77
GU-505	360412080010101		11-06-96	1030	120	89	110	25	2.1	66
GU-506	360947079550301		11-06-96	1230	205	175	--	25	2.1	148
GU-507	361133079462601		11-06-96	1430	--	--	--	25	2.1	61
GU-508	361412079461201		11-06-96	1630	185	110	145	20	1.5	126
GU-509	361254079424801		11-18-96	1700	345	--	--	30	2.5	234
GU-510	360645080005001		11-19-96	1200	245	120	200	20	1.5	154
GU-511	360435080021301		11-19-96	1400	425	200	400	25	2.5	198
GU-512	360036079574301		11-19-96	1700	225	115	230	25	1.9	195
GU-513	360904079575401		11-20-96	1130	140	90	130	20	3.0	110
GU-514	360903079590101		11-20-96	1400	445	90	215	25	.8	225
GU-515	361228080011301		11-20-96	1630	305	160	240	25	2.5	177
GU-516	361430079572001		11-21-96	1100	325	310	--	25	3.8	451
GU-517	361305079535501		11-21-96	1330	85	75	--	25	2.5	142
GU-518	361240079582501		11-21-96	1600	305	80	200	25	2.5	60
GU-519	355846079344001		12-03-96	1600	280	--	--	20	1.9	97
GU-520	361045079523101		12-04-96	1030	305	--	--	20	2.5	81
GU-521	361243079514101		12-04-96	1300	345	--	--	25	2.5	174
GU-522	361333079483501		12-04-96	1600	300	--	--	20	2.5	203
GU-523	360927079412501		12-05-96	1100	205	--	--	20	1.9	75
GU-524	360651079342301		12-05-96	1330	200	--	--	25	3.8	81
GU-525	360056079524801		12-05-96	1630	320	--	--	30	3.0	228
GU-526	360244079375101		12-09-96	1630	200	--	--	20	2.5	274
GU-527	355521079464501		12-10-96	1030	245	--	--	20	3.0	91
GU-528	355703079475001		12-10-96	1300	340	--	--	25	2.1	248
GU-529	360034079454501		12-10-96	1530	125	--	--	20	2.1	211
GU-530	355631079404301		12-11-96	1030	245	--	--	20	3.8	264
GU-531	355429079382901		12-11-96	1300	145	--	--	20	3.0	288
GU-532	355835079332301		12-11-96	1600	205	--	--	20	2.5	249
GU-533	361123079463601		12-12-96	1030	165	--	--	20	3.8	900
GU-534	360709079521901		12-12-96	1230	120	--	--	20	3.8	406
GU-535	360352079582101		12-12-96	1500	265	--	--	20	2.5	142
GU-536	355512079495301		12-17-96	1030	180	--	--	25	3.8	95
GU-537	355534079474901		12-17-96	1300	225	--	--	20	3.8	347
GU-538	360633079545301		12-16-96	1530	185	45	275	95	7.5	232
GU-539	355509079465201		12-18-96	1100	--	--	--	20	3.8	225

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SAMPLING SITES

WATER QUALITY DATA, NOVEMBER 1996 TO FEBRUARY 1997

GUILFORD COUNTY

LOCAL IDENT- IFIER	DATE	PH WATER FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	TURBI- DITY (NTU) ()	HARD- NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
GU-500	11-04-96	7.7	15.0	764	.2	3	5.0	--	--
GU-501	11-04-96	5.9	15.0	764	6.9	73	<1.0	--	--
GU-502	11-05-96	6.3	15.5	765	6.6	71	21	--	--
GU-503	11-05-96	6.3	15.0	765	5.7	60	<1.0	--	--
GU-504	11-05-96	5.9	16.5	765	6.5	71	4.0	--	--
GU-505	11-06-96	6.4	15.0	764	7.9	84	1.0	--	--
GU-506	11-06-96	7.0	15.0	764	4.7	49	<1.0	--	--
GU-507	11-06-96	6.2	16.0	764	7.8	86	<1.0	--	--
GU-508	11-06-96	6.4	15.5	764	.4	4	<1.0	--	--
GU-509	11-18-96	8.1	14.0	764	.4	4	<1.0	94	28
GU-510	11-19-96	--	14.5	764	.6	6	2.0	53	13
GU-511	11-19-96	--	13.5	764	1.3	12	3.0	76	22
GU-512	11-19-96	--	14.5	764	1.3	13	<1.0	63	17
GU-513	11-20-96	6.5	15.0	765	3.4	34	<1.0	31	9.3
GU-514	11-20-96	--	15.0	765	4.1	40	<1.0	95	28
GU-515	11-20-96	6.7	14.0	765	3.5	34	1.0	69	16
GU-516	11-21-96	7.5	15.0	765	.3	3	2.0	220	84
GU-517	11-21-96	6.0	14.0	765	.5	5	2.0	46	12
GU-518	11-21-96	5.4	15.0	765	.7	7	2.0	16	3.1
GU-519	12-03-96	6.5	12.5	764	5.6	52	<1.0	29	6.6
GU-520	12-04-96	6.9	13.0	764	7.7	73	<1.0	27	5.7
GU-521	12-04-96	7.5	14.0	764	3.3	33	<1.0	74	18
GU-522	12-04-96	7.7	15.0	764	3.7	37	<1.0	120	38
GU-523	12-05-96	6.6	12.0	764	6.5	60	2.0	27	6.0
GU-524	12-05-96	6.4	14.5	764	4.9	46	<1.0	17	5.1
GU-525	12-05-96	6.2	13.0	764	3.6	34	<1.0	90	21
GU-526	12-09-96	6.7	14.0	764	1.5	14	<1.0	110	21
GU-527	12-10-96	6.3	12.5	764	3.0	29	<1.0	34	8.6
GU-528	12-10-96	7.8	14.0	764	.1	1	24	120	28
GU-529	12-10-96	6.8	12.5	764	5.5	52	<1.0	96	27
GU-530	12-11-96	7.8	13.0	764	.2	2	9.0	110	31
GU-531	12-11-96	7.0	14.0	764	.3	3	5.0	110	37
GU-532	12-11-96	7.2	14.0	764	.3	3	1.0	110	31
GU-533	12-12-96	7.8	14.0	764	.4	4	1.0	450	170
GU-534	12-12-96	7.0	13.5	764	1.5	15	<1.0	19	4.4
GU-535	12-12-96	6.7	16.0	764	3.9	39	<1.0	51	12
GU-536	12-17-96	6.0	15.0	764	6.7	67	<1.0	32	7.9
GU-537	12-17-96	7.4	14.5	764	.3	3	<1.0	150	42
GU-538	12-16-96	8.0	16.0	764	.7	7	<1.0	110	34
GU-539	12-18-96	7.1	13.5	764	2.3	22	<1.0	96	22

