

U.S. DEPARTMENT OF THE INTERIOR

BRUCE BABBITT, Secretary

U.S. GEOLOGICAL SURVEY

Charles G. Groat, Director

For information on the water program in Virginia write to

District Chief
Water Resources Division
U.S. Geological Survey
1730 East Parham Road
Richmond, Virginia 23228

or

Virginia Department of Environmental Quality
Surface Water Investigations
900 Natural Resource Drive Suite 1060
Charlottesville, Virginia 22903

1998

PREFACE

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

Volume 1. Surface-Water-Discharge and Surface-Water-Quality Records

Volume 2. Ground-Water-Level and Ground-Water-Quality Records

This report (Volume 2) is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey and the Virginia Department of Environmental Quality 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 personnel contributed significantly to the collection, computation, processing, and completion of this information:

Dennis W. Adams
Richard J. Ahlin
Donna L. Belval
David P. Brower
Robert W. Buck
William V. Daniels, Jr.
Karl M. Dydak
Michael R. Eckenwiler
Matthew J. Ferrari
Patsy S. Francisco
Thomas L. Gibson
Joel R. Guyer
George E. Harlow

Harold G. Henderlite
Daniel W. Henry
James R. Jeffries
Donna S. Justus
Ronnie E. Lawson
Roger M. Moberg
David L. Nelms
Daniel A. Nissen
Joseph A. Owens
Gary K. Speiran
Derek A. Tribble
Stephen L. Wheeler
Roger K. White

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Water Resources Data - Virginia - Water Year 1998

Volume 2. Ground-Water-Level and Ground-Water-Quality Records

Roger K. White and Eugene D. Powell

U.S. Geological Survey, Water Resources Division
1730 East Parham Road
Richmond, Virginia 23228

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U.S. Geological Survey, Water Resources Division
1730 East Parham Road
Richmond, Virginia 23228

USGS-WDR-VA-98-2

Prepared in cooperation with the Virginia Department of Environmental Quality and with other agencies

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Water-resources data for the 1998 water year for Virginia consist of records of water levels and water quality of ground-water wells. This report (Volume 2. Ground-Water-Level and Ground-Water-Quality Records) contains water levels at 338 observation wells and water quality at 86 wells. Locations of these wells are shown on figures 4, 5, 6, and 7. The data in this report represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Virginia.

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Water levels, Water analyses, Chemical analyses, Water temperatures

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WATER RESOURCES DATA - VIRGINIA, 1998

VOLUME 2. GROUND-WATER-LEVEL AND GROUND-WATER-QUALITY RECORDS

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources of Virginia each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in this report series entitled "Water Resources Data - Virginia."

This series of annual reports for Virginia began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels. Beginning with the 1990 water year, the quantity of data to be published made it necessary to present the data in two volumes; Volume 1 encompassed surface-water-discharge and surface-water-quality records and Volume 2 encompassed ground-water-level and ground-water-quality records.

This report is Volume 2 in our 1998 series and includes records of water levels and water quality of ground-water wells. It contains records for water levels at 338 observation wells and water quality at 86 wells. Locations of these wells are shown on figures 4, 5, 6, and 7. The data in this report represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Virginia.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Virginia were published in U.S. Geological Survey Water-Supply Papers. Data on water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." These Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey, Branch of Information Services, Federal Center, Bldg. 41, Box 25286, Denver, CO 80225.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have 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 volume is identified as "U.S. Geological Survey Water-Data Report VA-97-2." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Office at the address given on the back of the title page or by telephone (804) 278-4750.

Water resources data, including those provided in water data reports, are available through the World Wide Web on the Internet. The Universal Resource Location (URL) to the Virginia District's home page is:

<http://www-va.usgs.gov/>

COOPERATION

The U.S. Geological Survey and agencies of the State of Virginia have had joint-funding agreements for the collection of water-resource records since 1930. Organizations that assisted in collecting the data in this report through joint-funding agreements with the Survey are:

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY, Thomas L. Hopkins, executive director.

CITY OF NEWPORT NEWS, Brian Ramaley, director, Department of Public Utilities.

HAMPTON ROADS PLANNING DISTRICT COMMISSION, Arthur L. Collins, executive director.

Organizations that provided data are acknowledged in station descriptions.

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RECORDS COLLECTED BY THE STATE OF VIRGINIA

In addition to data collected by the U.S. Geological Survey, there are included herein records for 178 index wells operated by the Virginia Department of Environmental Quality. These records are published as provided and are acknowledged in the "REMARKS" paragraph of each individual well. The Virginia Department of Environmental Quality is under the direction of Thomas L. Hopkins, executive director. Published material for the ground-water wells is supplied, respectively, through the Division of Technical Support, John M. Daniel, Jr., director, and Division of Environmental Sciences, James E. Sydnor, director.

SUMMARY OF HYDROLOGIC CONDITIONS

Hydrologic conditions were summarized based on monthly and continuous water-level measurements from a network of 13 observation wells that are located in the counties of Buchanan (14E 40), Buckingham (41H 3), Clarke (46W175), Fairfax (52V 2), Isle of Wight (55B 16), James City (56H 27), Loudoun (50W 4C), Louisa (45N 1), Montgomery (27F 2), Rockingham (41Q 1), and Westmoreland (55P 9), and in the cities of Colonial Heights (51G 1) and Suffolk (58B 13). These "index" wells were selected to represent large areas of Virginia having similar physiographic, geologic, and climatological environments. Water levels in other observation wells listed in this report, however, possibly differ from the general trends because of local conditions. Complete descriptions of the index wells can be found in the data tables and on figures 4, 5, 6, and 7.

Eleven of the index wells are used to monitor water levels in water-table aquifers across Virginia. By contrast, the wells in Isle of Wight (55B 16) and James City (56H 27) Counties are used to monitor water levels in deep confined aquifers in the Coastal Plain of Virginia.

Throughout much of Virginia, ground water is obtained from water-table aquifers that are present in shallow soils and underlying bedrock. Water-table aquifers typically exhibit seasonal cycles of water-level fluctuation. During cool months, water levels rise in response to increased infiltration of precipitation and recharge when evapotranspiration rates are low. During warm months, water levels decline as recharge largely ceases when evapotranspiration rates are high.

Monthly water-level measurements from the water-table aquifer wells during the 1998 water year were examined to distinguish water-level rises above, and declines below, average values calculated for each index well for each month (fig. 1). Throughout most of the 1998 water year, water levels in the water-table aquifers were generally near or above average monthly values. Approximately 45 percent of the monthly water-level measurements from the index wells were appreciably above average monthly values, including 14 measurements above record high monthly values. Similarly, approximately 43 percent of the water-level measurements were near average values. Only 12 percent of the water-level measurements were appreciably below average values, including 3 measurements below record low values. Greater than average amounts of precipitation prior to and (or) during the early part of the 1998 water year possibly resulted in increased recharge and above average water levels.

During the first 4 months of the 1998 water year (October 1997 through January 1998), water levels in most of the water-table aquifers were initially near average monthly values, but then rose to appreciably above average monthly values (fig. 1). Record high values for January were exceeded in Buchanan County (well 14E 40) and in Rockingham County (well 41Q 1). A relatively few water-level measurements were appreciably below average values for various months in Buckingham (well 41H 3), Fairfax (well 52V 2), and Montgomery (well 27F 2) Counties, but none were below record low values.

During the following 5 months (February through June), water levels in most of the water-table aquifers remained appreciably above average monthly values (fig. 1), and 11 record high values for various months were exceeded in Buchanan (well 14E 40), Clark (well 46W175), Montgomery (well 27F 2), Rockingham (well 41Q 1), and Westmoreland (well 55P 9) Counties, and in Colonial Heights (well 51G 1) and Suffolk (well 58B 13) Cities. Relatively few water-level measurements were near average values, and none were appreciably below average values.

Figure 1.--Monthly ground-well levels at key
observation wells in water-table
aquifers

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During the last 3 months of the 1998 water year (July through September), water levels in most of the water-table aquifers returned to near average monthly values (fig. 1). In addition, water levels further declined to appreciably below average values for various months in Buckingham (well 51H 3), Fairfax (well 52V 2), and Rockingham (well 41Q 1) Counties, and in Suffolk City (well 58B 13). The only 3 water levels below record lows that were measured during the 1998 water year were in Fairfax County (well 52V 2). Less than average amounts of precipitation during the middle and later parts of the 1998 water year possibly resulted in water levels declining to near or below average values. Water levels remained appreciably above average values, however, for various months in Montgomery (well 27F 2) and Clark (well 46W175) Counties, and exceeded the record high for July in Montgomery County (well 27F 2).

In addition to water-table aquifers, ground water is obtained in the Coastal Plain of Virginia from deep confined aquifers that are present in layered sediments as much as several hundred feet thick. The Coastal Plain aquifers represent a major water-supply resource that supports a large economic and population base. Unlike the water-table aquifers, the confined aquifers do not exhibit seasonal water-level fluctuations, but steady and prolonged water-level declines resulting from large water withdrawals during the past several decades.

Water-level measurements during the 1998 water year from the confined middle Potomac aquifer in Isle of Wight County (well 55B 16), and from the confined upper Potomac aquifer in James City County (well 56H 27), exhibited continuations of water-level declines during the preceding years (fig. 2). Water levels in the middle Potomac aquifer (well 55B 16) varied from 200.89 to 209.03 feet below land surface. Short term fluctuations probably result from varied pumping schedules. The highest water level recorded of 99.00 feet below land surface in 1960 indicates more than 100 feet of decline during the 38 years that followed, although water levels have relatively stabilized in more recent years. Water levels in the upper Potomac aquifer (well 56H 27) varied from 172.45 to 174.52 feet below land surface. The highest water level recorded of 153.47 feet below land surface in 1985 indicates as much as 20 feet of decline during the 13 years that followed, and water levels are apparently continuing to decline.

EXPLANATION OF THE RECORDS

The ground-water records published in this report are for the 1998 water year that began October 1, 1996, and ended September 30, 1998. A calendar of the water year is provided on the inside of the front cover. The records contain ground-water-level and ground-water-quality data. The locations of the wells where the data were collected are shown in figures 4, 5, 6, and 7. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each well in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given well and to no other. The number usually is assigned when a well is first established and is retained for that well indefinitely. The system used by the U.S. Geological Survey to assign identification numbers for ground-water well sites is based on geographic location. The "latitude-longitude" system is used for wells.

Figure 2. Ground-water levels in selected observation wells in confined Coastal Plain aquifers

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Latitude-Longitude System

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

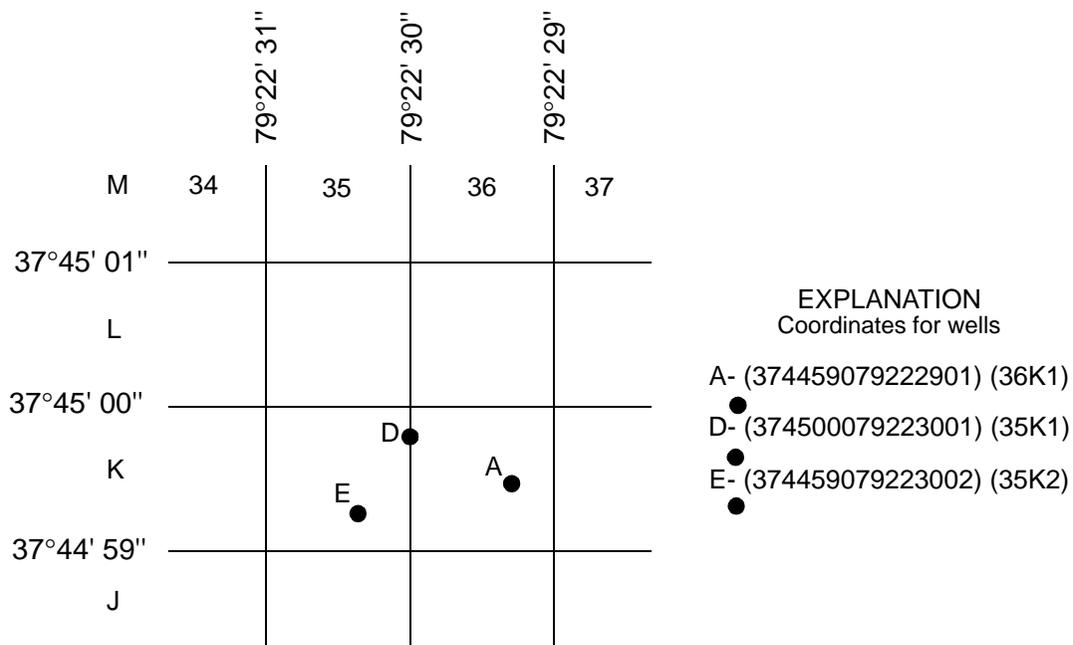


Figure 3. System for numbering wells.

A second well-numbering system used in Virginia utilizes 7 1/2-minute quadrangles within the State. The quadrangles are numbered from west to east, and lettered from south to north, omitting the letters "I" and "O." The designation for each quadrangle is determined by the method "Read Right, Up." Wells are numbered serially within each quadrangle. This local well number is shown immediately after the primary well number.

Well records furnished by the State of Virginia also include the well number that is based on an indexing system used by the Virginia Department of Environmental Quality.

Records of Ground-Water Levels

Only water-level data from a national network of observation wells are given in this report. These data are intended to provide a sampling and historical record of water-level changes in the Nation's most important aquifers. Locations of the observation wells in this network in Virginia are shown in figures 4, 5, 6, and 7.

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 of consistent accuracy and reliability.

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

Water-level records are obtained from direct measurements with a steel tape or from the graph or punched tape of a water-stage recorder. The water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given to a tenth of a foot or a larger unit.

Data Presentation

Each well record consists of three parts, the station description, the data table of water levels observed during the current water year, and a graph of the water levels for the current water year or other selected period. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments to follow clarify information presented under the various headings.

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

AQUIFER.--This entry designates by name (if a name exists) and geologic age the aquifer(s) open to the well.

WELL CHARACTERISTICS.--This entry describes the well in terms of depth, diameter, casing depth and/or screened interval, method of construction, use, and additional information such as casing breaks, collapsed screen, 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 weekly, monthly, or some other frequency of measurement.

DATUM.--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above (or below) sea level; it is reported with a precision depending on the method of determination.

REMARKS.--This entry describes factors that may influence the water level in a well or the measurement of the water level. It should identify wells that also are water-quality observation wells, and may be used to acknowledge the assistance of local (non-Survey) observers.

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

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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, and the dates of their occurrence.

A table of water levels follows the station description for each well. Water levels are reported in feet below land-surface datum and all taped measurements of water level are listed. For wells equipped with recorders, only abbreviated tables are published; generally, only water-level lows are listed for every fifth day and at the end of the month (eom). The highest and lowest water levels of the water year and their dates of occurrence are shown on a line below the abbreviated table. Because all values are not published for wells with recorders, the extremes may be values that are not listed in the table. Missing records are indicated by dashes in place of the water level. A hydrograph for a selected period of record follows each water-level table.

Records of Ground-Water Quality

Records of ground-water quality 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. The quality of ground water ordinarily changes only slowly; therefore, for most general purposes, one annual sampling, or only a few samples taken at infrequent intervals during the year, is sufficient. Frequent measurement of the same constituents is not necessary unless one is concerned with a particular problem, such as monitoring for trends in nitrate concentration. In the special cases where the quality of ground water may change more rapidly, more frequent measurements are made to identify the nature of the changes.

Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some counties but none are presented for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality Statewide. Such a view can be attained only by considering records for this year in context with similar records obtained for these and other counties in earlier years.

Most methods for collecting and analyzing water samples are described in the "U.S. Geological Survey Techniques of Water-Resources Investigations" publications referred to in the "On-site Measurements and Sample Collection" and the "Laboratory Measurements" sections in this data report. In addition, the TWRI book 1, Chapter D2, describes guidelines for the collection and field analysis of ground-water samples for selected unstable constituents. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. These methods are consistent with ASTM standards and generally follow ISO standards. All samples were obtained by trained personnel. The wells sampled were pumped long enough to assure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casings.

Data Presentation

The records of ground-water quality are published in a section titled QUALITY OF GROUND WATER immediately following the ground-water-level records. Data for quality of ground water are listed alphabetically by County and are identified by well number. The prime identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations. No descriptive statements are given for ground-water-quality records; however, the well number, depth of well, date of sampling, and other pertinent data are given in the table containing the chemical analyses of the ground water.

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Remark Codes

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

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

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.

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.

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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://www.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.)

DEFINITION OF TERMS

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

Adenosine triphosphate (ATP) is an organic, phosphate-rich, compound important in the transfer of energy in organisms. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

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

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

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

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

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

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

Fecal coliform bacteria are bacteria that are present in the intestine 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 that produce blue colonies within 24 hours when incubated at 44.5°C ±0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C ±1.0°C on 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 microorganisms, such as bacteria.

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

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

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

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

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

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

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

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

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

Dissolved refers to 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.

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Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

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 Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

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

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

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

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Methylene blue active substances (MBAS) are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

Micrograms per gram (μ/g) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

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

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

National Geodetic Vertical Datum of 1929 (NGVD of 1929) 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.

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.

Organism is any living entity.

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

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

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

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

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

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

Particle-size classification used in this report agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

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

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

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

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

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

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

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

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Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated by the plants (carbon method).

Milligrams of carbon per area or volume per unit time [mg C/(m².time)] for periphyton and macrophytes and [mg C/(m³.time)] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mg O₂/(m².time)] for periphyton and macrophytes and [mg O₂/(m³.time)] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

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

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

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 of the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

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

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is associated with the material retained on a 0.45-micrometer filter.

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

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 µm membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

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

Kingdom.....	Animal
Phylum.....	Arthropoda
Class.....	Insecta
Order.....	Ephemeroptera
Family.....	Ephemeridae
<u>Genus.....</u>	<u>Hexagenia</u>
<u>Species.....</u>	<u>Hexagenia limbata</u>

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined 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, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Water year is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1996, is called the "1996 water year."

WSP is used as an abbreviation for "Water-Supply Paper" in reference to previously published reports.

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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, Federal Center, Box 25286, 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.

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PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

- 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 programmed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-B4. *Regression modeling of ground-water flow*, by 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.

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PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

- 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--TWR I 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.
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- 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.
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- 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.

WATER RESOURCES DATA - VIRGINIA, 1998

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- 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.
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- 8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.
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- 9-A6. *National Field Manual for the Collection of Water-Quality Data: Field Measurements*, edited by F. D. Wilde and D.B. Radtke: USGS--TWRI Book 9, Chapter A6. In press. Variously paginated.
- 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.
- 9-A8. *National Field Manual for the Collection of Water-Quality Data: Bottom Material Samples*, by D.B. Radtke: USGS--TWRI Book 9, Chapter A8. 1998. 48 pages.
- 9-A9. *National Field Manual for the Collection of Water-Quality Data: Safety in Field Activities*, by S.L. Lane and R.G. Fay: USGS--TWRI Book 9, Chapter A9. 1998. 60 pages.

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Listed below is a selection of reports on water resources in Virginia which are available through the Virginia District at the U.S. Geological Survey, WRD, 3600 West Broad Street, Room 606, Richmond, Virginia 23230.

An index of geophysical logging in Virginia by the U.S. Geological Survey, by M. P. Mulheren, J. D. Larson, and H. T. Hopkins: U.S. Geological Survey Open-File Report 82-432. 1982. 34 pages.

Annual maximum stages and discharges of selected streams in Virginia through 1990, by B. J. Prugh, Jr., E. H. Nuckels, and C. G. Humphrey: U.S. Geological Survey Open-File Report 90-587. 1991. 442 pages.

Assessment of ground-water contamination from a leaking underground storage tank at a Defense Supply Center near Richmond, Virginia, by W. G. Wright and J. D. Powell: U.S. Geological Survey Water-Resources Investigations Report 90-4091. 1990. 38 pages.

Availability and quality of ground water in the Piedmont province of Virginia, by J. D. Powell and J. M. Abe: U.S. Geological Survey Water-Resources Investigations Report 85-4235. 1985. 33 pages.

Base-flow characteristics of streams in the Valley and Ridge, the Blue Ridge, and the Piedmont Physiographic Provinces of Virginia, by D.L. Nelms, G.E. Harlow, Jr., and D.C. Hayes: U.S. Geological Survey Water Supply Paper 2457. 1997. 48 pages.

Compilation of surface-water and water-quality data-collection sites on selected streams in Virginia, by B. J. Prugh, Jr. and C. G. Humphrey: U.S. Geological Survey Open-File Report 93-462. 1994. 645 pages.

WATER RESOURCES DATA - VIRGINIA, 1998

SELECTED U.S. GEOLOGICAL SURVEY REPORTS ON WATER RESOURCES IN VIRGINIA--Continued

Conceptualization and analysis of ground-water flow system in the Coastal Plain of Virginia and adjacent parts of Maryland and North Carolina, by J. F. Harsh and R. J. Lacznik: U.S. Geological Survey Professional Paper 1404-F. 1990. 100 pages.

Design, revisions, and considerations for continued use of a ground-water-flow model of the Coastal Plain aquifer system in Virginia, by R. McFarland: U. S. Geological Survey Water-resources Investigations Report 98-4085. 1998. 49 pages.

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Effects of fracturing on well yields in the coalfield areas of Wise and Dickenson Counties, southwestern Virginia, by W. G. Wright: U.S. Geological Survey Water-Resources Investigations Report 85-4061. 1985. 21 pages.

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Evaluation of municipal withdrawals from the confined aquifers of southeastern Virginia, by D. L. Richardson, R. J. Lacznik, and P. A. Hamilton: U.S. Geological Survey Open-File Report 88-723. 1988. 50 pages

Flood of November 1985 in West Virginia, Pennsylvania, Maryland, and Virginia, by J. B. Lescinsky: U.S. Geological Survey Open-File Report 86-486. 1987. 33 pages.

Floods in West Virginia, Virginia, Pennsylvania, and Maryland, November 1985, by D. H. Carpenter: U.S. Geological Survey Water-Resources Investigations Report 88-4213. 1990. 86 pages.

Geohydrology and Geochemistry near coastal ground-water-discharge areas of the Eastern Shore, Virginia, by G.K. Speiran: U.S. Geological Survey Water Supply Paper. 1996. 73 pages.

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Ground-water hydrology and quality in the Valley and Ridge and Blue Ridge physiographic provinces of Clarke County, Virginia, by W. G. Wright: U.S. Geological Survey Water-Resources Investigations Report 90-4134. 1991. 61 pages.

Ground-water in Virginia: Use during 1990, availability, and resource information needs, by McFarland, E. R. and Focazio, M. J.: U.S. Geological Survey Open-File Report 94-114. 1 page.

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Ground-water withdrawals from the confined aquifers in the Coastal Plain of Virginia, 1891-1983, by T. K. Kull and R. J. Lacznik: U.S. Geological Survey Water-Resources Investigations Report 87-4049. 1987. 37 pages.

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WATER RESOURCES DATA - VIRGINIA, 1998

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- Hydraulic characteristics of, and ground-water flow in, coal-bearing rocks of southwestern Virginia, by G. E. Harlow, Jr. and G. D. LeCain: U.S. Geological Survey Water Supply Paper 2388. 1994. 36 pages.
- Hydrogeologic and water-quality data for the Explosive Experimental Area, Naval Surface Warfare Center, Dahlgren Site, Dahlgren, Virginia, by E. C. Hammond and C. F. Bell: U.S. Geological Survey Open-File Report 95-386. 1995. 67 pages.
- Hydrogeologic and water-quality data for the Main Site, Naval Surface Warfare Center, Dahlgren Laboratory, Dahlgren, Virginia, by C. F. Bell, T. P. Bolles, and G. E. Harlow, Jr.: U.S. Geological Survey Open-File Report 94-301. 1995. 81 pages.
- Hydrogeologic framework, analysis of ground-water flow, and relations to regional flow in the Fall Zone near Richmond, Virginia, by E.R. McFarland: U.S. Geological Survey Water-Resources Investigations Report 97-4021. 1997. 56 pages.
- Hydrogeologic framework of the shallow aquifer system of York County, Virginia, by A. R. Brockman and D. L. Richardson: U.S. Geological Survey Water-Resources Investigations Report 92-4111. 1992. 36 pages.
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- Low flow of streams in Fairfax County, Virginia, by E. H. Mohler, Jr., and G. F. Hagan: U.S. Geological Survey Open-File Report 81-63. 1981. 30 pages.
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Virginia ground-water quality, by J. D. Powell and P. A. Hamilton: U.S. Geological Survey Open-File Report 87-759. 1987. 7 pages.

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Well-construction, water-level, and ground-water-quality data for Prince William County, Virginia, 1992, by D. L. Nelms and A. R. Brockman: U.S. Geological Survey Open-File Report 93-443. 1994. 73 pages.

Figure 4. Location of ground-water observation wells--left side

Figure 4. Location of ground-water observation wells--right side

Figure 5. Location of ground-water observation wells in southeastern Virginia -- left side

Figure 5. Location of ground-water observation wells
in southeastern Virginia -- right side

Figure 6. Location of ground-water observation wells
on York-James peninsula and vicinity -- left side

Figure 6. Location of ground-water observation wells
on York-James peninsula and vicinity -- right side

Figure 7. Location of ground-water observation wells
on Delmarva peninsula (only one page)

GROUND-WATER-LEVEL RECORDS

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	STATION	NUMBER	GEO- LOGIC UNIT	DATE	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)
ACCOMACK COUNTY									
65K 9	374233075443201		121CSPKU	07-16-98	159.00	110	106	17.0	270
67M 9	375626075272301		121CSPKU	07-15-98	256.00	256	223	20.0	1070
67M 24	375639075285901		121CSPKU	07-15-98	245.00	245	216	25.0	694
67M 46	375626075272501		110QRNR	07-15-98	59.00	59	44	20.0	141
CAROLINE COUNTY									
50M 2	385814077321401		400GRGS	12-09-97	39.94	40	35	250	72.0
			400GRGS	03-16-98	39.94	40	35	250	67.0
			400GRGS	06-18-98	39.94	40	35	250	63.7
			400GRGS	09-02-98	39.94	40	35	250	55.8
50M 3	385814077321402		122MOCN	12-09-97	25.14	25	20	250	35.0
			122MOCN	03-16-98	25.14	25	20	250	35.0
			122MOCN	06-18-98	25.14	25	20	250	35.4
			122MOCN	09-02-98	25.14	25	20	250	35.1
50M 4	385812077321801		400GRGS	12-11-97	15.49	15	10	235	54.0
			400GRGS	03-16-98	15.49	15	10	235	43.0
			400GRGS	06-18-98	15.49	15	10	235	43.1
			400GRGS	09-02-98	15.49	15	10	235	43.4
50M 5	385809077322001		400GRGS	12-11-97	8.62	8.6	8.4	210	38.0
			400GRGS	03-16-98	8.62	8.6	8.4	210	38.0
			400GRGS	06-18-98	8.62	8.6	8.4	210	34.0
			400GRGS	09-02-98	8.62	8.6	8.4	210	32.2
50M 6	385809077322002		122MOCN	12-11-97	4.84	4.8	0	210	81.0
			122MOCN	03-20-98	4.84	4.8	0	210	34.0
			122MOCN	06-18-98	4.84	4.8	0	210	33.7
50M 7	385806077322501		400GRGS	12-09-97	46.28	46	41	240	111
			400GRGS	03-20-98	46.28	46	41	240	108
			400GRGS	06-18-98	46.28	46	41	240	89.5
			400GRGS	09-03-98	46.28	46	41	240	84.0
50M 8	375908077314801		400GRGS	09-01-98	8.50	8.3	6.0	200	448
50M 9	375904077315401		400GRGS	09-01-98	10.35	10	9.2	215	300
50M 10	375904077315402		400GRGS	09-01-98	7.90	7.6	5.6	215	258
50M 11	375853077315901		400GRGS	09-01-98	41.80	42	37	240	102
50M 12	375853077315902		122MOCN	09-01-98	15.40	15	13	240	20.8
50M 13	375853077315903		122MOCN	09-01-98	10.20	10	8.0	240	28.5
50M 14	375842077321301		400GRGS	09-01-98	47.50	47	42	265	52.2

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	STATION	NUMBER	GEO- LOGIC UNIT	DATE	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)
CAROLINE COUNTY--Continued									
50M 15	375842077321302	122MOCN	09-01-98	27.00	27	25	265	27.9	
51M 1	375840077292701	400GRGS	08-17-98	445.00	445	75	195	544	
51M 15	385832077253501	121CSPKU	12-08-97	25.29	25	20	190	286	
		121CSPKU	03-17-98	25.29	25	20	190	159	
		121CSPKU	06-23-98	25.29	25	20	190	187	
		121CSPKU	09-03-98	25.29	25	20	190	19	
51M 16	385827077254101	121CSPKU	09-03-98	25.29	25	20	190	153	
		121CSPKU	12-08-97	14.50	15	9.5	160	62.0	
		121CSPKU	03-17-98	14.50	15	9.5	160	56.0	
		121CSPKU	06-22-98	14.50	15	9.5	160	54.1	
*		121CSPKU	09-03-98	14.50	--	--	160	--	
51M 17	385819077254501	121CSPKU	09-03-98	14.50	15	9.5	160	56.6	
		121CSPKU	12-08-97	13.98	14	9.0	130	125	
		121CSPKU	03-17-98	13.98	14	9.0	130	68.0	
		121CSPKU	06-22-98	13.98	14	9.0	130	84.2	
51M 18	385811077254901	121CSPKU	09-03-98	13.98	14	9.0	130	106	
		125PLCN	12-09-97	52.54	53	48	110	470	
		125PLCN	03-18-98	52.54	53	48	110	469	
		125PLCN	06-23-98	52.54	53	48	110	483	
		125PLCN	09-03-98	52.54	53	48	110	503	
51M 19	385811077254902	110QRNR	12-09-97	9.80	9.8	4.8	110	40.0	
		110QRNR	03-18-98	9.80	9.8	4.8	110	55.0	
		110QRNR	06-22-98	9.80	9.8	4.8	110	40.7	
		110QRNR	09-03-98	9.80	9.8	4.8	110	33.0	
51M 20	385759077254501	110QRNR	12-08-97	14.89	15	9.9	115	283	

* Replicate sample.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
ACCOMACK COUNTY--Continued									
65K 9	7.72	26.1	16.2	755	.48	.1	1	--	--
67M 9	7.76	30.1	15.9	760	3.2	.2	2	--	--
67M 24	7.84	29.5	15.7	758	1.0	.1	1	--	--
67M 46	5.58	30.1	15.4	760	.20	5.5	55	--	--
CAROLINE COUNTY--Continued									
50M 2	6.00	9.00	15.2	760	--	4.2	42	--	--
	6.40	9.00	13.0	--	--	3.7	--	--	--
	6.34	--	14.6	--	--	1.4	--	--	--
	5.90	31.9	14.4	--	--	5.3	--	3.3	1.8
50M 3	5.10	7.0	15.2	760	--	9.8	98	--	--
	5.10	11.5	13.7	--	--	5.8	--	--	--
	5.11	--	13.5	--	--	3.4	--	--	--
	5.65	31.9	15.1	--	--	8.0	--	1.8	.84
50M 4	4.90	6.0	14.0	760	--	7.7	75	--	--
	5.20	9.5	11.1	--	--	4.8	--	--	--
	5.40	--	13.3	--	--	1.0	--	--	--
	4.49	30.5	16.3	--	--	8.3	--	1.6	1.4
50M 5	5.70	10.0	13.0	762	--	8.3	79	--	--
	5.40	9.0	9.3	--	--	3.8	--	--	--
	5.31	--	13.1	--	--	1.0	--	--	--
	4.41	30.5	16.6	--	--	.8	--	1.1	1.0
50M 6	4.80	8.0	10.5	761	--	2.0	18	--	--
	5.40	11.5	7.9	757	--	4.1	35	--	--
	5.27	--	15.6	--	--	.1	--	--	--
50M 7	7.30	8.0	14.8	760	--	2.0	20	--	--
	7.40	11.0	14.0	756	--	2.2	22	--	--
	6.79	--	17.0	--	--	1.4	--	--	--
	6.82	23.9	14.4	--	--	1.9	--	5.0	3.9
50M 8	6.26	28.0	22.6	--	--	.6	--	17	9.6
50M 9	6.26	28.5	17.7	--	--	.1	--	3.8	4.0
50M 10	6.34	28.5	18.5	--	--	.1	--	3.8	4.0
50M 11	5.56	24.3	15.4	--	--	.1	--	4.8	1.9
50M 12	5.36	24.3	15.4	--	--	6.8	--	.59	.31
50M 13	5.60	24.7	17.6	--	--	4.0	--	1.6	.32
50M 14	5.97	28.0	14.1	--	--	5.6	--	3.7	.92

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
CAROLINE COUNTY--Continued									
50M 15	4.20	28.0	13.5	--	--	7.5	--	.70	.91
51M 1	7.31	24.1	16.1	753	.36	.1	1	--	--
51M 15	4.40	9.0	14.3	765	--	8.8	86	--	--
	4.80	7.0	12.0	776	--	9.9	90	--	--
	4.99	--	17.5	--	--	1.1	--	--	--
	4.32	26.0	14.7	--	--	6.4	--	6.7	9.1
	4.47	26.5	14.7	--	--	--	--	6.7	9.4
51M 16	4.50	10.0	13.9	766	--	--	--	--	--
	4.80	6.0	11.2	778	--	6.6	59	--	--
	4.52	--	14.0	--	--	1.1	--	--	--
	--	--	--	--	--	--	--	1.8	1.1
	4.80	26.5	17.3	--	--	3.3	--	1.9	1.2
51M 17	4.10	8.0	13.3	768	--	3.2	30	--	--
	6.00	4.0	9.2	778	--	7.9	67	--	--
	5.49	--	13.6	--	--	.5	--	--	--
	5.68	26.5	17.3	--	--	.9	--	6.4	1.9
51M 18	7.60	6.0	8.3	765	--	2.8	24	--	--
	8.00	8.0	14.0	770	--	5.9	57	--	--
	7.08	--	17.8	--	--	1.1	--	--	--
	7.01	29.5	14.6	--	--	.3	--	50	14
	5.20	5.0	12.5	766	--	7.2	67	--	--
51M 19	5.00	8.0	9.4	770	--	5.0	43	--	--
	5.08	--	16.1	--	--	.7	--	--	--
	4.92	29.6	20.5	--	--	5.4	--	1.4	1.0
51M 20	4.40	8.0	14.4	769	--	7.6	74	--	--

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	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)
ACCOMACK COUNTY--Continued									
65K 9	--	--	117	--	0	143	--	--	--
67M 9	--	--	199	--	0	243	--	--	--
67M 24	--	--	178	--	0	217	--	--	--
67M 46	--	--	15	--	0	18	--	--	--
CAROLINE COUNTY--Continued									
50M 2	--	--	--	--	--	--	--	--	--
	--	--	--	19	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	4.0	1.8	--	18	--	--	6.2	1.4	<.1
50M 3	--	--	--	--	--	--	--	--	--
	--	--	--	2	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	2.1	1.0	--	3	--	--	.2	1.9	<.1
50M 4	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	2.7	1.5	--	0	--	--	.5	2.9	<.1
50M 5	--	--	--	--	--	--	--	--	--
	--	--	--	7	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	2.9	.8	--	0	--	--	1.6	3.4	<.1
50M 6	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
50M 7	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	5.7	1.3	--	32	--	--	5.1	1.6	.1
50M 8	9.3	16	--	282	--	--	3.6	4.4	.3
50M 9	2.7	2.2	--	148	--	--	<.1	2.8	.1
	--	--	--	--	--	--	--	--	--
50M 10	2.5	1.7	--	114	--	--	<.1	2.9	<.1
50M 11	7.3	.9	--	33	--	--	.9	1.5	.1
50M 12	2.6	.6	--	6	--	--	.1	1.6	<.1
50M 13	1.8	.7	--	7	--	--	.4	1.3	<.1
50M 14	6.5	1.3	--	--	--	--	3.1	1.3	<.1