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SAMPLING SITES

WATER QUALITY DATA, NOVEMBER 1996 TO FEBRUARY 1997

GUILFORD COUNTY

LOCAL IDENT- I- FIER	DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) (00405)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
GU-500	11-04-96	--	--	--	--	--	--	--	--
GU-501	11-04-96	--	--	--	--	--	--	--	--
GU-502	11-05-96	--	--	--	--	--	--	--	--
GU-503	11-05-96	--	--	--	--	--	--	--	--
GU-504	11-05-96	--	--	--	--	--	--	--	--
GU-505	11-06-96	--	--	--	--	--	--	--	--
GU-506	11-06-96	--	--	--	--	--	--	--	--
GU-507	11-06-96	--	--	--	--	--	--	--	--
GU-508	11-06-96	--	--	--	--	--	--	--	--
GU-509	11-18-96	5.9	9.6	18	.4	2.9	85	1.3	22
GU-510	11-19-96	5.0	6.4	19	.4	5.2	49	--	13
GU-511	11-19-96	5.0	9.1	20	.5	3.2	77	--	15
GU-512	11-19-96	5.0	8.9	23	.5	1.4	95	--	1.5
GU-513	11-20-96	2.0	6.8	30	.5	3.0	49	30	.90
GU-514	11-20-96	6.0	7.2	14	.3	2.1	103	--	12
GU-515	11-20-96	7.0	8.0	19	.4	3.8	76	29	3.7
GU-516	11-21-96	2.0	7.2	7	.2	1.2	208	13	13
GU-517	11-21-96	4.0	7.2	24	.5	2.0	36	70	1.0
GU-518	11-21-96	2.0	5.2	39	.6	1.5	14	108	<.20
GU-519	12-03-96	3.0	8.0	36	.6	1.4	48	29	1.1
GU-520	12-04-96	3.0	6.0	31	.5	2.4	39	9.5	.30
GU-521	12-04-96	7.0	6.7	16	.3	1.6	85	5.2	.60
GU-522	12-04-96	6.0	6.9	11	.3	1.3	67	2.6	56
GU-523	12-05-96	3.0	5.0	28	.4	1.0	34	17	1.1
GU-524	12-05-96	1.0	10	55	1	.90	38	29	.30
GU-525	12-05-96	9.0	10	19	.5	.60	86	105	10
GU-526	12-09-96	13	11	18	.5	2.7	70	27	26
GU-527	12-10-96	3.0	5.9	27	.4	.60	47	46	.70
GU-528	12-10-96	11	6.7	11	.3	1.8	133	4.1	3.5
GU-529	12-10-96	7.0	7.8	15	.3	.50	109	33	.60
GU-530	12-11-96	8.0	9.9	16	.4	2.8	128	3.9	5.6
GU-531	12-11-96	5.0	14	21	.6	1.3	126	24	7.3
GU-532	12-11-96	8.0	7.2	12	.3	1.5	105	13	14
GU-533	12-12-96	7.0	8.8	4	.2	4.6	57	1.7	400
GU-534	12-12-96	2.0	80	90	8	.60	150	29	27
GU-535	12-12-96	5.0	7.4	24	.5	1.2	49	19	10
GU-536	12-17-96	3.0	8.0	34	.6	.80	46	89	.40
GU-537	12-17-96	12	12	14	.4	3.5	158	12	8.8
GU-538	12-16-96	5.0	8.4	15	.4	1.4	75	1.4	36
GU-539	12-18-96	10	9.4	17	.4	1.3	97	15	11