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	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)
CAROLINE COUNTY--Continued									
50M 15	1.9	.7	--	0	--	--	.2	2.3	<.1
51M 1	--	--	126	--	0	154	--	--	--
51M 15	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	3.0	4.6	--	0	--	--	.6	16	<.1
51M 16	2.5	4.6	--	0	--	--	.3	16	<.1
	--	--	--	--	--	--	--	--	--
	--	--	--	2	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	2.6	1.9	--	--	--	--	1.9	6.4	<.1
51M 17	2.7	1.8	--	2	--	--	2.2	6.4	<.1
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
51M 18	4.2	1.6	--	30	--	--	12	3.0	<.1
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	32	8.6	--	132	--	--	85	14	--
51M 19	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
51M 20	1.8	.9	--	3	--	--	4.5	2.4	<.1
	--	--	--	--	--	--	--	--	--

< Actual value is known to be less than the value shown.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	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- 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,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)
ACCOMACK COUNTY--Continued								
65K 9	--	--	--	--	--	<.05	--	--
67M 9	--	--	--	--	--	<.05	--	--
67M 24	--	--	--	--	--	<.05	--	--
67M 46	--	--	--	--	--	1.9	--	--
CAROLINE COUNTY--Continued								
50M 2	--	--	--	--	<.01	.20	<.02	<.1
	--	--	--	--	.002	.26	<.002	<.1
	--	--	--	--	.002	.28	<.002	<.1
	.02	31	65	62	.002	.28	<.002	<.1
50M 3	--	--	--	--	<.01	2.3	<.02	<.1
	--	--	--	--	<.001	2.3	<.002	<.1
	--	--	--	--	<.001	2.3	<.002	<.1
	.02	8.8	32	29	<.001	2.4	.004	<.1
50M 4	--	--	--	--	<.01	3.5	<.02	<.1
	--	--	--	--	<.001	2.8	<.002	<.1
	--	--	--	--	<.001	.52	<.002	<.1
	.02	12	39	37	<.001	2.4	<.002	<.1
50M 5	--	--	--	--	<.01	<.05	<.02	<.1
	--	--	--	--	.001	.022	.028	<.1
	--	--	--	--	.001	.005	.027	<.1
	.01	12	32	29	<.001	.010	.050	.1
50M 6	--	--	--	--	<.01	<.05	<.02	<.1
	--	--	--	--	.002	.043	.002	<.1
	--	--	--	--	<.001	<.005	.004	<.1
50M 7	--	--	--	--	<.01	<.05	<.02	<.1
	--	--	--	--	.002	.008	<.002	<.1
	--	--	--	--	.002	.24	.017	.1
	.01	37	84	81	.003	.31	<.002	<.1
50M 8	.34	28	436	326	.026	.014	16	17
50M 9	11	5.5	58	--	.001	<.005	1.3	1.4
50M 10	.14	3.5	43	--	.001	.014	1.3	1.3
50M 11	.01	39	77	78	.001	.020	<.002	<.1
50M 12	.01	15	31	26	<.001	.11	<.002	<.1
50M 13	.01	9.8	24	22	<.001	.072	<.002	<.1
50M 14	.01	27	59	60	.004	.35	<.002	<.1

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	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, 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,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)
CAROLINE COUNTY--Continued								
50M 15	.02	7.5	21	21	<.001	.88	<.002	<.1
51M 1	--	--	--	--	--	<.05	--	--
51M 15	--	--	--	--	<.01	25	<.02	<.1
	--	--	--	--	<.001	11	<.002	<.1
	--	--	--	--	<.001	17.0	<.002	<.1
	.02	6.9	100	--	<.001	15	<.002	.1
51M 16	.03	6.7	111	--	<.001	13	<.002	.1
	--	--	--	--	<.01	1.9	<.02	<.1
	--	--	--	--	<.001	1.6	<.002	<.1
	--	--	--	--	<.001	1.7	<.002	<.1
	.02	12	35	37	.007	2.1	<.002	<.1
51M 17	.02	12	39	38	.007	2.0	<.002	<.1
	--	--	--	--	<.01	.12	<.02	<.1
	--	--	--	--	<.001	.049	<.002	<.1
	--	--	--	--	<.001	.026	.018	.1
	.06	27	75	67	<.001	.19	.148	.3
51M 18	--	--	--	--	<.01	<.05	.05	<.1
	--	--	--	--	.001	.037	.007	<.1
	--	--	--	--	.001	.13	.033	.3
	.04	29	320	315	<.001	.085	.065	.5
51M 19	--	--	--	--	<.01	.07	<.02	<.1
	--	--	--	--	<.001	.022	<.002	<.1
	--	--	--	--	<.001	.024	<.002	<.1
	<.01	9.8	25	25	<.001	.046	<.002	<.1
51M 20	--	--	--	--	<.01	4.9	<.02	<.1

< Actual value is known to be less than the value shown.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTH, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	RADON TOTAL (PCI/L) (82303)	LIGHT ABSOR- BENCE AT 253.7 NM (PER CM)** (99905)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
ACCOMACK COUNTY--Continued							
65K 9	--	--	--	--	370	--	1.4
67M 9	--	--	--	--	310	--	2.0
67M 24	--	--	--	--	280	--	1.7
67M 46	--	--	--	--	380	--	.2
CAROLINE COUNTY--Continued							
50M 2	-- .005 .007 .004	.01 .005 .010 .003	-- -- -- <10	-- -- -- 31	-- -- -- --	-- -- .038 --	-- -- -- --
50M 3	--	<.01	--	--	--	--	--
	<.001 .003 .002	<.001 <.001 .001	-- -- 110	-- -- 7	-- -- --	-- .034 --	-- -- --
50M 4	-- .001	<.01 <.001	-- --	-- --	-- --	-- --	-- --
	.002 .016 --	<.001 .006 <.01	-- <10 --	-- 48 --	-- -- --	.039 -- --	-- -- --
50M 5	.001 .003	<.001 .006	-- --	-- --	-- --	-- .042	-- --
	.005 -- .001 .005	.003 <.01 <.001	270 -- --	210 -- --	-- -- --	-- -- -- .005	-- -- -- --
50M 6	--	.05	--	--	--	--	--
	.042 .061 .043	.038 .053 .046	-- -- 27	-- -- 120	-- -- --	-- .013 --	-- -- --
50M 8	.003	.028	47000	2100	--	--	--
50M 9	.001	.002	65000	4700	--	--	--
50M 10	<.001	.001	50000	4500	--	--	--
50M 11	.039	.039	250	190	--	--	--
50M 12	.001	.001	16	79	--	--	--
50M 13	.001	<.001	560	22	--	--	--
50M 14	.001	.001	<10	190	--	.132	--

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	PHOS-	PHOS-	IRON,	MANGA-	RADON	LIGHT	CARBON,
	PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	DIS- SOLVED (UG/L AS FE) (01046)	NESE, DIS- SOLVED (UG/L AS MN) (01056)		222 TOTAL (PCI/L) (82303)	ABSOR- BENCE AT 253.7 NM (PER CM)** (99905)
CAROLINE COUNTY--Continued							
50M 15	.001	<.001	14	37	--	--	--
51M 1	--	--	--	--	360	--	.3
51M 15	--	<.01	--	--	--	--	--
	.010	.001	--	--	--	--	--
	.001	<.001	--	--	--	.041	--
	<.001	<.001	<10	42	--	--	--
	.004	.002	<10	37	--	--	--
51M 16	--	<.01	--	--	--	--	--
	.001	<.001	--	--	--	--	--
	.002	.002	--	--	--	.078	--
	.001	<.001	93	9	--	--	--
	.001	.001	110	10	--	--	--
51M 17	--	.01	--	--	--	--	--
	.002	<.001	--	--	--	.093	--
	.006	.005	--	--	--	--	--
	.019	.018	3100	26	--	--	--
51M 18	--	.02	--	--	--	--	--
	.012	.010	--	--	--	--	--
	.028	.029	--	--	--	--	--
	.032	.029	<10	36	--	--	--
51M 19	--	<.01	--	--	--	--	--
	.001	.001	--	--	--	--	--
	.002	<.001	--	--	--	.015	--
	.002	.001	140	16	--	--	--
51M 20	--	<.01	--	--	--	--	--

< Actual value is known to be less than the value shown.

** Abbreviations used: NM:nanometers:PER CM, per centimeter.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	STATION	NUMBER	GEO- LOGIC UNIT	DATE	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)
CAROLINE COUNTY--Continued									
51M 20	385759077254501		110QRNR	03-18-98	14.89	15	9.9	115	236
			110QRNR	06-22-98	14.89	15	9.9	115	265
			110QRNR	09-02-98	14.89	15	9.9	115	267
*			110QRNR	09-02-98	14.89	15	9.9	115	267
51M 21	385748077255801		121CSPKU	12-08-97	17.53	18	13	185	80.0
			121CSPKU	03-18-98	17.53	18	13	185	44.0
			121CSPKU	06-22-98	17.53	18	13	185	31.0
			121CSPKU	09-02-98	17.53	18	13	185	74.0
52N 17	380139077212901		217PPSC	08-17-98	295.00	292	262	175	339
53P 5	381007077113101		217PPSC	08-18-98	317.00	308	299	28.0	235
CHARLES CITY COUNTY									
53G 20	372224077112401		217PPSC	09-01-98	300.00	250	220	85.0	391
ESSEX COUNTY									
55L 2	374932076564201		124EOCN	08-03-98	283.00	275	244	170	245
*			124EOCN	08-03-98	283.00	275	244	170	245
FAIRFAX COUNTY									
53T 30	383814077090301		217PTXN	09-01-98	464.00	464	434	30.0	811
54T 19B	384453077031801		217PPSC	08-19-98	286.70	277	238	100	242
GLOUCESTER COUNTY									
58G 87	371844076304501		110QRNR	08-05-98	55.00	48	47	30.0	181
58H 2	372458076321401		217PPSC	08-06-98	815.00	815	784	75.0	2330
HANOVER COUNTY									
51K 23	374050077230201		217PTXN	09-02-98	260.00	260	240	155	345
52J 54	373522077163701		217PPSC	09-02-98	487.00	482	357	193	259
52J 55	373651077201701		217PPSC	09-02-98	413.00	408	320	170	286
ISLE OF WIGHT COUNTY									
56C 8	365205076495701		217PPSC	08-31-98	350.00	350	340	35.0	388
58D 12	365755076305501		211CRCSU	05-13-98	409.00	--	--	8.0	1130
JAMES CITY COUNTY									
56F 19	371447076463501		217PPSC	08-04-98	390.00	390	360	35.0	852
57G 57	371900076442701		124EOCN	06-24-98	302.00	302	282	100	323

* Replicate sample.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300) (00301)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
CAROLINE COUNTY--Continued								
51M 20	4.60	6.0	10.0	772	--	7.4	65	--
	4.40	--	14.3	--	--	1.9	--	--
	4.4	35.1	18.6	--	--	4.7	--	7.1
	4.37	35.1	18.6	--	--	4.7	--	7.2
51M 21	5.50	3.0	13.7	768	--	5.4	52	--
	5.20	5.0	11.6	769	--	5.2	47	--
	4.91	--	14.7	--	--	.6	--	--
	5.33	31.0	16.6	--	--	.7	--	2.9
52N 17	7.77	28.1	16.5	752	.19	.1	1	--
53P 5	7.70	25.7	16.5	755	.26	.2	3	--
CHARLES CITY COUNTY--Continued								
53G 20	8.15	29.0	16.5	751	.27	.2	2	--
ESSEX COUNTY--Continued								
55L 2	7.88	21.4	18.0	756	.17	.2	2	--
	7.88	21.4	18.0	756	.17	.2	2	--
FAIRFAX COUNTY--Continued								
53T 30	7.82	23.9	17.4	753	.22	.3	3	--
54T 19B	7.71	22.4	15.7	757	.22	.1	1	--
GLOUCESTER COUNTY--Continued								
58G 87	4.80	25.0	16.4	761	.19	6.9	70	--
58H 2	7.82	23.2	21.9	759	8.1	.1	1	--
HANOVER COUNTY--Continued								
51K 23	7.44	34.3	16.7	744	.35	.2	2	--
52J 54	7.52	27.5	17.9	746	.53	.2	2	--
52J 55	7.43	24.0	17.9	746	.26	.2	2	--
ISLE OF WIGHT COUNTY--Continued								
56C 8	8.25	25.3	17.6	755	.28	.1	1	--
58D 12	8.40	14.0	19.7	771	--	.1	1	1.6
JAMES CITY COUNTY--Continued								
56F 19	8.15	20.6	18.9	760	.18	.1	2	--
57G 57	8.32	25.3	19.1	759	.59	.2	2	--

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CAC03 (39086)	ANC WATER UNFLTRD IT FIELD MG/L AS CAC03 (00419)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
CAROLINE COUNTY--Continued									
51M 20	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	32	2.3	--	--	0	--	--	85	13
	34	1.9	--	--	0	--	--	21	63
51M 21	--	--	--	--	--	--	--	--	--
	--	--	--	--	6	--	--	--	--
	--	--	--	--	--	--	--	--	--
	7.2	2.1	--	--	11	--	--	1.7	12
52N 17	--	--	--	96	--	0	117	--	--
53P 5	--	--	--	97	--	0	118	--	--
CHARLES CITY COUNTY--Continued									
53G 20	--	--	--	186	--	0	227	--	--
ESSEX COUNTY--Continued									
55L 2	--	--	--	123	--	0	150	--	--
	--	--	--	123	--	0	150	--	--
FAIRFAX COUNTY--Continued									
53T 30	--	--	--	125	--	0	153	--	--
54T 19B	--	--	--	82	--	0	100	--	--
GLOUCESTER COUNTY--Continued									
58G 87	--	--	--	1	--	0	2	--	--
58H 2	--	--	--	549	--	0	670	--	--
HANOVER COUNTY--Continued									
51K 23	--	--	--	134	--	0	163	--	--
52J 54	--	--	--	119	--	0	145	--	--
52J 55	--	--	--	113	--	0	138	--	--
ISLE OF WIGHT COUNTY--Continued									
56C 8	--	--	--	196	--	0	239	--	--
58D 12	250	8.6	430	436	--	14	503	15	77
JAMES CITY COUNTY--Continued									
56F 19	--	--	--	322	--	0	393	--	--
57G 57	--	--	--	134	--	5	154	--	--

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	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)	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)
CAROLINE COUNTY--Continued									
51M 20	--	--	--	--	--	<.001	3.5	<.002	<.1
	--	--	--	--	--	<.001	1.3	<.002	<.1
	.2	.05	13	320	--	<.001	1.7	<.002	<.1
	<.1	.04	14	168	--	<.001	1.6	<.002	<.1
51M 21	--	--	--	--	--	<.01	.54	<.02	<.1
	--	--	--	--	--	<.001	.009	<.002	<.1
	--	--	--	--	--	<.001	.007	<.002	<.1
	<.1	.05	13	47	49	.001	.35	.015	<.1
52N 17	--	--	--	--	--	--	<.05	--	--
53P 5	--	--	--	--	--	--	.05	--	--
CHARLES CITY COUNTY--Continued									
53G 20	--	--	--	--	--	--	<.05	--	--
ESSEX COUNTY--Continued									
55L 2	--	--	--	--	--	--	<.05	--	--
	--	--	--	--	--	--	<.05	--	--
FAIRFAX COUNTY--Continued									
53T 30	--	--	--	--	--	--	<.05	--	--
54T 19B	--	--	--	--	--	--	<.05	--	--
GLOUCESTER COUNTY--Continued									
58G 87	--	--	--	--	--	--	9.9	--	--
58H 2	--	--	--	--	--	--	<.05	--	--
HANOVER COUNTY--Continued									
51K 23	--	--	--	--	--	--	<.05	--	--
52J 54	--	--	--	--	--	--	<.05	--	--
52J 55	--	--	--	--	--	--	<.05	--	--
ISLE OF WIGHT COUNTY--Continued									
56C 8	--	--	--	--	--	--	<.05	--	--
58D 12	3.7	.35	11	654	629	--	--	--	--
JAMES CITY COUNTY--Continued									
56F 19	--	--	--	--	--	--	.07	--	--
57G 57	--	--	--	--	--	--	<.05	--	--

< Actual value is known to be less than the value shown.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	RADON 222 TOTAL (PCI/L) (82303)	LIGHT ABSOR- BENCE AT 253.7 NM (PER CM)** (99905)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
CAROLINE COUNTY--Continued							
51M 20	.002	<.001	--	--	--	--	--
	.002	.012	--	--	--	.007	--
	.001	<.001	E6	130	--	--	--
	.001	.001	<10	130	--	--	--
51M 21	--	<.01	--	--	--	--	--
	.001	<.001	--	--	--	--	--
	.002	.001	--	--	--	.010	--
	.001	.001	440	44	--	--	--
52N 17	--	--	--	--	310	--	.2
53P 5	--	--	--	--	230	--	.2
CHARLES CITY COUNTY--Continued							
53G 20	--	--	--	--	250	--	.3
ESSEX COUNTY--Continued							
55L 2	--	--	--	--	610	--	.4
	--	--	--	--	600	--	.4
FAIRFAX COUNTY--Continued							
53T 30	--	--	--	--	270	--	.2
54T 19B	--	--	--	--	230	--	.2
GLOUCESTER COUNTY--Continued							
58G 87	--	--	--	--	380	--	.4
58H 2	--	--	--	--	250	--	.7
HANOVER COUNTY--Continued							
51K 23	--	--	--	--	290	--	.3
52J 54	--	--	--	--	420	--	.2
52J 55	--	--	--	--	490	--	.3
ISLE OF WIGHT COUNTY--Continued							
56C 8	--	--	--	--	210	--	.3
58D 12	--	--	28	5	--	--	--
JAMES CITY COUNTY--Continued							
56F 19	--	--	--	--	230	--	.4
57G 57	--	--	--	--	320	--	.3

< Actual value is known to be less than the value shown.

** Abbreviations used: NM, nanometers; PER CM, per centimeter

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	STATION	NUMBER	GEO- LOGIC UNIT	DATE	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
KING GEORGE COUNTY										
53Q 21	381536077095201		217PPSC	06-23-98	782.00	721	662	190	238	7.27
*			217PPSC	06-23-98	782.00	721	662	190	238	7.27
54Q 91	382046077035501		217PPSC	06-25-98	676.00	671	641	18.0	351	7.53
LANCASTER COUNTY										
58L 2	374641076305001		124EOCN	07-08-98	365.00	354	344	105	694	8.18
MATHEWS COUNTY										
59J 7	373126076231701		121CSPKU	07-09-98	114.00	114	92	25.0	397	7.37
*			121CSPKU	07-09-98	114.00	114	92	25.0	--	--
60G 4	371925076162702		121CSPKU	07-08-98	153.00	148	118	5.0	1560	7.05
MIDDLESEX COUNTY										
58J 1	373630076361201		124EOCN	07-06-98	330.00	320	298	95.0	498	8.42
58J 12	373631076361201		211CRCSU	07-06-98	644.00	634	565	90.0	764	8.26
NEW KENT COUNTY										
54H 13	372949077072101		211CRCSU	07-01-98	370.00	364	304	115	338	8.14
54H 26	372735077054102			08-25-98	7.50	--	--	--	44.7	4.7
54H 28	372736077053902			08-25-98	9.40	--	--	--	145	5.72
54J 5	373207077064701		217PPSC	09-03-98	470.00	466	399	152	323	7.83
NORTHAMPTON COUNTY										
63F 52 SOW 182B	370807075570803		211CRCSU	10-30-97	1332.00	--	--	8.0	59200	6.8
63F 53 SOW 182C	370807075570804		121CSPKU	10-30-97	220.00	--	--	8.0	684	8.6
63G 37	372106075562001		121CSPKU	07-14-98	165.00	165	145	38.0	204	8.01
64J 2	372235075533501		121CSPKU	07-16-98	190.00	190	160	35.0	337	7.63
NORTHUMBERLAND COUNTY										
58M 4	375744076335001		124EOCN	07-07-98	360.00	360	334	98.0	305	7.92
59M 5	375502076281801		124EOCN	07-07-98	448.00	438	412	100	511	8.30
59M 6	375716076255401		211CRCSU	09-10-98	616.00	616	596	23.0	602	8.31
PRINCE GEORGE COUNTY										
51E 4	370100077232701		217PPSC	08-31-98	160.00	160	135	98.0	229	6.83
ROCKINGHAM COUNTY										
39SS 1	383216078572801			07-08-98	--	--	--	1610	301	6.90
				08-19-98	--	--	--	1610	349	6.56

* Replicate sample.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
KING GEORGE COUNTY--Continued										
53Q 21	27.3	21.6	758	.67	.7	8	--	--	--	--
	27.3	21.6	758	.67	.6	7	--	--	--	--
54Q 91	31.4	22.7	763	.49	.1	1	--	--	--	--
LANCASTER COUNTY--Continued										
58L 2	25.5	19.4	753	.21	.2	2	--	--	--	--
MATHEWS COUNTY--Continued										
59J 7	23.4	16.1	757	.07	.1	1	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
60G 4	23.8	16.4	758	.62	.1	1	--	--	--	--
MIDDLESEX COUNTY--Continued										
58J 1	26.1	24.8	760	.30	.1	1	--	--	--	--
58J 12	27.6	28.8	760	.10	.1	1	--	--	--	--
NEW KENT COUNTY--Continued										
54H 13	25.6	21.6	752	.20	.2	3	--	--	--	--
54H 26	28.5	19.4	--	--	.6	--	1.1	.84	3.1	.8
54H 28	28.0	19.4	--	--	1.5	--	12	1.6	4.0	1.5
54J 5	22.7	18.8	747	.93	.2	2	--	--	--	--
NORTHAMPTON COUNTY--Continued										
63F 52 SOW 182B	--	18.8	773	--	.2	3	1000	760	12000	260
63F 53 SOW 182C	--	17.2	773	--	.2	2	3.9	3.6	130	12
63G 37	31.1	17.2	759	.75	.2	2	--	--	--	--
64J 2	28.2	16.4	756	.45	.1	1	--	--	--	--
NORTHUMBERLAND COUNTY--Continued										
58M 4	23.9	23.9	759	.31	.3	3	--	--	--	--
59M 5	28.5	18.7	766	1.0	.1	1	--	--	--	--
59M 6	23.1	20.8	755	.22	.1	2	--	--	--	--
PRINCE GEORGE COUNTY--Continued										
51E 4	28.5	15.7	752	.21	.2	2	--	--	--	--
ROCKINGHAM COUNTY--Continued										
39SS 1	21.0	12.6	722	--	5.4	53	--	--	--	--
	--	11.5	--	--	5.5	--	--	--	--	--

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	ALKA- LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CAC03 (39086)	ANC WATER UNFLTRD FET FIELD MG/L AS CAC03 (00410)	ANC WATER UNFLTRD IT FIELD MG/L AS CAC03 (00419)	ANC WATER UNFLTRD FET FIELD MG/L AS HCO3 (00440)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	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)
KING GEORGE COUNTY--Continued										
53Q 21	--	88	--	--	--	0	107	--	--	--
	--	88	88	--	110	0	107	--	--	--
54Q 91	--	140	--	--	--	0	171	--	--	--
LANCASTER COUNTY--Continued										
58L 2	--	195	--	--	--	0	238	--	--	--
MATHEWS COUNTY--Continued										
59J 7	--	172	--	--	--	0	210	--	--	--
	--	--	--	--	--	--	--	--	--	--
60G 4	--	219	--	--	--	0	267	--	--	--
MIDDLESEX COUNTY--Continued										
58J 1	--	268	--	--	--	5	317	--	--	--
58J 12	--	372	--	--	--	5	444	--	--	--
NEW KENT COUNTY--Continued										
54H 13	--	137	--	--	--	0	167	--	--	--
54H 26	--	--	--	2	--	--	--	5.3	6.5	<.1
54H 28	--	--	--	5	--	--	--	20	11	<.1
54J 5	--	144	--	--	--	0	176	--	--	--
NORTHAMPTON COUNTY--Continued										
63F 52 SOW 182B	330	340	--	--	--	.00	414	<.1	23000	<.1
63F 53 SOW 182C	230	230	--	--	--	8	266	1.0	63	1.2
63G 37	--	76	--	--	--	0	93	--	--	--
64J 2	--	145	--	--	--	0	177	--	--	--
NORTHUMBERLAND COUNTY--Continued										
58M 4	--	146	--	--	--	0	178	--	--	--
59M 5	--	268	--	--	--	0	327	--	--	--
59M 6	--	296	--	--	--	6	361	--	--	--
PRINCE GEORGE COUNTY--Continued										
51E 4	--	113	--	--	--	0	138	--	--	--
ROCKINGHAM COUNTY--Continued										
39SS 1	--	--	--	--	--	--	--	--	--	--

< Actual value is known to be less than the value shown.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	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)	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)
KING GEORGE COUNTY--Continued									
53Q 21	--	--	--	--	--	<.05	--	--	--
54Q 91	--	--	--	--	--	<.05	--	--	--
LANCASTER COUNTY--Continued									
58L 2	--	--	--	--	--	<.05	--	--	--
MATHEWS COUNTY--Continued									
59J 7	--	--	--	--	--	<.05	--	--	--
	--	--	--	--	--	<.05	--	--	--
60G 4	--	--	--	--	--	<.05	--	--	--
MIDDLESEX COUNTY--Continued									
58J 1	--	--	--	--	--	<.05	--	--	--
58J 12	--	--	--	--	--	<.05	--	--	--
NEW KENT COUNTY--Continued									
54H 13	--	--	--	--	--	<.05	--	--	--
54H 26	.03	12	33	32	--	--	--	--	--
54H 28	.06	28	97	91	--	--	--	--	--
54J 5	--	--	--	--	--	<.05	--	--	--
NORTHAMPTON COUNTY--Continued									
63F 52 SOW 182B	93	29	39300	--	--	--	--	--	--
63F 53 SOW 182C	.33	12	382	365	--	--	--	--	--
63G 37	--	--	--	--	--	<.05	--	--	--
64J 2	--	--	--	--	--	<.05	--	--	--
NORTHUMBERLAND COUNTY--Continued									
58M 4	--	--	--	--	--	<.05	--	--	--
59M 5	--	--	--	--	--	<.05	--	--	--
59M 6	--	--	--	--	--	<.05	--	--	--
PRINCE GEORGE COUNTY--Continued									
51E 4	--	--	--	--	--	<.05	--	--	--
ROCKINGHAM COUNTY--Continued									
39SS 1	--	--	--	--	.01	2.8	.05	<.1	.04

< Actual value is known to be less than the value shown.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)	RADON TOTAL (PCI/L) (82303)	LIGHT ABSOR- BENCE AT 253.7 NM (PER CM)** (99905)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
KING GEORGE COUNTY--Continued								
53Q 21	--	--	--	--	--	210	--	.2
	--	--	--	--	--	210	--	.2
54Q 91	--	--	--	--	--	310	--	.4
LANCASTER COUNTY--Continued								
58L 2	--	--	--	--	--	1400	--	1.1
MATHEWS COUNTY--Continued								
59J 7	--	--	--	--	--	710	--	.6
	--	--	--	--	--	710	--	.2
60G 4	--	--	--	--	--	280	--	2.1
MIDDLESEX COUNTY--Continued								
58J 1	--	--	--	--	--	1000	--	.9
58J 12	--	--	--	--	--	200	--	.4
NEW KENT COUNTY--Continued								
54H 13	--	--	--	--	--	260	--	.3
54H 26	--	1300	13	-34.1	-6.29	--	--	--
54H 28	--	10000	220	-32.8	-5.90	--	.792	--
54J 5	--	--	--	--	--	330	--	.3
NORTHAMPTON COUNTY--Continued								
63F 52 SOW 182B	--	57000	840	--	--	--	--	--
63F 53 SOW 182C	--	24	3	--	--	--	--	--
63G 37	--	--	--	--	--	190	--	.6
64J 2	--	--	--	--	--	190	--	1.9
NORTHUMBERLAND COUNTY--Continued								
58M 4	--	--	--	--	--	280	--	.5
59M 5	--	--	--	--	--	260	--	.7
59M 6	--	--	--	--	--	240	--	.2
PRINCE GEORGE COUNTY--Continued								
51E 4	--	--	--	--	--	200	--	.3
ROCKINGHAM COUNTY--Continued								
39SS 1	--	--	--	--	--	--	--	--
	.02	--	--	--	--	--	--	--

** Abbreviations used: NM, nanometers: PER CM, per centimeter.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	STATION	NUMBER	GEO- LOGIC UNIT	DATE	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
SOUTHAMPTON COUNTY										
52B 10 SOW 178C	363916077201003		217PPSC	11-18-97	233.00	--	--	120	291	7.7
52B 11 SOW 178D	363916077201004		217PPSC	11-18-97	190.00	--	--	120	396	7.0
52B 12 SOW 178E	363916077201005		217PPSC	11-18-97	135.00	--	--	120	404	7.4
53A 11	363424077143001		217PPSC	07-30-98	290.00	286	236	44.0	335	7.28
53B 8	364214077121701		217PPSC	07-27-98	276.00	252	238	120	358	7.12
SUSSEX COUNTY										
51D 2	365635077235101		217PPSC	08-31-98	88.00	82	62	76.0	96.0	5.46
*			217PPSC	08-31-98	88.00	82	62	76.0	96.0	5.46
54E 1	370200077054301		211CRCSU	07-27-98	230.00	230	200	115	368	7.50
WESTMORELAND COUNTY										
55P 11	381158076575301		125PLCN	09-10-98	216.00	216	206	25.0	405	7.82
YORK COUNTY										
57G 60	372118076430401		124EOCN	08-04-98	324.00	324	298	110	372	8.23
58F 82	371130076303601		217PPSC	08-18-98	1210.00	--	--	56.1	8670	7.70
CITY OF CHESAPEAKE										
61A 15	363530076123601		217PTXN	06-15-98	1650.00	1640	1610	12.0	36400	6.40
61A 16	363530076123602		217PPSC	06-15-98	1476.00	1470	1440	12.0	25.0	6.80
61A 17	363531076123701		217PPSC	06-16-98	1310.00	1350	1190	12.0	9.00	7.60
61B 6 SOW 091C	364227076074703		000SAND	04-23-98	780.00	780	760	15.0	9480	7.50
61B 12	364227076074706		217PTXN	04-22-98	1831.00	1830	1820	15.0	47600	7.10
61B 16	364227076074710		124EOCN	04-24-98	690.00	680	670	15.0	9530	7.50
61C 34	364859076133301		110QRNR	07-29-98	68.00	68	58	15.0	352	6.80
CITY OF NEWPORT NEWS										
58F 81	371002076331601		217PTXN	07-17-98	1270.00	--	--	35.3	10900	7.2
CITY OF SUFFOLK										
57B 7	363955076380001		217PPSC	07-28-98	645.00	645	621	62.0	816	7.98
58B270 SOW 169C	364318076365503		211CRCSU	03-24-98	500.00	--	--	35.0	970	8.20
58B271 SOW 169D	364317076363501		217PPSC	03-25-98	710.00	--	--	29.0	884	7.80
58B273 SOW 169F	364348076363201		217PPSC	03-24-98	661.00	--	--	26.0	753	8.20
58C 58 SOW 141B	365133076351202		217PPSC	05-12-98	605.00	--	--	52.0	677	8.10
58C 59 SOW 141C	365133076351203		211CRCSU	05-11-98	447.00	447	437	52.0	930	8.40

* Replicate sample.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED CENT SATUR- ATION (00301)	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)
SOUTHAMPTON COUNTY--Continued									
52B 10 SOW 178C	1.00	16.4	774	--	.2	2	8.0	1.8	47
52B 11 SOW 178D	8.00	16.7	774	--	.1	1	61	6.0	6.3
52B 12 SOW 178E	10.0	16.3	769	--	.1	1	62	6.5	5.4
53A 11	27.2	17.3	754	.18	.1	1	--	--	--
53B 8	26.7	18.0	755	.19	.1	1	--	--	--
SUSSEX COUNTY--Continued									
51D 2	25.0	15.8	751	.29	.1	1	--	--	--
	25.0	15.8	751	.29	.1	1	--	--	--
54E 1	26.8	16.8	757	.14	.8	8	--	--	--
WESTMORELAND COUNTY--Continued									
55P 11	18.6	18.1	760	.23	.1	1	--	--	--
YORK COUNTY--Continued									
57G 60	25.4	16.8	758	.27	.1	2	--	--	--
58F 82	29.0	21.5	756	--	0	0	31	21	1700
CITY OF CHESAPEAKE--Continued									
61A 15	28.0	28.0	760	--	.1	1	620	300	7200
61A 16	33.0	27.0	759	--	.2	3	320	160	5200
61A 17	28.0	26.0	763	--	.2	2	42	26	2000
61B 6 SOW 091C	14.0	20.0	764	--	0	0	29	34	2000
61B 12	15.0	21.0	768	--	.1	1	1100	470	9500
61B 16	21.0	21.0	765	--	0	0	28	34	2000
61C 34	28.3	17.2	753	.18	.1	1	--	--	--
CITY OF NEWPORT NEWS--Continued									
58F 81	29.0	23.2	761	--	.1	1	85	31	2200
CITY OF SUFFOLK--Continued									
57B 7	28.9	21.0	754	.17	.1	1	--	--	--
58B270 SOW 169C	19.0	19.6	773	--	.2	2	1.3	.59	220
58B271 SOW 169D	17.0	19.9	783	--	0	0	.89	.47	200
58B273 SOW 169F	10.0	19.1	772	--	.3	3	.63	.40	170
58C 58 SOW 141B	15.0	20.3	761	--	.1	1	1.1	.31	160
58C 59 SOW 141C	15.0	19.7	758	--	--	--	1.5	.64	210

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	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)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)
SOUTHAMPTON COUNTY--Continued									
52B 10 SOW 178C	12	120	117	0	143	4.6	3.5	.1	.03
52B 11 SOW 178D	2.8	170	168	0	205	8.4	2.3	<.1	.05
52B 12 SOW 178E	2.5	190	187	0	228	9.3	2.3	.2	.04
53A 11	--	--	153	0	187	--	--	--	--
53B 8	--	--	167	0	204	--	--	--	--
SUSSEX COUNTY--Continued									
51D 2	--	--	7	0	8	--	--	--	--
	--	--	7	0	8	--	--	--	--
54E 1	--	--	180	0	220	--	--	--	--
WESTMORELAND COUNTY--Continued									
55P 11	--	--	187	0	228	--	--	--	--
YORK COUNTY--Continued									
57G 60	--	--	179	4	218	--	--	--	--
58F 82	40	330	331	0	404	190	2400	.3	9.4
CITY OF CHESAPEAKE--Continued									
61A 15	74	95	98	0	120	520	13000	<.1	26
61A 16	96	180	185	0	226	440	8700	<.1	31
61A 17	41	360	365	0	445	190	2900	.5	11
61B 6 SOW 091C	55	610	614	0	749	170	2500	1.2	9.3
61B 12	120	91	95	0	116	590	17000	<.1	62
61B 16	56	640	643	0	787	160	2500	1.2	9.4
61C 34	--	--	116	0	142	--	--	--	--
CITY OF NEWPORT NEWS--Continued									
58F 81	39	--	218	0	266	250	3200	.3	13
CITY OF SUFFOLK--Continued									
57B 7	--	--	390	0	476	--	--	--	--
58B270 SOW 169C	8.0	430	432	0	527	6.2	14	7.2	.08
58B271 SOW 169D	6.1	360	362	0	442	9.2	21	6.4	.12
58B273 SOW 169F	6.1	330	328	0	400	4.8	7.1	7.4	.05
58C 58 SOW 141B	4.6	340	347	0	423	2.2	3.5	4.5	.04
58C 59 SOW 141C	8.3	550	551	84	502	3.7	5.5	4.5	.06