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SAMPLING SITES

WATER QUALITY DATA, NOVEMBER 1996 TO FEBURARY 1997

GUILFORD COUNTY

LOCAL IDENT- IFIER	DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRATE IMMUNO- ASSAY (MG/L) ()
GU-500	11-04-96	--	--	--	--	--	--	--	<.25
GU-501	11-04-96	--	--	--	--	--	--	--	1.9
GU-502	11-05-96	--	--	--	--	--	--	--	2.1
GU-503	11-05-96	--	--	--	--	--	--	--	2.3
GU-504	11-05-96	--	--	--	--	--	--	--	1.5
GU-505	11-06-96	--	--	--	--	--	--	--	1.5
GU-506	11-06-96	--	--	--	--	--	--	--	.10
GU-507	11-06-96	--	--	--	--	--	--	--	2.1
GU-508	11-06-96	--	--	--	--	--	--	--	.10
GU-509	11-18-96	1.8	3.0	<.10	24	154	148	.034	<.25
GU-510	11-19-96	6.5	.20	<.10	40	124	120	<.010	<.25
GU-511	11-19-96	1.8	.40	<.10	36	142	141	<.010	.30
GU-512	11-19-96	3.6	<.10	<.10	38	140	145	<.010	.10
GU-513	11-20-96	2.2	.10	<.10	34	88	93	<.010	.50
GU-514	11-20-96	2.5	.20	<.10	35	156	156	<.010	<.25
GU-515	11-20-96	4.5	.10	<.10	41	130	132	<.010	.30
GU-516	11-21-96	7.2	<.10	<.10	15	258	260	.180	1.1
GU-517	11-21-96	11	<.10	<.10	30	108	104	<.010	3.1
GU-518	11-21-96	4.5	<.10	<.10	17	48	--	<.010	1.5
GU-519	12-03-96	1.6	<.10	<.10	40	94	92	<.010	<.25
GU-520	12-04-96	1.2	.20	<.10	44	92	88	<.010	.20
GU-521	12-04-96	1.5	.60	<.10	29	132	119	<.010	.50
GU-522	12-04-96	3.8	.60	<.10	25	192	183	<.010	1.0
GU-523	12-05-96	1.2	<.10	<.10	34	76	75	<.010	.40
GU-524	12-05-96	1.5	<.10	<.10	52	98	96	<.010	.10
GU-525	12-05-96	9.0	<.10	<.10	42	162	162	<.010	1.6
GU-526	12-09-96	17	.10	<.10	52	192	195	<.010	2.0
GU-527	12-10-96	1.7	<.10	<.10	38	80	87	<.010	<.25
GU-528	12-10-96	2.0	<.10	<.10	22	180	155	<.010	<.25
GU-529	12-10-96	2.8	<.10	<.10	48	158	162	<.010	.40
GU-530	12-11-96	2.7	<.10	<.10	33	168	170	<.010	<.25
GU-531	12-11-96	9.2	.20	<.10	43	198	193	<.010	<.25
GU-532	12-11-96	3.9	<.10	<.10	39	174	168	<.010	.10
GU-533	12-12-96	1.4	1.1	<.10	31	718	658	<.010	<.25
GU-534	12-12-96	11	.10	<.10	41	284	268	<.010	2.2
GU-535	12-12-96	3.9	.20	<.10	48	134	122	<.010	.90
GU-536	12-17-96	1.6	<.10	<.10	48	86	99	<.010	.10
GU-537	12-17-96	9.5	<.10	<.10	27	222	211	.011	.20
GU-538	12-16-96	1.9	1.2	<.10	24	174	157	.013	<.25
GU-539	12-18-96	4.4	.10	<.10	46	172	165	<.010	.30

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SAMPLING SITES

WATER QUALITY DATA, NOVEMBER 1996 TO FEBURARY 1997

GUILFORD COUNTY

LOCAL IDENT- I- FIER	DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)
GU-500	11-04-96	--	--	--	--	--	--	--	--
GU-501	11-04-96	--	--	--	--	--	--	--	--
GU-502	11-05-96	--	--	--	--	--	--	--	--
GU-503	11-05-96	--	--	--	--	--	--	--	--
GU-504	11-05-96	--	--	--	--	--	--	--	--
GU-505	11-06-96	--	--	--	--	--	--	--	--
GU-506	11-06-96	--	--	--	--	--	--	--	--
GU-507	11-06-96	--	--	--	--	--	--	--	--
GU-508	11-06-96	--	--	--	--	--	--	--	--
GU-509	11-18-96	.040	<.010	<.20	<.020	<.010	5.2	<1	6.0
GU-510	11-19-96	.160	<.010	<.20	<.020	<.010	<3.0	<1	25
GU-511	11-19-96	.390	<.010	<.20	<.020	<.010	7.2	<1	52
GU-512	11-19-96	.250	<.010	<.20	.030	.020	6.4	<1	25
GU-513	11-20-96	.700	<.010	<.20	<.020	.010	5.3	<1	17
GU-514	11-20-96	.100	<.010	<.20	<.020	.010	5.0	<1	17
GU-515	11-20-96	.470	<.010	<.20	<.020	.020	8.2	<1	10
GU-516	11-21-96	1.30	<.010	<.20	<.020	<.010	7.1	<1	8.0
GU-517	11-21-96	3.40	<.010	<.20	.040	.040	4.9	<1	70
GU-518	11-21-96	1.60	<.010	<.20	<.020	<.010	9.8	<1	55
GU-519	12-03-96	<.020	<.010	<.20	.070	.090	3.8	<1	45
GU-520	12-04-96	.320	<.010	<.20	.080	.090	4.3	<1	11
GU-521	12-04-96	.690	<.010	<.20	.040	.050	6.5	<1	5.0
GU-522	12-04-96	1.10	<.010	<.20	<.020	<.010	5.1	<1	50
GU-523	12-05-96	.510	<.010	<.20	.060	.080	5.0	<1	12
GU-524	12-05-96	.160	<.010	<.20	.100	.120	5.1	<1	17
GU-525	12-05-96	1.80	<.010	<.20	.060	.080	5.2	<1	25
GU-526	12-09-96	2.30	<.010	<.20	.060	.050	4.8	1	79
GU-527	12-10-96	.050	<.010	<.20	.100	.100	5.1	<1	17
GU-528	12-10-96	<.020	<.010	<.20	<.020	<.010	4.5	2	24
GU-529	12-10-96	.490	<.010	<.20	.070	.080	4.4	1	10
GU-530	12-11-96	<.020	<.010	<.20	.030	.040	6.7	<1	6.0
GU-531	12-11-96	<.020	.026	<.20	.040	.040	4.6	<1	21
GU-532	12-11-96	<.020	.010	<.20	<.020	.030	4.7	<1	5.0
GU-533	12-12-96	<.020	<.010	<.20	<.020	<.010	5.2	<1	31
GU-534	12-12-96	2.60	<.010	<.20	.030	.040	4.7	<1	2.0
GU-535	12-12-96	1.10	.011	<.20	.110	.120	4.7	<1	33
GU-536	12-17-96	.220	<.010	<.20	.080	.080	11	<1	38
GU-537	12-17-96	.270	<.010	<.20	.020	.020	5.5	<1	20
GU-538	12-16-96	.070	<.010	<.20	<.020	<.010	8.6	<1	1.0
GU-539	12-18-96	.410	<.010	<.20	.150	.170	5.9	<1	41