< Actual value is known to be less than the value shown.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	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, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	RADON 222 TOTAL (PCI/L) (82303)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
SOUTHAMPTON COUNTY--Continued								
52B 10 SOW 178C	40	201	187	--	98	25	--	--
52B 11 SOW 178D	52	256	243	--	2500	45	--	--
52B 12 SOW 178E	54	274	257	--	2900	66	--	--
53A 11	--	--	--	<.05	--	--	250	.2
53B 8	--	--	--	<.05	--	--	210	.2
SUSSEX COUNTY--Continued								
51D 2	--	--	--	<.05	--	--	230	.5
	--	--	--	<.05	--	--	240	.1
54E 1	--	--	--	<.05	--	--	170	.2
WESTMORELAND COUNTY--Continued								
55P 11	--	--	--	<.05	--	--	280	.3
YORK COUNTY--Continued								
57G 60	--	--	--	.06	--	--	160	.4
58F 82	28	4810	4700	--	2500	120	--	--
CITY OF CHESAPEAKE--Continued								
61A 15	39	22900	22100	--	7300	1700	--	--
61A 16	21	16100	15000	--	3900	680	--	--
61A 17	12	5500	5480	--	350	52	--	--
61B 6 SOW 091C	17	5110	5180	--	280	<40	--	--
61B 12	19	30500	29100	--	19000	3600	--	--
61B 16	17	5010	5180	--	280	44	--	--
61C 34	--	--	--	<.05	--	--	340	1.6
CITY OF NEWPORT NEWS--Continued								
58F 81	19	6080	6000	--	970	89	--	--
CITY OF SUFFOLK--Continued								
57B 7	--	--	--	.09	--	--	200	.4
58B270 SOW 169C	11	590	527	--	16	7	--	--
58B271 SOW 169D	19	529	479	--	170	9	--	--
58B273 SOW 169F	13	445	409	--	37	4	--	--
58C 58 SOW 141B	16	416	400	--	130	7	--	--
58C 59 SOW 141C	10	565	580	--	30	8	--	--

< Actual value is known to be less than the value shown.

GROUND-WATER LEVELS

ACCOMACK COUNTY

372922076470101. Local number, 64H 5 SOW 102C.

LOCATION.--Lat 37°29'21", long 75°47'05", Hydrologic Unit 02080110, at entrance to Virginia Landing, 0.2 mi south from end of State Highway 605, 2.0 mi southeast of Willis Wharf, and 5.2 mi southwest of intersection of State Highways 605 and 182. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 306 ft, screened 296 to 306 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Nov. 13, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Nov. 13, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 0.3 ft above land-surface datum prior to Mar. 1, 1988; 1.1 ft thereafter.

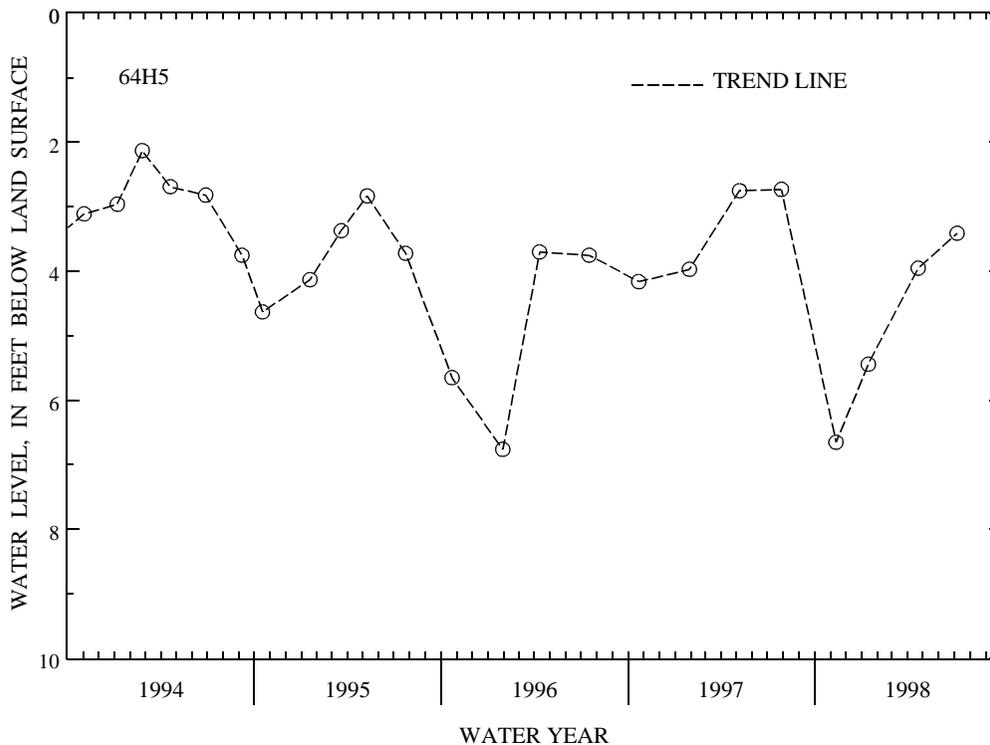
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--June 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.70 ft below land-surface datum, June 6, 1984; lowest measured, 7.35 ft below land-surface datum, Nov. 1, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	6.65	JAN 14	5.44	APR 22	3.95	JUL 07	3.41
WATER YEAR 1998 HIGHEST		3.41	JUL 07, 1998				
LOWEST		6.65	NOV 12, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

372905075474002. Local number, 64H 6 SOW 102A.

LOCATION.--Lat 37°29'21", long 75°47'05", Hydrologic Unit 02080110, at entrance to Virginia Landing, 0.2 mi south from end of State Highway 605, 2.0 mi southeast of Willis Wharf, and 5.2 mi southwest of intersection of State Highways 605 and 182. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 154 ft, screened 144 to 154 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Nov. 13, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Nov. 13, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 0.7 ft above land-surface datum.

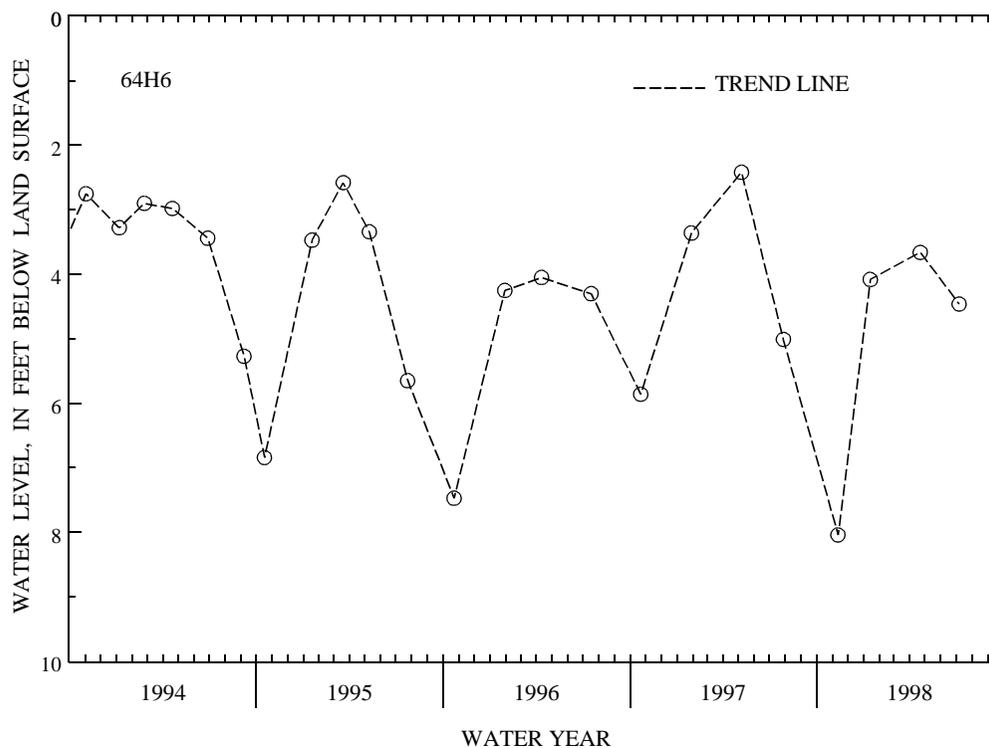
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--June 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.33 ft below land-surface datum, Oct. 30, 1984; lowest measured, 9.63 ft below land-surface datum, Sept. 1, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	8.04	JAN 14	4.08	APR 22	3.66	JUL 07	4.46
WATER YEAR 1998	HIGHEST	3.66	APR 22, 1998				
	LOWEST	8.04	NOV 12, 1997				



GROUND-WATER LEVELS
 ACCOMACK COUNTY

372905075474001. Local number, 64H 7 SOW 102B.

LOCATION.--Lat 37°29'21", long 75°47'05", Hydrologic Unit 02080110, at entrance to Virginia Landing, 0.2 mi south from end of State Highway 605, 2.0 mi southeast of Willis Wharf, and 5.2 mi southwest of intersection of State Highways 605 and 182. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 220 ft, screened 210 to 220 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Nov. 13, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Nov. 13, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum.

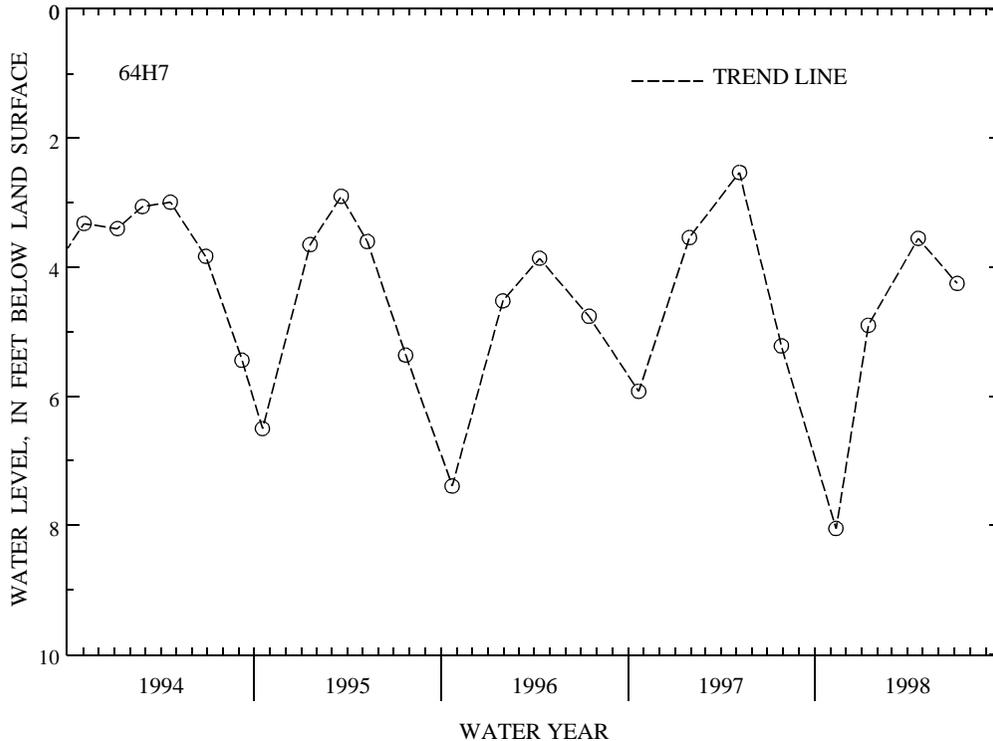
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--June 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.19 ft below land-surface datum, July 10, 1984; lowest measured, 8.76 ft below land-surface datum, Nov. 1, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	8.05	JAN 14	4.90	APR 22	3.55	JUL 07	4.25
WATER YEAR 1998 HIGHEST		3.55	APR 22, 1998				
LOWEST		8.05	NOV 12, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

373932075452701. Local number, 64K 10 SOW 108A.

LOCATION.--Lat 37°39'32", long 75°45'27", Hydrologic Unit 02080109, 200 ft east of State Highway 609, 0.2 mi south-east of intersection of State Highways 609 and 627, and 0.9 mi northwest of Melfa. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 50 ft, screened 40 to 50 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 47 ft above sea level, from topographic map. Measuring point: Top of casing, 0.22 ft above land-surface datum prior to Mar. 1, 1988; 0.75 ft thereafter.

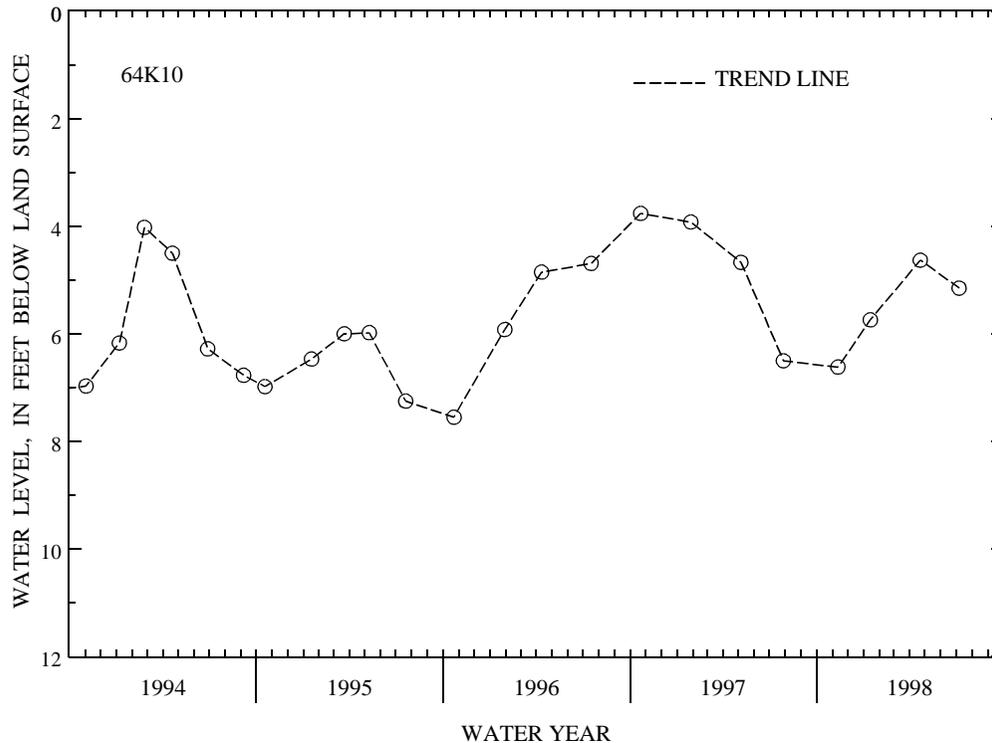
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--September 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.98 ft below land-surface datum, Apr. 21, 1983; lowest measured, 15.06 ft below land-surface datum, Jan. 30, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	6.62	JAN 14	5.74	APR 22	4.63	JUL 07	5.15
WATER YEAR 1998	HIGHEST	4.63	APR 22, 1998				
	LOWEST	6.62	NOV 12, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

373932075452702. Local number, 64K 11 SOW 108B.

LOCATION.--Lat 37°39'32", long 75°45'27", Hydrologic Unit 02080109, 200 ft east of State Highway 609, 0.2 mi southeast of intersection of State Highways 609 and 627, and 0.9 mi northwest of Melfa. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 180 ft, screened 170 to 180 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 47 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

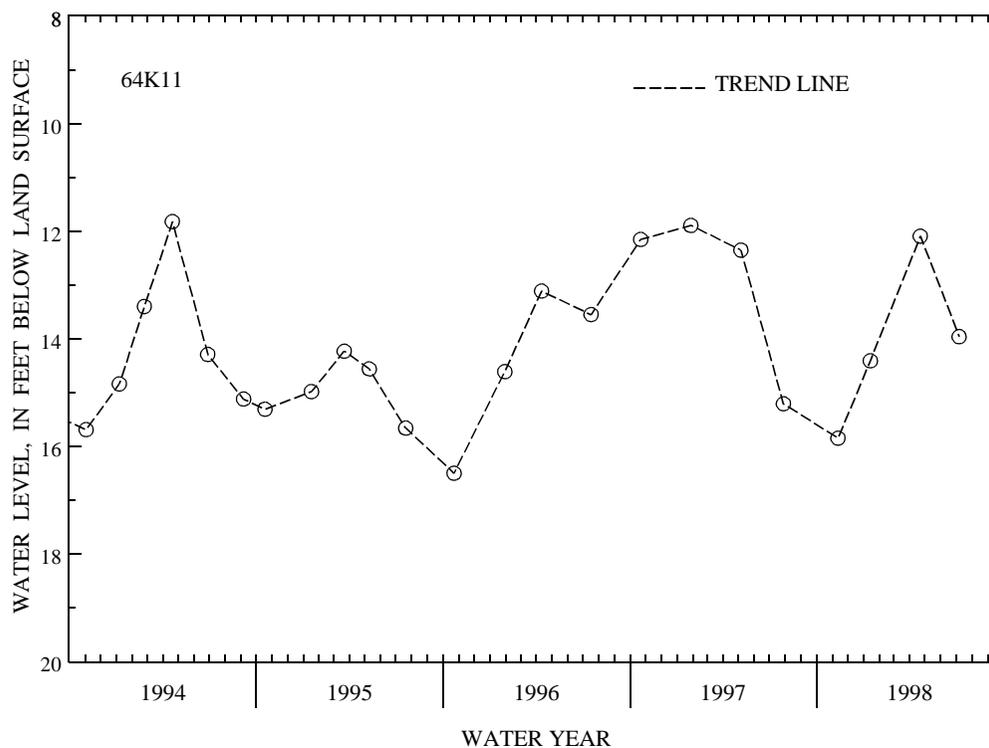
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--September 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.03 ft below land-surface datum, Aug. 1, 1979; lowest measured, 16.50 ft below land-surface datum, Oct. 23, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	15.85	JAN 14	14.41	APR 22	12.09	JUL 07	13.96
WATER YEAR 1998		HIGHEST	12.09	APR 22, 1998			
		LOWEST	15.85	NOV 12, 1997			



GROUND-WATER LEVELS

ACCOMACK COUNTY

373932075452703. Local number, 64K 12 SOW 108C.

LOCATION.--Lat 37°39'32", long 75°45'27", Hydrologic Unit 02080109, 200 ft east of State Highway 609, 0.2 mi southeast of intersection of State Highways 609 and 627, and 0.9 mi northwest of Melfa. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 284 ft, screened 274 to 284 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 47 ft above sea level, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum.

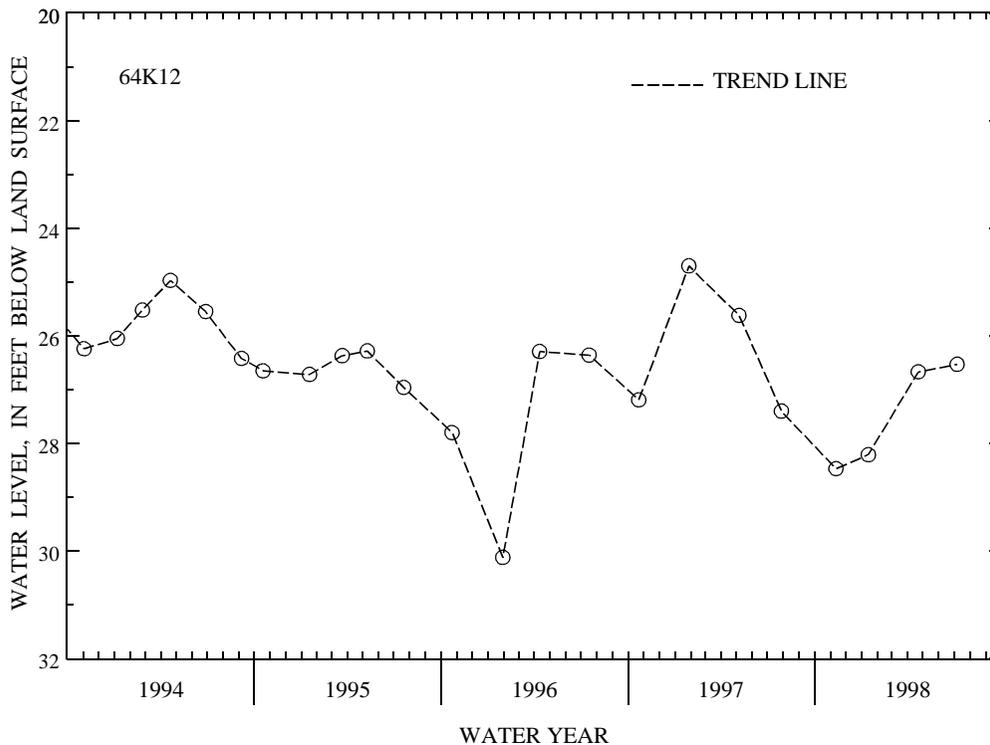
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

PERIOD OF RECORD.--September 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.50 ft below land-surface datum, Feb. 2, 1984; lowest measured, 30.12 ft below land-surface datum, Jan. 30, 1996.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	28.47	JAN 14	28.21	APR 22	26.67	JUL 07	26.53
WATER YEAR 1998 HIGHEST		26.53	JUL 07, 1998				
LOWEST		28.47	NOV 12, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

373845075522501. Local number, 64K 7 SOW 106C.

LOCATION.--Lat 37°38'45", long 75°52'25", Hydrologic Unit 02080109, 100 ft north of State Highway 633, 0.3 mi northwest of intersection of State Highways 631 and 633, and 0.3 mi northwest of Hacksneck. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 176 ft, screened 166 to 176 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 3 ft above sea level, from topographic map. Measuring point: Top of casing, 0.73 ft above land-surface datum.

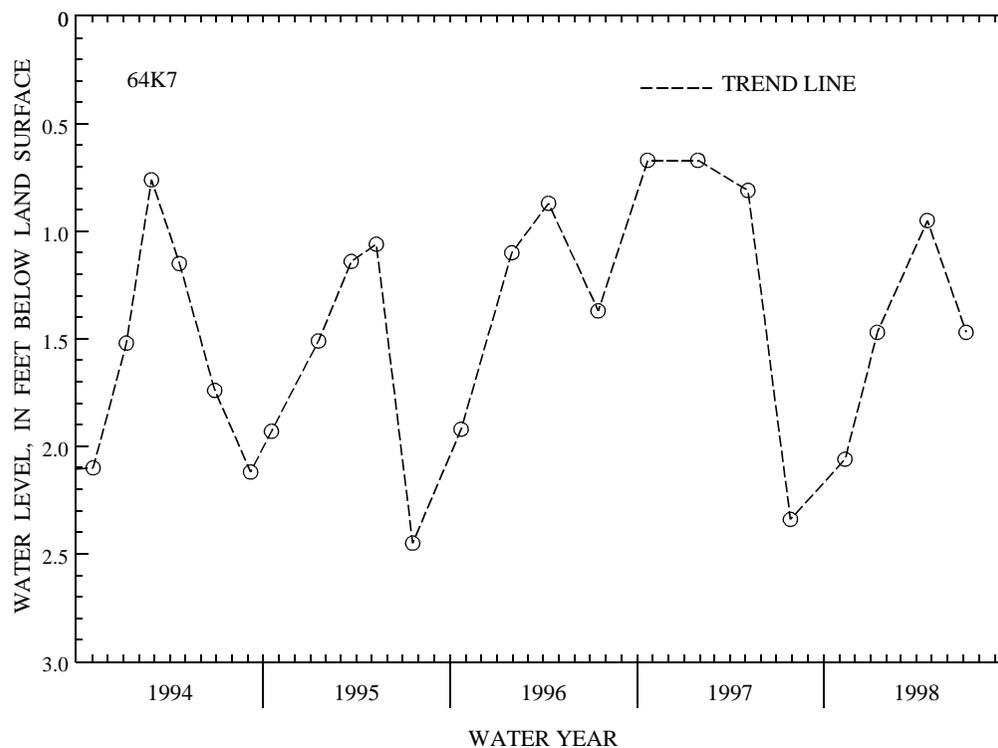
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.31 ft below land-surface datum, May 22, 1991; lowest measured, 2.35 ft below land-surface datum, July 16, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	2.06	JAN 14	1.47	APR 22	0.95	JUL 07	1.47
WATER YEAR 1998	HIGHEST	0.95	APR 22, 1998				
	LOWEST	2.06	NOV 12, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

373845075522503. Local number, 64K 8 SOW 106B.

LOCATION.--Lat 37°38'45", long 75°52'25", Hydrologic Unit 02080109, 100 ft north of State Highway 633, 0.3 mi northwest of intersection of State Highways 631 and 633, and 0.3 mi northwest of Hacksneck. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 95 ft, screened 85 to 95 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 3 ft above sea level, from topographic map. Measuring point: Top of casing, 0.7 ft above land-surface datum.

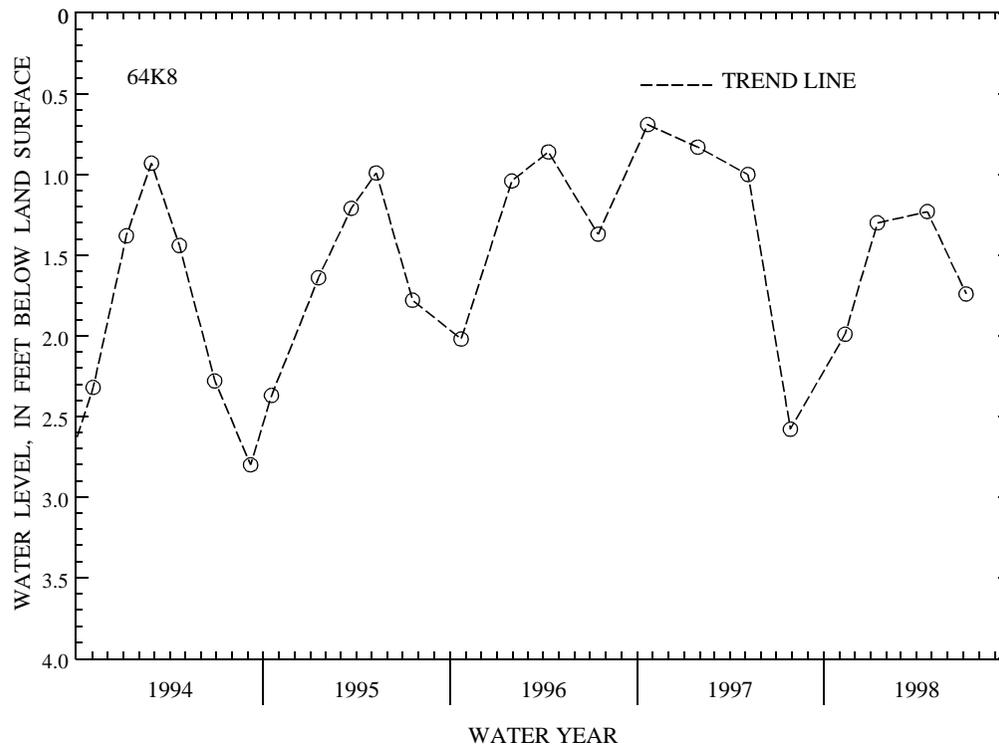
REMARKS.--Records provided by the Virginia Department of Environmental Quality. - Water Division.

PERIOD OF RECORD.--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.69 ft below land-surface datum, Oct. 22, 1996; lowest measured, 2.92 ft below land-surface datum, Sept. 2, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	1.99	JAN 14	1.30	APR 22	1.23	JUL 07	1.74
WATER YEAR 1998	HIGHEST	1.23	APR 22, 1998				
	LOWEST	1.99	NOV 12, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

373845075522502. Local number, 64K 9 SOW 106A.

LOCATION.--Lat 37°38'45", long 75°52'25", Hydrologic Unit 02080109, 100 ft north of State Highway 633, 0.3 mi northwest of intersection of State Highways 631 and 633, and 0.3 mi northwest of Hacksneck. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 37 ft, screened 27 to 37 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is approximately 3 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

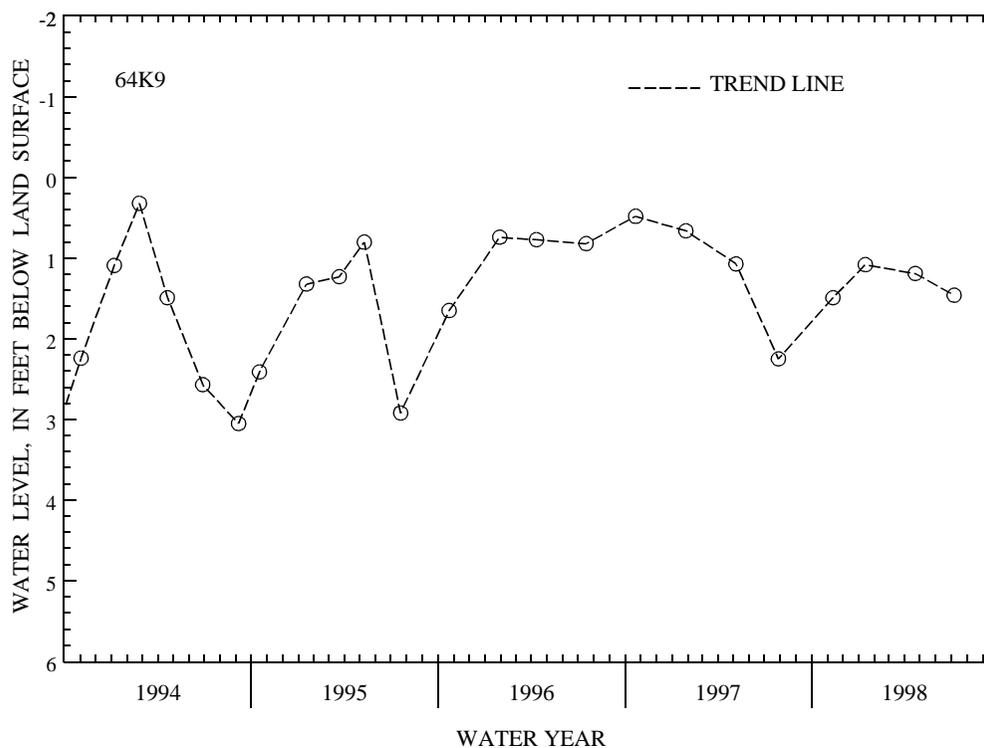
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.32 ft below land-surface datum, Feb. 24, 1994; lowest measured, 3.46 ft below land-surface datum, Sept. 14, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	1.49	JAN 14	1.08	APR 22	1.19	JUL 07	1.46
WATER YEAR 1998	HIGHEST	1.08	JAN 14, 1998				
	LOWEST	1.49	NOV 12, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

374442075432501. Local number, 65K 23 SOW 109C.

LOCATION.--Lat 37°44'28", long 75°43'28", Hydrologic Unit 02080109, 50 ft north of State Highway 658, 0.1 mi northeast of intersection of State Highways 658 and 660, and 2.2 mi southeast of Deep Creek. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 290 ft, screened 280 to 290 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 13 ft above sea level, from topographic map. Measuring point: Top of casing, 0.3 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

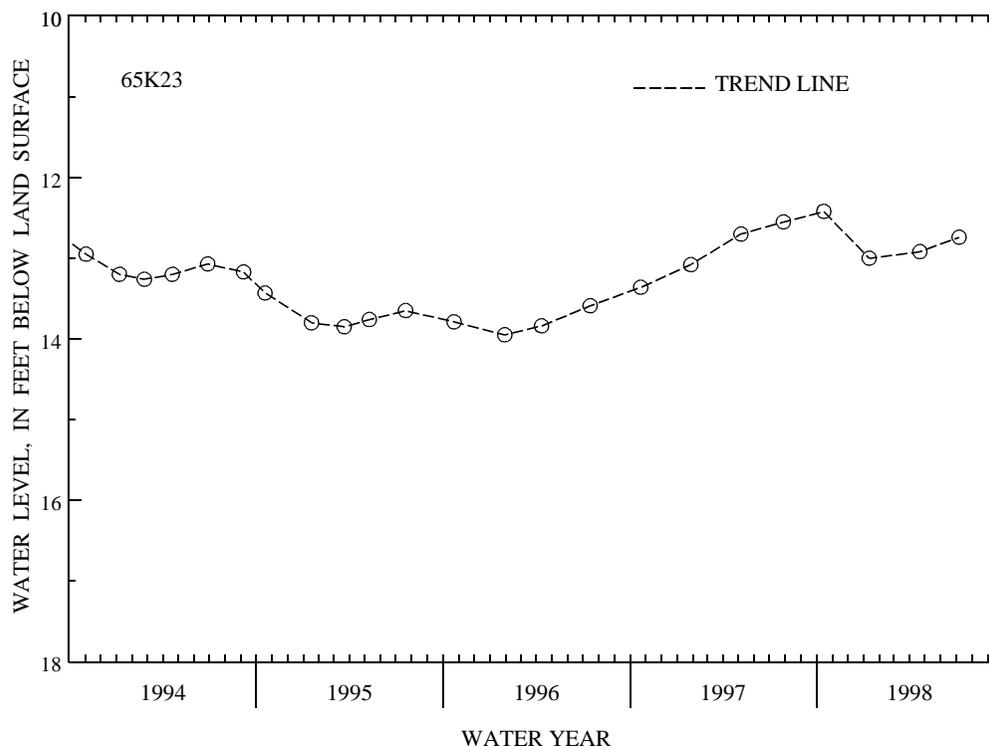
PERIOD OF RECORD.--June 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.36 ft below land-surface datum, Dec. 30, 1982; lowest measured, 16.65 ft below land-surface datum, Mar. 12, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL						
OCT 15	12.42	JAN 12	13.00	APR 21	12.92	JUL 07	12.74

WATER YEAR 1998	HIGHEST	12.42	OCT 15, 1997
	LOWEST	13.00	JAN 12, 1998



GROUND-WATER LEVELS

ACCOMACK COUNTY

374442075432502. Local number, 65K 24 SOW 109A.

LOCATION.--Lat 37°44'42", long 75°43'25", Hydrologic Unit 02080109, 50 ft north of State Highway 658, 0.1 mi northeast of intersection of State Highways 658 and 660, and 2.2 mi southeast of Deep Creek. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 130 ft, screened 120 to 130 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 13 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum.