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SAMPLING SITES

WATER QUALITY DATA, NOVEMBER 1996 TO FEBURARY 1997

GUILFORD COUNTY

LOCAL IDENT- I- FIER	DATE	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
GU-500	11-04-96	--	--	--	--	--	--	--	--
GU-501	11-04-96	--	--	--	--	--	--	--	--
GU-502	11-05-96	--	--	--	--	--	--	--	--
GU-503	11-05-96	--	--	--	--	--	--	--	--
GU-504	11-05-96	--	--	--	--	--	--	--	--
GU-505	11-06-96	--	--	--	--	--	--	--	--
GU-506	11-06-96	--	--	--	--	--	--	--	--
GU-507	11-06-96	--	--	--	--	--	--	--	--
GU-508	11-06-96	--	--	--	--	--	--	--	--
GU-509	11-18-96	<.50	<.50	<1.0	<1.0	<1.0	7.0	<1.0	6.7
GU-510	11-19-96	<.50	<.50	<1.0	<1.0	7.8	20	<1.0	8.7
GU-511	11-19-96	<.50	<.50	2.1	<1.0	14	2.0	<1.0	1.7
GU-512	11-19-96	<.50	<.50	<1.0	<1.0	1.5	7.0	<1.0	32
GU-513	11-20-96	<.50	<.50	<1.0	<1.0	60	1.0	<1.0	2.1
GU-514	11-20-96	<.50	<.50	2.7	<1.0	5.1	2.0	<1.0	.50
GU-515	11-20-96	<.50	<.50	2.1	<1.0	10	10	<1.0	2.2
GU-516	11-21-96	<.50	<.50	<1.0	<1.0	3.6	3.0	<1.0	33
GU-517	11-21-96	<.50	<.50	2.6	<1.0	79	7.0	<1.0	.60
GU-518	11-21-96	<.50	<.50	1.2	<1.0	21	4.0	<1.0	2.9
GU-519	12-03-96	<.50	<.50	<1.0	<1.0	28	5.0	<1.0	6.5
GU-520	12-04-96	<.50	<.50	3.0	<1.0	38	<1.0	<1.0	<.20
GU-521	12-04-96	<.50	<.50	<1.0	<1.0	5.3	2.0	<1.0	.70
GU-522	12-04-96	<.50	<.50	<1.0	<1.0	26	1.0	<1.0	4.7
GU-523	12-05-96	<.50	<.50	1.1	<1.0	67	2.0	<1.0	.50
GU-524	12-05-96	<.50	<.50	<1.0	<1.0	95	6.0	<1.0	1.0
GU-525	12-05-96	<.50	<.50	1.6	<1.0	520	1.0	<1.0	.40
GU-526	12-09-96	<.50	<.50	<1.0	<1.0	8.5	110	<1.0	110
GU-527	12-10-96	<.50	<.50	1.0	<1.0	9.0	2.0	1.6	1.0
GU-528	12-10-96	<.50	<.50	<1.0	<1.0	<1.0	350	<1.0	18
GU-529	12-10-96	<.50	<.50	3.6	<1.0	33	<1.0	<1.0	10
GU-530	12-11-96	<.50	<.50	<1.0	<1.0	5.4	5.0	<1.0	33
GU-531	12-11-96	<.50	<.50	<1.0	<1.0	<1.0	200	<1.0	290
GU-532	12-11-96	<.50	<.50	<1.0	<1.0	38	4.0	<1.0	97
GU-533	12-12-96	<.50	<.50	<1.0	<1.0	12	3.0	<1.0	.30
GU-534	12-12-96	<.50	<.50	<1.0	<1.0	40	<1.0	<1.0	<.20
GU-535	12-12-96	<.50	<.50	2.8	<1.0	31	<1.0	<1.0	<.20
GU-536	12-17-96	<.50	<.50	1.7	<1.0	3.8	1.0	<1.0	.40
GU-537	12-17-96	<.50	<.50	<1.0	<1.0	4.0	3.0	<1.0	15
GU-538	12-16-96	<.50	<.50	<1.0	<1.0	<1.0	2.0	<1.0	4.8
GU-539	12-18-96	<.50	<.50	<1.0	<1.0	<1.0	2.0	<1.0	5.4