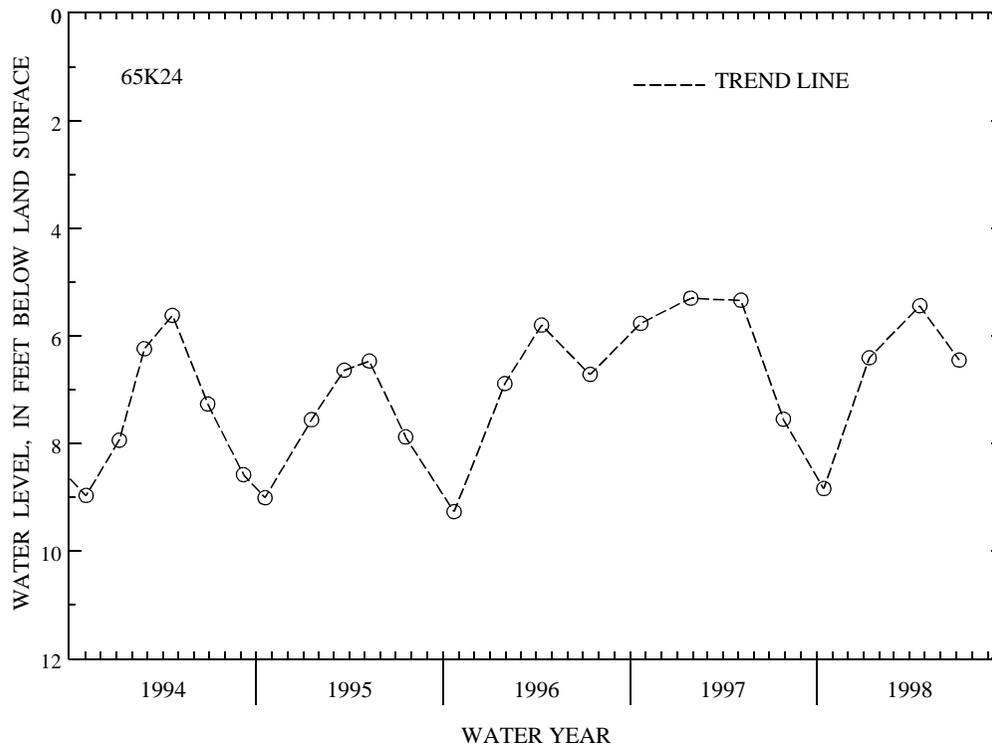
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--June 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.35 ft below land-surface datum, Apr. 21, 1983; lowest measured, 9.27 ft below land-surface datum, Oct. 23, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	8.84	JAN 12	6.41	APR 21	5.44	JUL 07	6.45
WATER YEAR 1998	HIGHEST	5.44	APR 21, 1998				
	LOWEST	8.84	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

374442075432503. Local number, 65K 25 SOW 109B.

LOCATION.--Lat 37°44'42", long 75°43'25", Hydrologic Unit 02080109, 50 ft north of State Highway 658, 0.1 mi northeast of intersection of State Highways 658 and 660, and 2.2 mi southeast of Deep Creek. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 228 ft, screened 218 to 228 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 13 ft above sea level, from topographic map. Measuring point: Top of casing, 0.85 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

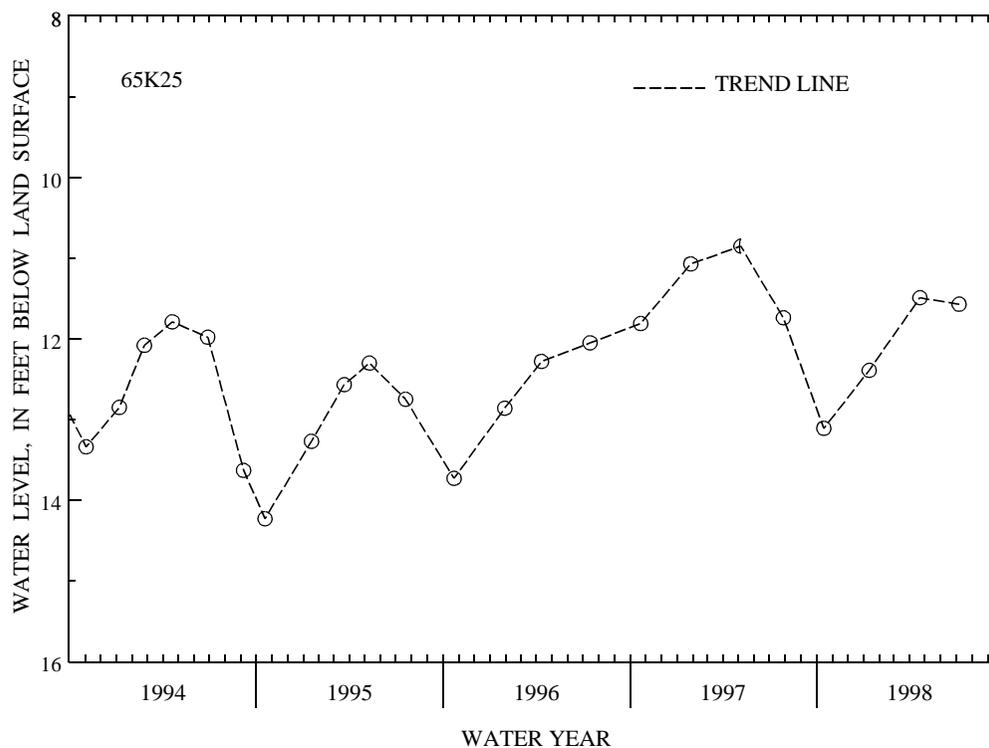
PERIOD OF RECORD.--June 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.15 ft below land-surface datum, June 20, 1984; lowest measured, 14.34 ft below land-surface datum, Sept. 10, 1991.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL						
OCT 15	13.11	JAN 12	12.39	APR 21	11.49	JUL 07	11.57

WATER YEAR 1998	HIGHEST	11.49	APR 21, 1998
	LOWEST	13.11	OCT 15, 1997



GROUND-WATER LEVELS

ACCOMACK COUNTY

374442075432504. Local number, 65K 26 SOW 109S.

LOCATION.--Lat 37°44'42", long 75°43'25", Hydrologic Unit 02080109, 50 ft north of State Highway 658, 0.1 mi northeast of intersection of State Highways 658 and 660, and 2.2 mi southeast of Deep Creek. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 25 ft, screened 15 to 25 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 13 ft above sea level, from topographic map. Measuring point: Top of casing, 0.37 ft above land-surface datum prior to Mar. 1, 1988; 0.5 ft thereafter.

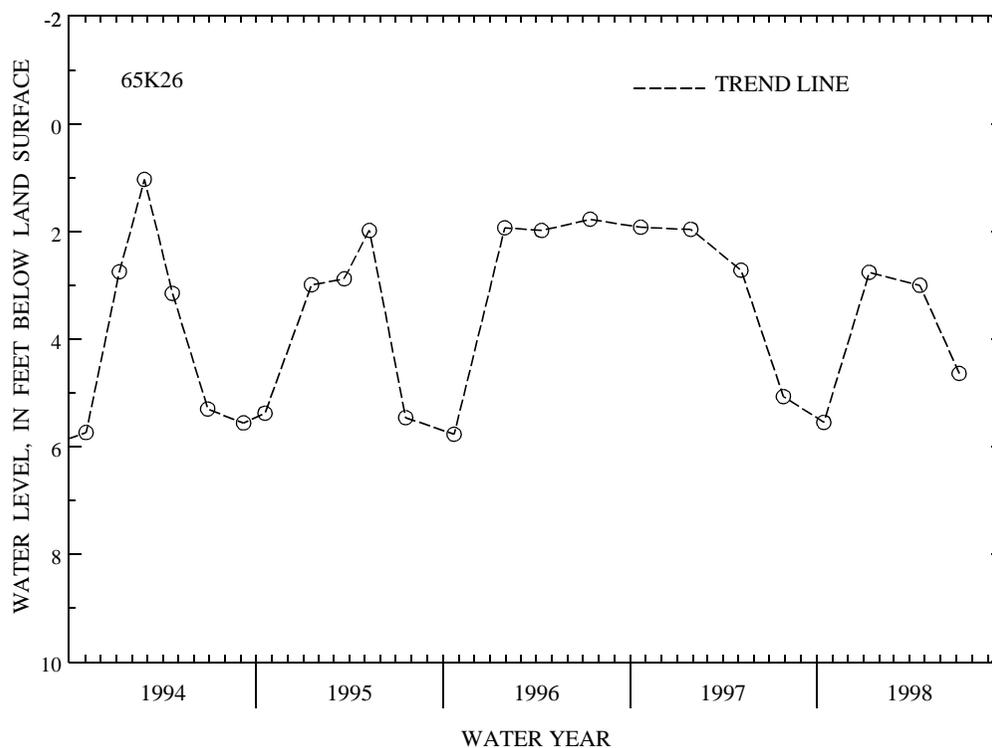
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--June 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.03 ft below land-surface datum, Feb. 24, 1994; lowest measured, 6.57 ft below land-surface datum, Oct. 31, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	5.55	JAN 12	2.76	APR 21	3.00	JUL 07	4.64
WATER YEAR 1998	HIGHEST	2.76	JAN 12, 1998				
	LOWEST	5.55	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

374425075400002. Local number, 65K 28 SOW 114B.

LOCATION.--Lat 37°44'25", long 75°40'00", Hydrologic Unit 02080109, 0.2 mi northwest of intersection of State Highway 662 and U.S. Highway 13, 0.6 mi northwest of State Highway 662, and 0.9 mi east of Greenbush. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 230 ft, screened 220 to 230 ft.

INSTRUMENTATION.--Continuous strip-chart recorder. Prior to July 20, 1985, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 45 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 1.5 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction. Water level affected by local pumpage.

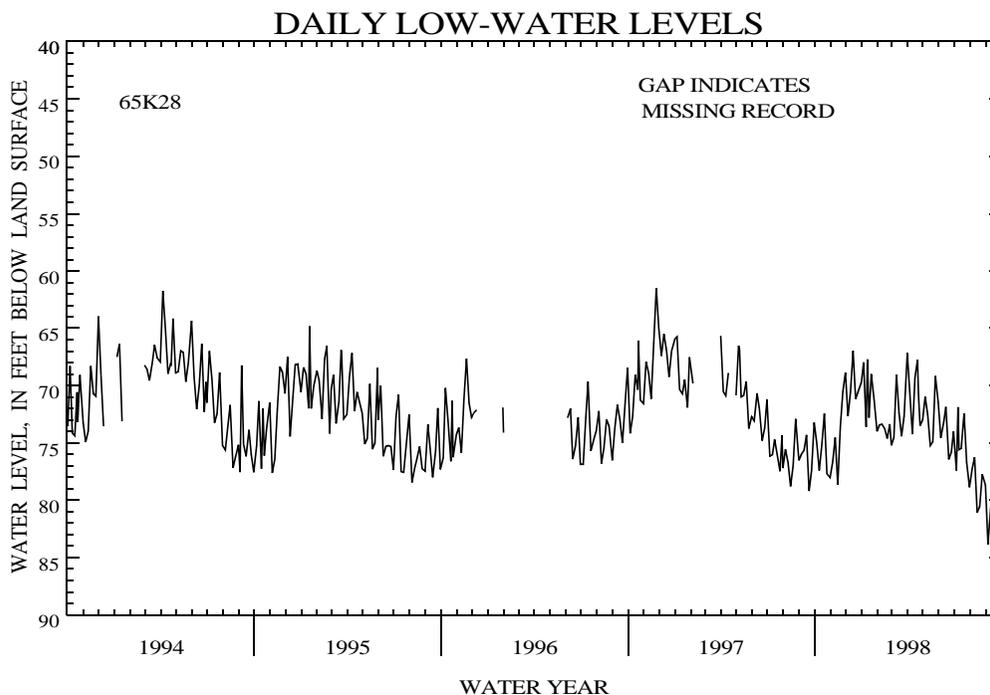
PERIOD OF RECORD.--March 1980 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 49.40 ft below land-surface datum, June 6, 1987; lowest recorded, 83.85 ft below land-surface datum, Sept. 5, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	74.95	76.65	72.65	67.95	73.40	74.50	70.95	70.95	74.55	77.40	77.30	83.85
10	77.40	74.50	70.50	73.60	73.35	69.05	74.25	72.55	73.20	75.60	76.25	80.80
15	75.18	78.65	66.95	72.80	73.70	72.35	69.30	75.25	71.85	75.50	81.08	78.50
20	72.45	73.62	71.15	69.00	74.60	74.40	67.75	74.90	76.45	72.45	80.55	80.75
25	77.65	70.50	70.50	71.25	73.35	72.65	73.50	69.15	75.80	76.65	77.70	83.45
EOM	78.00	68.85	69.70	74.00	75.20	67.15	73.00	71.45	74.00	78.85	78.65	81.35

WATER YEAR 1998	HIGHEST INSTANTANEOUS	64.45	DEC 29, 1997
	LOWEST INSTANTANEOUS	83.85	SEP 05, 1998



GROUND-WATER LEVELS

ACCOMACK COUNTY

374425075400004. Local number, 65K 30 SOW 114S.

LOCATION.--Lat 37°44'25", long 75°40'00", Hydrologic Unit 02080109, 0.2 mi northwest of intersection of State Highway 662 and U.S. Highway 13, 0.6 mi northwest of State Highway 662, and 0.9 mi east of Greenbush. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 40 ft, screened 30 to 40 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 45 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to Mar. 1, 1988; 1.5 ft thereafter.

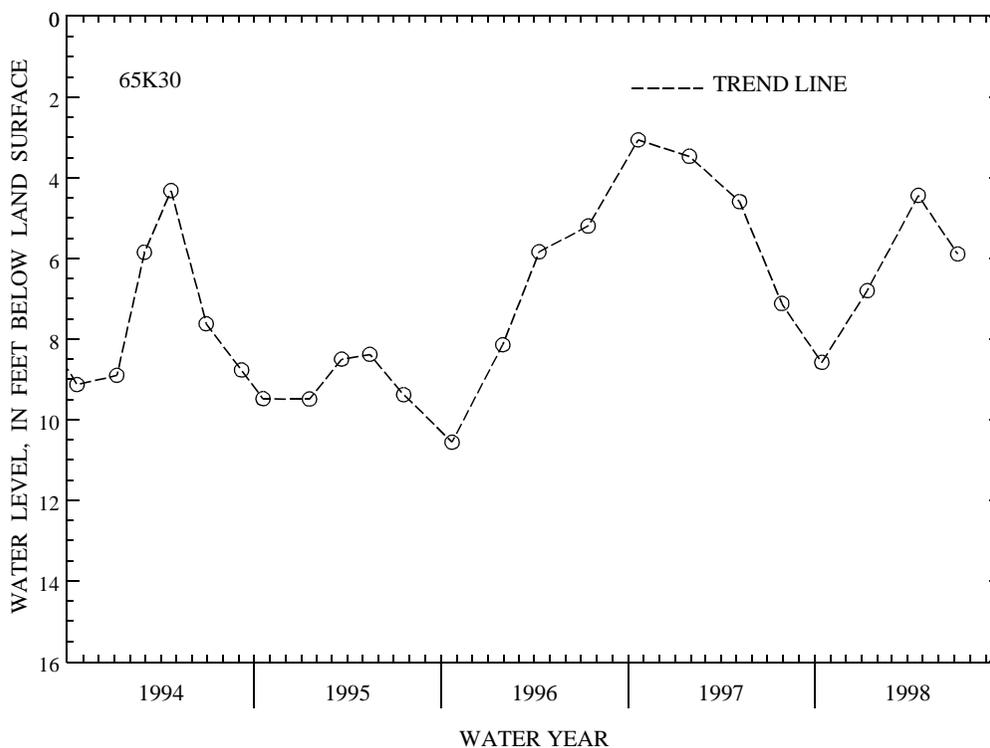
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--March 1980 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.06 ft below land-surface datum, Oct. 21, 1996; lowest measured, 20.10 ft below land-surface datum, Dec. 9, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	8.58	JAN 12	6.80	APR 22	4.44	JUL 08	5.89
WATER YEAR 1998		HIGHEST	4.44	APR 22, 1998			
		LOWEST	8.58	OCT 15, 1997			



GROUND-WATER LEVELS

ACCOMACK COUNTY

374314075401402. Local number, 65K 59 SOW 183A.

LOCATION.--Lat 37°43'14", long 75°40'14", Hydrologic Unit 02080109, at Accomac, 500 ft north of U.S. Highway 13 (Business), 700 ft east of intersection of State Highway 764, and U.S. Highway 13 (Business). Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 250 ft, diameter 2 in. from 250 to 285 ft, depth 285 ft, screened 275 to 285 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 6, 1990 to Jan. 28, 1997, continuous strip-chart recorder. Prior to Aug. 7, 1990, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

PERIOD OF RECORD.--May 1990 to current year.