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SAMPLING SITES

WATER QUALITY DATA, NOVEMBER 1996 TO FEBURARY 1997

GUILFORD COUNTY

LOCAL IDENT- I- FIER	DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)	BTEX IMMUNO- ASSAY (MG/L) ()
GU-500	11-04-96	--	--	--	--	--	25	620	<.02
GU-501	11-04-96	--	--	--	--	--	68	6300	<.02
GU-502	11-05-96	--	--	--	--	--	42	2200	<.02
GU-503	11-05-96	--	--	--	--	--	41	2000	<.02
GU-504	11-05-96	--	--	--	--	--	68	6200	<.02
GU-505	11-06-96	--	--	--	--	--	62	4900	<.02
GU-506	11-06-96	--	--	--	--	--	40	1900	<.02
GU-507	11-06-96	--	--	--	--	--	50	3300	<.02
GU-508	11-06-96	--	--	--	--	--	52	3600	<.02
GU-509	11-18-96	<2.0	<1.0	<1	<1.0	8.7	54	3400	<.02
GU-510	11-19-96	7.6	<1.0	1	<1.0	84	35	1400	<.02
GU-511	11-19-96	<2.0	<1.0	<1	<1.0	47	25	630	<.02
GU-512	11-19-96	<2.0	1.2	<1	<1.0	11000	21	410	<.02
GU-513	11-20-96	<2.0	<1.0	<1	<1.0	2400	45	2600	<.02
GU-514	11-20-96	<2.0	<1.0	<1	<1.0	330	33	1300	<.02
GU-515	11-20-96	<2.0	<1.0	<1	<1.0	410	49	3100	<.02
GU-516	11-21-96	<2.0	<1.0	2	<1.0	4.7	28	750	<.02
GU-517	11-21-96	<2.0	<1.0	<1	<1.0	39	52	3500	<.02
GU-518	11-21-96	<2.0	<1.0	<1	<1.0	26	35	1500	<.02
GU-519	12-03-96	<2.0	<1.0	<1	<1.0	1600	39	1900	<.02
GU-520	12-04-96	<2.0	<1.0	<1	<1.0	490	54	3700	<.02
GU-521	12-04-96	<2.0	<1.0	<1	<1.0	220	35	1500	<.02
GU-522	12-04-96	<2.0	<1.0	<1	<1.0	100	39	1900	<.02
GU-523	12-05-96	<2.0	<1.0	<1	<1.0	290	35	1400	<.02
GU-524	12-05-96	<2.0	<1.0	<1	<1.0	1300	34	1300	<.02
GU-525	12-05-96	<2.0	1.5	<1	<1.0	15	18	200	<.02
GU-526	12-09-96	<2.0	1.2	2	<1.0	18	23	540	<.02
GU-527	12-10-96	<2.0	<1.0	1	<1.0	11	18	150	<.02
GU-528	12-10-96	<2.0	<1.0	3	<1.0	28	23	450	<.02
GU-529	12-10-96	<2.0	3.5	<1	<1.0	230	16	<70	<.02
GU-530	12-11-96	<2.0	<1.0	<1	<1.0	13	18	150	<.02
GU-531	12-11-96	<2.0	<1.0	<1	<1.0	11	18	160	<.02
GU-532	12-11-96	3.6	<1.0	<1	<1.0	15	19	270	<.02
GU-533	12-12-96	2.0	<1.0	<1	<1.0	4.0	36	1500	<.02
GU-534	12-12-96	3.0	1.2	<1	<1.0	17	48	2900	<.02
GU-535	12-12-96	<2.0	1.2	<1	<1.0	12	29	910	<.02
GU-536	12-17-96	<2.0	1.1	<1	<1.0	280	28	710	<.02
GU-537	12-17-96	<2.0	<1.0	<1	<1.0	580	18	160	<.02
GU-538	12-16-96	6.4	1.4	2	<1.0	2.7	36	1200	<.02
GU-539	12-18-96	<2.0	<1.0	<1	<1.0	5.2	23	410	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SAMPLING SITES

WATER QUALITY DATA, NOVEMBER 1996 TO FEBURARY 1997

GUILFORD COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	FLOW RATE (G/M) (00059)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)
GU-540	360849079335501		01-15-97	1130	205	20	1.9	150	6.9	15.0
GU-541	360044079390801		01-15-97	1500	205	25	4.3	164	6.7	14.5
GU-542	355935079431201		01-15-97	1700	200	20	2.5	281	7.9	13.5
GU-543	360744079502001		01-16-97	1030	120	20	2.5	67	6.2	14.0
GU-544	361148079514701		01-16-97	1200	205	20	3.8	111	6.4	12.5
GU-545	361304079524601		01-16-97	1400	145	25	3.0	--	7.7	13.0
GU-546	361412079581801		01-16-97	1630	245	20	2.5	90	6.0	13.0
GU-547	361310079342401		01-27-97	1430	80	--	2.5	124	6.2	15.0
GU-548	361149079364301		01-27-97	1730	150	--	2.5	147	6.4	13.0
GU-549	360020079370301		01-29-97	1430	245	--	2.5	385	6.6	15.0
GU-550	355956079415801		01-29-97	1630	185	15	2.5	92	6.7	13.5
GU-551	360254079543401		01-30-97	1200	215	15	3.8	107	6.6	12.5
GU-552	355819079554501		01-30-97	1430	125	15	2.5	420	7.1	14.0
GU-553	360248079401001		02-04-97	1330	180	15	2.5	205	6.6	12.5
GU-554	360126079445001		02-04-97	1630	120	15	3.8	160	6.5	11.5
GU-555	355948079533201		02-05-97	1100	155	15	2.5	155	6.4	13.5
GU-556	355957079533801		02-05-97	1330	185	15	3.8	388	7.6	14.0
GU-557	360000079533501		02-05-97	1600	175	20	2.5	421	7.4	14.5
GU-558	355826079443801		02-06-97	1200	445	15	3.8	226	6.8	12.0
GU-559	355956079420601		02-06-97	1430	120	15	3.8	161	6.6	11.5
GU-560	361247079492801		02-11-97	1600	205	15	3.8	54	6.4	14.0
GU-561	361238079514501		02-11-97	1800	225	15	3.8	81	6.8	13.5
GU-562	355629079403201		02-12-97	1700	125	15	3.8	165	6.4	13.0
GU-563	355549079501001		02-12-97	1900	225	15	2.5	98	6.6	9.5
GU-564	360045079523201		02-13-97	1300	260	15	3.8	113	6.6	13.0
GU-565	360001079533201		02-13-97	1430	210	15	3.8	326	6.8	12.0
GU-566	361000079384901		02-19-97	1400	225	--	2.5	72	6.6	15.5
GU-567	361250079391701		02-19-97	1630	--	--	3.8	92	5.9	13.0
GU-568	361109080004801		02-20-97	1300	135	--	3.8	393	7.5	10.5
GU-569	360938080015401		02-20-97	1530	505	--	3.8	97	5.8	14.0

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SAMPLING SITES

WATER QUALITY DATA, NOVEMBER 1996 TO FEBURARY 1997

GUILFORD COUNTY

LOCAL IDENT- I- FIER	DATE	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	TURBI- DITY (NTU) ()	NITRATE IMMUNO- ASSAY (MG/L) ()	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)	BTEX IMMUNO- ASSAY (MG/L) ()
GU-540	01-15-97	764	3.1	31	<1.0	.60	19	240	<.02
GU-541	01-15-97	764	.9	9	2.0	.70	22	390	<.02
GU-542	01-15-97	764	2.0	20	<1.0	.10	16	<72	<.02
GU-543	01-16-97	764	5.3	51	<1.0	.30	44	2400	<.02
GU-544	01-16-97	764	7.7	73	<1.0	4.7	48	2900	<.02
GU-545	01-16-97	764	.4	3	1.0	<.25	29	890	<.02
GU-546	01-16-97	764	2.7	27	1.0	.90	68	6200	<.02
GU-547	01-27-97	764	1.1	11	--	--	16	83	--
GU-548	01-27-97	764	2.7	26	21	<.25	26	730	<.02
GU-549	01-29-97	762	.8	8	<1.0	1.1	14	<39	<.02
GU-550	01-29-97	762	6.7	65	1.0	1.9	22	410	<.02
GU-551	01-30-97	764	4.0	37	<1.0	.90	18	220	<.02
GU-552	01-30-97	764	.4	4	1.0	<.25	22	430	<.02
GU-553	02-04-97	764	3.8	38	<1.0	4.3	21	360	.10
GU-554	02-04-97	764	3.3	31	1.0	.80	24	580	<.02
GU-555	02-05-97	764	5.0	49	<1.0	<.25	19	240	<.02
GU-556	02-05-97	764	.5	5	<1.0	.20	17	120	<.02
GU-557	02-05-97	764	.7	6	<1.0	.10	16	98	<.02
GU-558	02-06-97	764	.7	7	<1.0	.50	15	<37	<.02
GU-559	02-06-97	764	5.6	56	<1.0	3.8	21	370	<.02
GU-560	02-11-97	764	8.6	84	<1.0	1.1	36	1600	<.02
GU-561	02-11-97	764	6.5	63	<1.0	1.2	33	1300	<.02
GU-562	02-12-97	764	1.8	17	13	1.7	20	320	<.02
GU-563	02-12-97	764	6.1	54	<1.0	.30	19	260	<.02
GU-564	02-13-97	764	4.0	38	<1.0	.10	26	650	<.02
GU-565	02-13-97	764	2.2	20	<1.00	2.0	16	94	<.02
GU-566	02-19-97	764	6.3	63	<1.00	.70	21	340	<.02
GU-567	02-19-97	764	5.1	49	2.0	.10	27	740	<.02
GU-568	02-20-97	764	3.3	29	<1.0	2.7	42	2200	<.02
GU-569	02-20-97	764	6.8	67	<1.0	2.5	48	3000	<.02

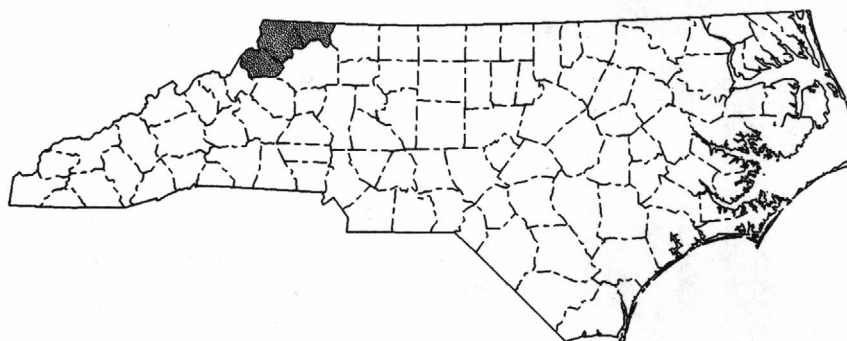
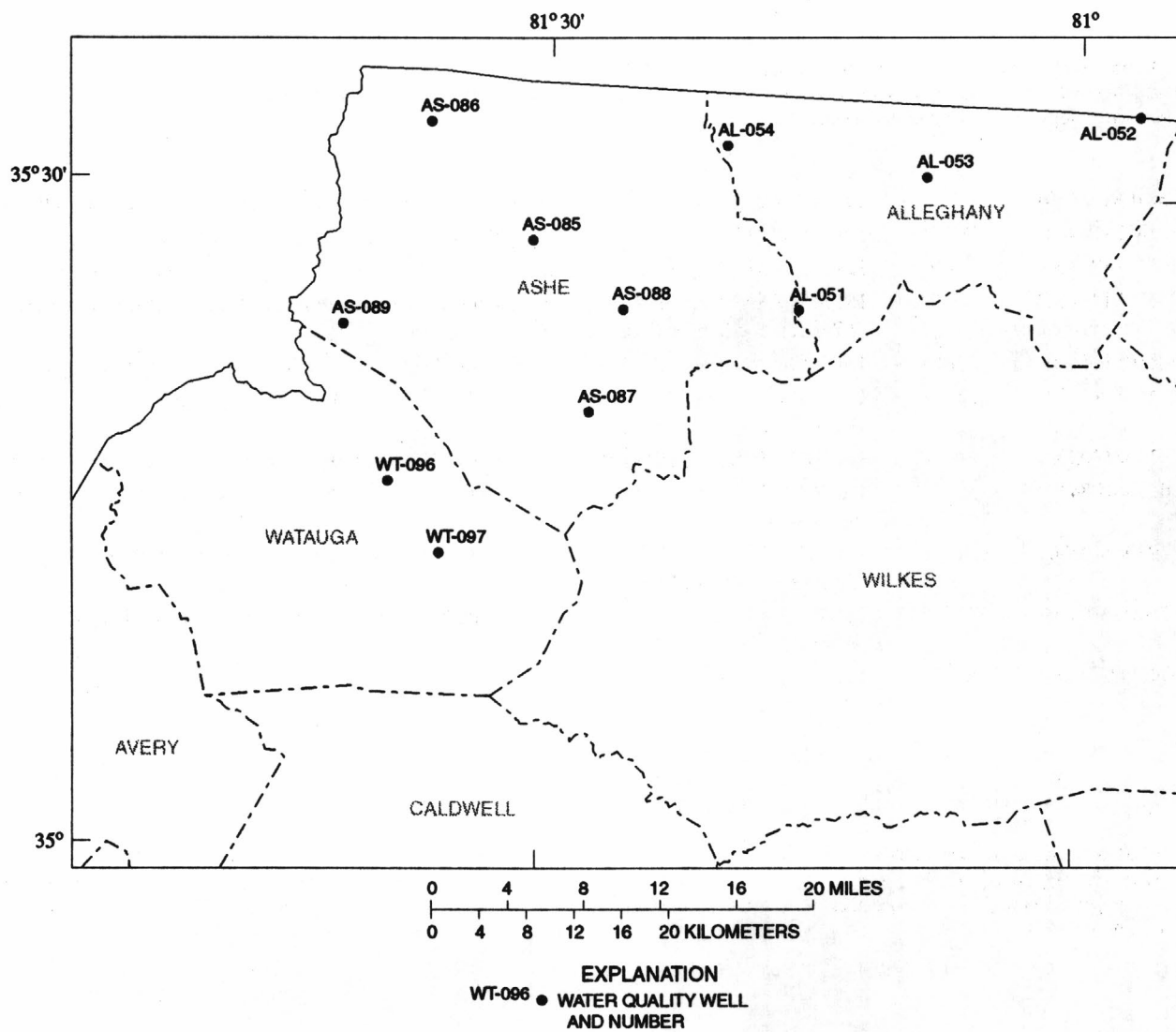


Figure 11.--Location of Watauga, Ashe, and Alleghany Counties in North Carolina.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SAMPLING SITES

During the summer of 1997, 11 wells were sampled in North Carolina in the Kanawha-New River Basin as part of a study unit survey within the National Water-Quality Assessment (NAWQA) Program. Samples included field determinations, major ions, trace metals, nutrients, dissolved organic carbon, radon, microbiology, volatile organic compounds and pesticides.

361327081354601	WT-097	Lat 36°13'27", long 81°35'46", Watauga County, 3.4 mi east of Boone, 1.3 mi west of Rutherford.
361638081384401	WT-096	Lat 36°16'38", long 81°38'44", Watauga County, 3.5 mi southwest of Todd, 0.5 mi west of Soda Hill.
361957081273001	AS-087	Lat 36°19'57", long 81°27'30", Ashe County, 2.2 mi south of Othello, 1.7 mi east of Oval.
362339081412601	AS-089	Lat 36°23'39", long 81°41'26", Ashe County, located in Sutherland 1.2 mi southeast of Green Valley, 2.7 mi east of Snyder Gap.
362436081254101	AS-088	Lat 36°24'36", long 81°25'41", Ashe County, 2.7 mi east of Jefferson, 1.0 mi north of Orion.
362445081154701	AL-051	Lat 36°24'45", long 81°15'47", Alleghany County, located in Laurel Springs 2.9 mi south of Furches, 3.9 mi east of Ore Knob.
362739081305001	AS-085	Lat 36°27'39", long 81°30'50", Ashe County, 0.3 mi east of Warrensville, 2.5 mi north of Smethport.
363053081084101	AL-053	Lat 36°30'53", long 81°08'41", Alleghany County, 1.0 mi northwest of Sparta, 1.3 mi southeast of Twin Oaks.
363208081195801	AL-054	Lat 36°32'08", long 81°19'58", Alleghany County, 3.7 mi south of Mouth of Wilson, VA, 2.7 mi southwest of Piney Creek.
363254081364201	AS-086	Lat 36°32'54", long 81°36'42", Ashe County, 6.5 mi northwest of Lansing, 3.7 mi south of Whitetop, VA.
363345080564001	AL-052	Lat 36°33'45", long 80°56'40", Alleghany County, 0.1 mi north of Edmonds, 2.6 mi west of Low Gap, VA.

VOLATILE ORGANIC COMPOUNDS

REMARKS.--The following table contains volatile organic compounds (VOC) data for sites at which VOC's were detected. The eleven sites identified previously and sampled as part of the Kanawha/New River National Water Quality Assessment program were analyzed for the VOC's listed in the volatile organic compound schedule. Only those sites where VOC's were detected and only those constituents which had detectable concentrations of VOC's are presented here.

STATION NUMBER	DATE	TIME	BENZENE	CHLORO-	ETHYL-	TOLUENE
			(UG/L)	FORM	BENZENE	(UG/L)
			(34030)	(UG/L)	(UG/L)	(34010)
ALLEGHANY COUNTY						
362445081154701	7-15-97	1000	E0.020	<0.052	E0.010	E0.060
363053081084101	7-09-97	1100	<0.032	<0.052	<0.030	<0.038
363208081195801	8-12-97	1100	<0.032	E0.007	<0.030	E0.020
363345080564001	8-07-97	1100	E0.010	E0.010	<0.030	<0.038
ASHE COUNTY						
361957081273001	7-15-97	1500	<0.032	<0.052	<0.030	<0.038
362339081412601	7-01-97	1000	E0.010	<0.052	<0.030	<0.038
362436081254101	7-08-97	0900	<0.032	0.251	<0.030	<0.038
362739081305001	7-08-97	1400	<0.032	E0.020	<0.030	<0.038
363254081364201	7-01-97	1500	E0.010	<0.052	<0.030	<0.038
WATAUGA COUNTY						
361327081354601	7-02-97	1000	<0.032	<0.052	<0.030	<0.038
361638081384401	7-02-97	1500	<0.032	E0.020	<0.030	<0.038

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SAMPLING SITES

PESTICIDES

The following table contains pesticide data for sites at which pesticides were detected. The eleven sites identified previously and sampled as part of the Kanawha/New River National Water Quality Assessment program were analyzed for the pesticides listed in pesticide schedules A and B. Only those sites where pesticides were detected and only those constituents which had detectable concentrations of pesticides are presented here.

STATION NUMBER	DATE	TIME	DEETHYL					
			ATRA- ZINE, (UG/L) (39632)	ATRA- ZINE, (UG/L) (04040)	DINOSEB (UG/L) (49301)	MOL- INATE (UG/L) (82671)	P, P' DDE (UG/L) (34653)	SIMAZINE, (UG/L) (04035)
ALLEGHANY COUNTY								
362445081154701	7-15-97	1000	E0.003	E0.008	<0.035	<0.004	<0.006	<0.005
ASHE COUNTY								
361957081273001	7-15-97	1500	E0.001	<0.002	<0.035	<0.004	<0.006	<0.005
362339081412601	7-01-97	1000	E0.001	E0.001	<0.035	<0.004	<0.006	E0.002
362436081254101	7-08-97	0900	0.004	E0.009	E0.030	E0.002	E0.002	E0.003
362739081305001	7-08-97	1400	<0.001	E0.001	<0.035	E0.003	E0.002	<0.005
363254081364201	7-01-97	1500	E0.001	<0.002	<0.035	<0.004	<0.006	E0.002
WATAUGA COUNTY								
361327081354601	7-02-97	1000	<0.001	E0.001	<0.035	<0.004	<0.006	0.009

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SAMPLING SITES

NATIONAL WATER QUALITY ASSESSMENT PROGRAM.

KANAWHA-NEW RIVER BASIN STUDY UNIT

NEW RIVER BASIN

[illegible][illegible]

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SAMPLING SITES

NATIONAL WATER QUALITY ASSESSMENT PROGRAM,

KANAWHA-NEW RIVER BASIN STUDY UNIT

NEW RIVER BASIN

STATION NUMBER	DATE	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
361327081354601	07-02-97	--	--	--	--	--	--	--	740	--
	07-02-97	<1	18	<1.0	<1.0	1.1	<1.0	<1.0	--	<1.0
361638081384401	07-02-97	--	--	--	--	--	--	--	26	--
	07-02-97	<1	13	<1.0	<1.0	1.0	<1.0	<1.0	--	<1.0
361957081273001	07-15-97	--	--	--	--	--	--	--	<3.0	--
	07-15-97	<1	13	<1.0	<1.0	<1.0	<1.0	1.1	--	<1.0
362339081412601	07-01-97	--	--	--	--	--	--	--	8.4	--
	07-01-97	<1	68	<1.0	<1.0	<1.0	<1.0	<1.0	--	<1.0
362436081254101	07-08-97	--	--	--	--	--	--	--	<3.0	--
	07-08-97	<1	82	<1.0	<1.0	1.9	<1.0	<1.0	--	<1.0
362445081154701	07-15-97	--	--	--	--	--	--	--	3.0	--
	07-15-97	<1	1.8	<1.0	<1.0	<1.0	<1.0	<1.0	--	<1.0
362739081305001	07-08-97	--	--	--	--	--	--	--	8.0	--
	07-08-97	<1	38	<1.0	<1.0	4.0	<1.0	3.0	--	<1.0
363053081084101	07-09-97	--	--	--	--	--	--	--	<3.0	--
	07-09-97	<1	6.5	<1.0	<1.0	1.3	<1.0	3.1	--	<1.0
363208081195801	08-12-97	--	--	--	--	--	--	--	5.0	--
	08-12-97	<1	79	<1.0	<1.0	<1.0	<1.0	3.7	--	<1.0
363254081364201	07-01-97	--	--	--	--	--	--	--	<3.0	--
	07-01-97	<1	7.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	<1.0
363345080564001	08-07-97	--	--	--	--	--	--	--	100	--
	08-07-97	<1	162	<1.0	<1.0	4.9	<1.0	21	--	<1.0

STATION NUMBER	DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	RADON 222 TOTAL (PCI/L) (82303)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
361327081354601	07-02-97	98	--	--	--	--	--	4619	--	0.10
	07-02-97	95	<1.0	<1.0	<1	<1.0	196	--	<1.0	--
361638081384401	07-02-97	1.3	--	--	--	--	--	7172	--	<0.10
	07-02-97	1.6	<1.0	2.6	<1	<1.0	138	--	<1.0	--
361957081273001	07-15-97	<1.0	--	--	--	--	--	1628	--	<0.10
	07-15-97	<1.0	<1.0	<1.0	<1	<1.0	48	--	<1.0	--
362339081412601	07-01-97	5.7	--	--	--	--	--	333	--	0.20
	07-01-97	5.4	1.7	<1.0	<2	<1.0	1.1	--	<1.0	--
362436081254101	07-08-97	<1.0	--	--	--	--	--	8193	--	0.30
	07-08-97	<1.0	<1.0	<1.0	<1	<1.0	2.7	--	<1.0	--
362445081154701	07-15-97	3.7	--	--	--	--	--	1241	--	0.10
	07-15-97	3.7	3.4	<1.0	<1	<1.0	232	--	1.2	--
362739081305001	07-08-97	<1.0	--	--	--	--	--	240	--	0.40
	07-08-97	<1.0	<1.0	5.4	<1	<1.0	1030	--	<1.0	--
363053081084101	07-09-97	42	--	--	--	--	--	2670	--	0.10
	07-09-97	40	<1.0	<1.0	<1	<1.0	7.6	--	<1.0	--
363208081195801	08-12-97	3.2	--	--	--	--	--	521	--	0.20
	08-12-97	3.4	3.6	<1.0	<1	<1.0	109	--	<1.0	--
363254081364201	07-01-97	<1.0	--	--	--	--	--	4227	--	<0.10
	07-01-97	<1.0	<1.0	<1.0	<2	<1.0	29	--	<1.0	--
363345080564001	08-07-97	21	--	--	--	--	--	681	--	0.10
	08-07-97	20	<1.0	<1.0	<1	<1.0	32	--	<1.0	--

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
inch (in.)	2.54×10^1	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^0	kilometer
<i>Area</i>		
acre	4.047×10^3	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi ²)	2.590×10^0	square kilometer
<i>Volume</i>		
gallon (gal)	3.785×10^0	liter
	3.785×10^0	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^3	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft ³)	2.832×10^1	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^3	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second
	2.832×10^1	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^1	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
<i>Mass</i>		
ton (short)	9.072×10^{-1}	megagram or metric ton

Sea level: In this report “sea level” refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment for the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

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