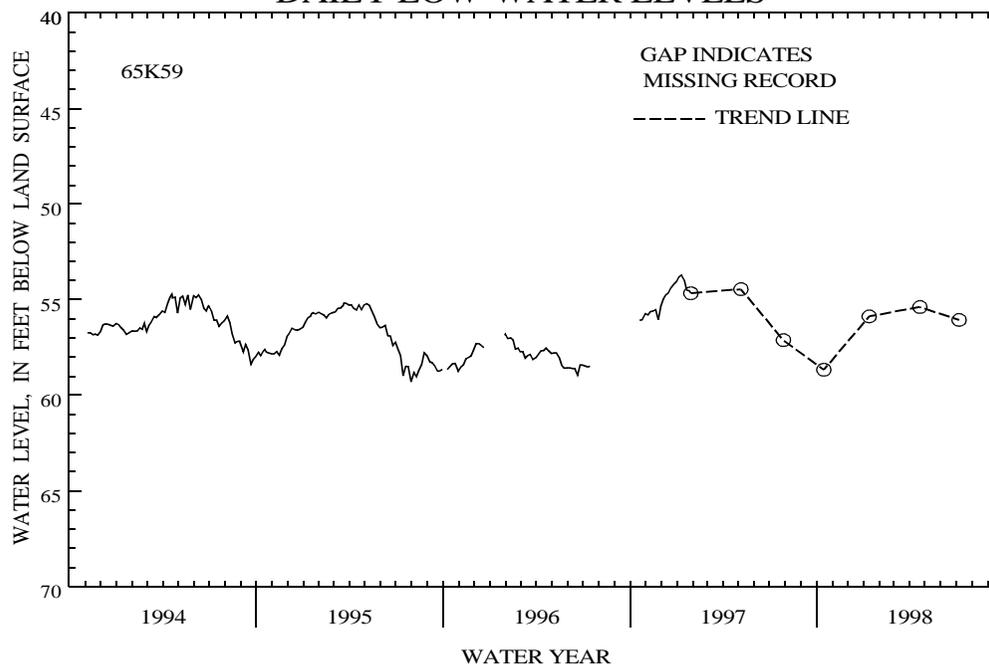
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 52.28 ft below land-surface datum, Jan. 13, 1993; lowest recorded, 61.24 ft below land-surface datum, Sept. 29, 1991.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL						
OCT 15	58.66	JAN 12	55.87	APR 21	55.38	JUL 07	56.06

WATER YEAR 1998	HIGHEST	55.38	APR 21, 1998
	LOWEST	58.66	OCT 15, 1997

DAILY LOW-WATER LEVELS



GROUND-WATER LEVELS

ACCOMACK COUNTY

374314075401403. Local number, 65K 60 SOW 183B.

LOCATION.--Lat 37°43'14", long 75°40'14", Hydrologic Unit 02080109, at Accomac, 500 ft north of U.S. Highway 13 (Business), 700 ft east of intersection of State Highway 764, and U.S. Highway 13 (Business). Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 210 ft, diameter 2 in. from 210 to 235 ft, depth 235 ft, screened 225 to 235 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 20, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

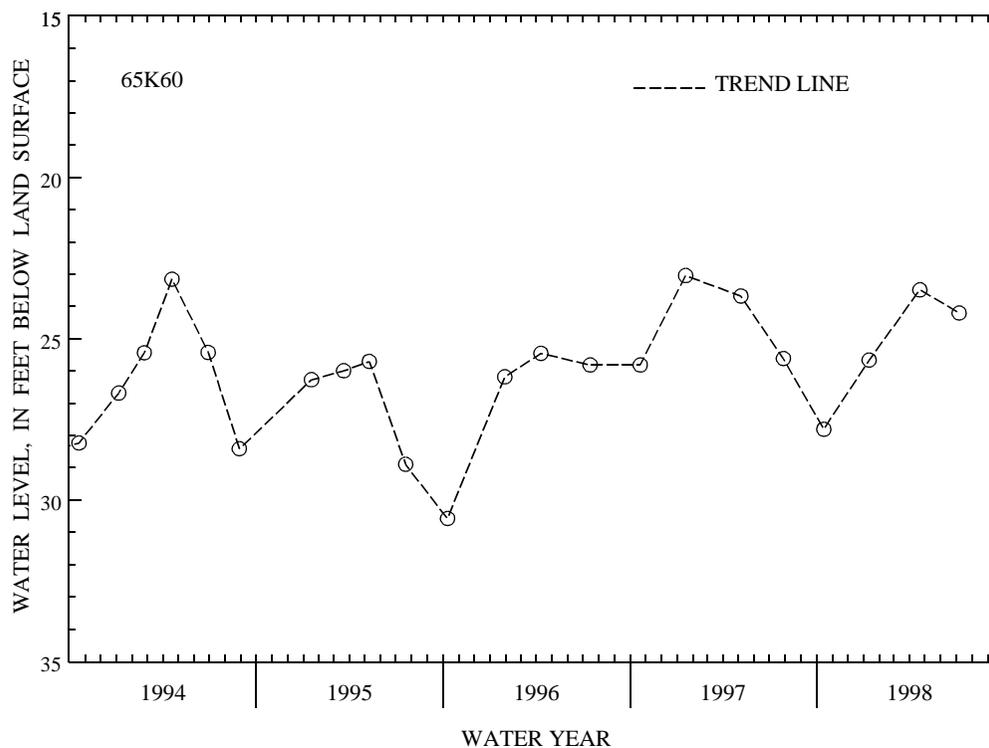
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

PERIOD OF RECORD.--May 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.50 ft below land-surface datum, May 7, 1990; lowest measured, 30.57 ft below land-surface datum, Oct. 10, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	27.80	JAN 12	25.66	APR 21	23.48	JUL 07	24.20
WATER YEAR 1998	HIGHEST	23.48	APR 21, 1998				
	LOWEST	27.80	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

374314075401404. Local number, 65K 61 SOW 183C.

LOCATION.--Lat 37°43'14", long 75°40'14", Hydrologic Unit 02080109, at Accomac, 500 ft north of U.S. Highway 13 (Business), 700 ft east of intersection of State Highway 764, and U.S. Highway 13 (Business). Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 82 ft, diameter 2 in. from 82 to 134 ft, depth 134 ft, screened 124 to 134 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 6, 1990 to Jan. 28, 1997, continuous strip-chart recorder. Prior to Aug. 6, 1990, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

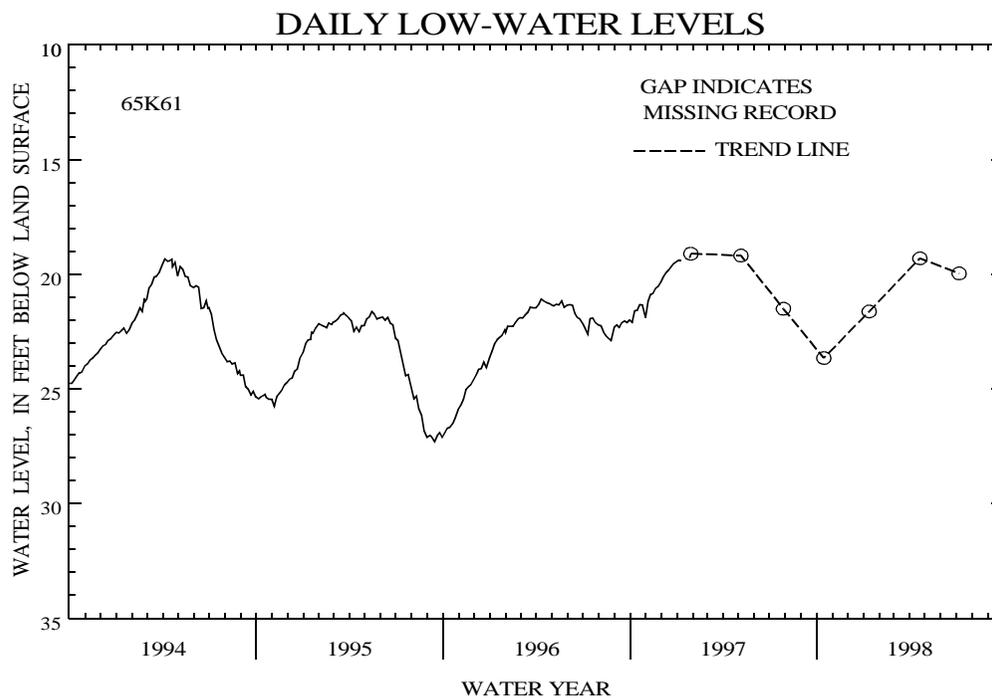
PERIOD OF RECORD.--May 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.20 ft below land-surface datum, May 7, 1990; lowest recorded, 27.32 ft (corrected) below land-surface datum, Sept. 13, 14, 1995.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL						
OCT 15	23.65	JAN 12	21.62	APR 21	19.30	JUL 07	19.96

WATER YEAR 1998	HIGHEST	19.30	APR 21, 1998
	LOWEST	23.65	OCT 15, 1997



GROUND-WATER LEVELS

ACCOMACK COUNTY

374314075401405. Local number, 65K 62 SOW 183D.

LOCATION.--Lat 37°43'14", long 75°40'14", Hydrologic Unit 02080109, at Accomac, 500 ft north of U.S. Highway 13 (Business), 700 ft east of intersection of State Highway 764, and U.S. Highway 13 (Business). Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 20 ft, screened 15 to 20 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 20, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

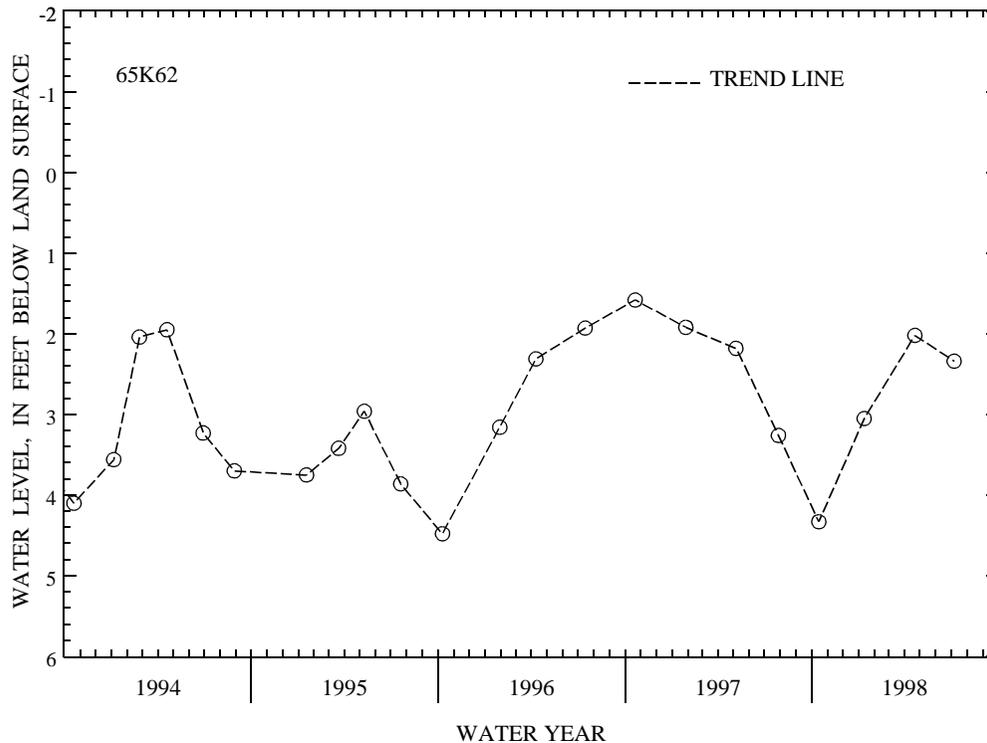
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--May 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.09 ft below land-surface datum, Jan. 4, 1993; lowest measured, 4.48 ft below land-surface datum, Oct. 10, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	4.33	JAN 12	3.05	APR 21	2.02	JUL 07	2.34
WATER YEAR 1998	HIGHEST	2.02	APR 21, 1998				
	LOWEST	4.33	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

374320075380501. Local number, 66K 2 SOW 101C.

LOCATION.--Lat 37°43'19", long 75°36'54", Hydrologic Unit 02080110, 0.2 mi north of State Highway 662, 2.2 mi east of intersection of State Highway 662 and U.S. Highway 13 (Business), and 2.8 mi east of Accomac. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 292 ft, screened 282 to 292 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 0.4 ft above land-surface datum prior to Mar. 1, 1988; 0.6 ft thereafter.

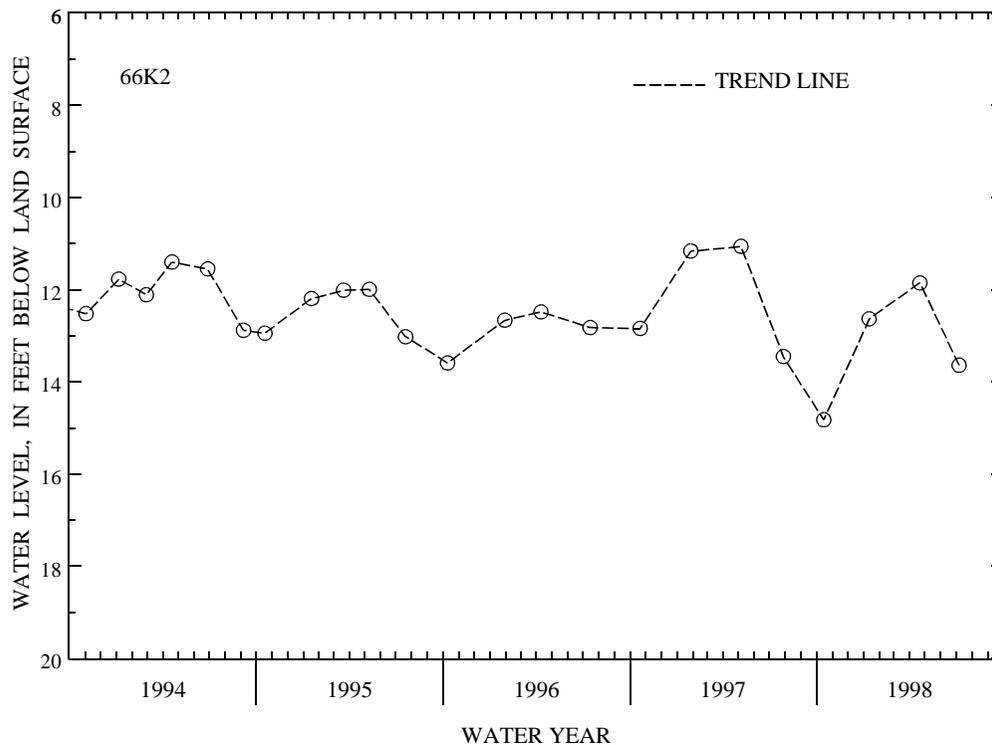
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--June 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.57 ft below land-surface datum, Apr. 25, 1984; lowest measured, 17.30 ft below land-surface datum, Aug. 5, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	14.82	JAN 12	12.63	APR 21	11.85	JUL 07	13.64
WATER YEAR 1998	HIGHEST	11.85	APR 21, 1998				
	LOWEST	14.82	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

374320075365602. Local number, 66K 3 SOW 101B.

LOCATION.--Lat 37°43'20", long 75°38'05", Hydrologic Unit 02080110, 0.2 mi north of State Highway 662, 2.2 mi east of intersection of State Highway 662 and U.S. Highway 13 (Business), and 2.8 mi east of Accomac. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 220 ft, screened 210 to 220 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 8 ft above sea level, from topographic map. Measuring point: Top of casing, 0.36 ft above land-surface datum prior to Mar. 1, 1988; 0.65 ft thereafter.

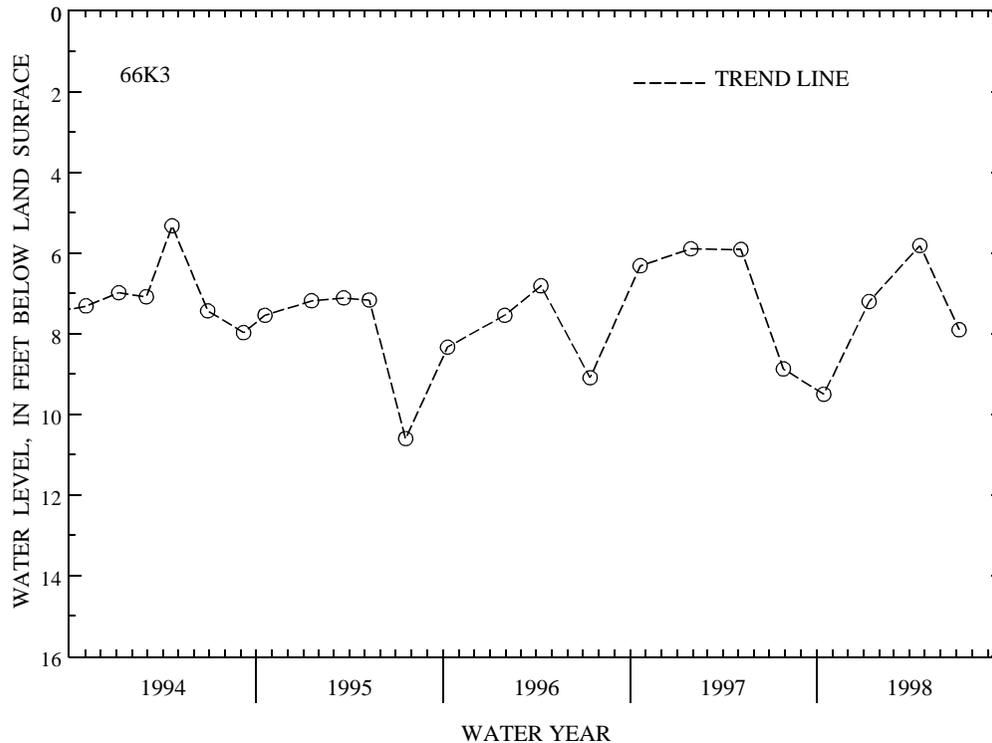
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--June 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.04 ft below land-surface datum, Apr. 25, 1984; lowest measured, 10.60 ft below land-surface datum, July 20, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	9.50	JAN 12	7.20	APR 21	5.81	JUL 07	7.90
WATER YEAR 1998	HIGHEST	5.81	APR 21, 1998				
	LOWEST	9.50	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

374320075365603. Local number, 66K 4 SOW 101A.

LOCATION.--Lat 37°43'20", long 75°36'56", Hydrologic Unit 02080110, 0.2 mi north of State Highway 662, 2.2 mi east of intersection of State Highway 662 and U.S. Highway 13 (Business), and 2.8 mi east of Accomac. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 152 ft, screened 142 to 152 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 0.4 ft above land-surface datum prior to Mar. 1, 1988; 0.65 ft Mar. 1, 1988, to June 20, 1989; at land-surface datum June 21, 1989, to Jan. 3, 1990; 0.85 ft above land-surface datum thereafter.

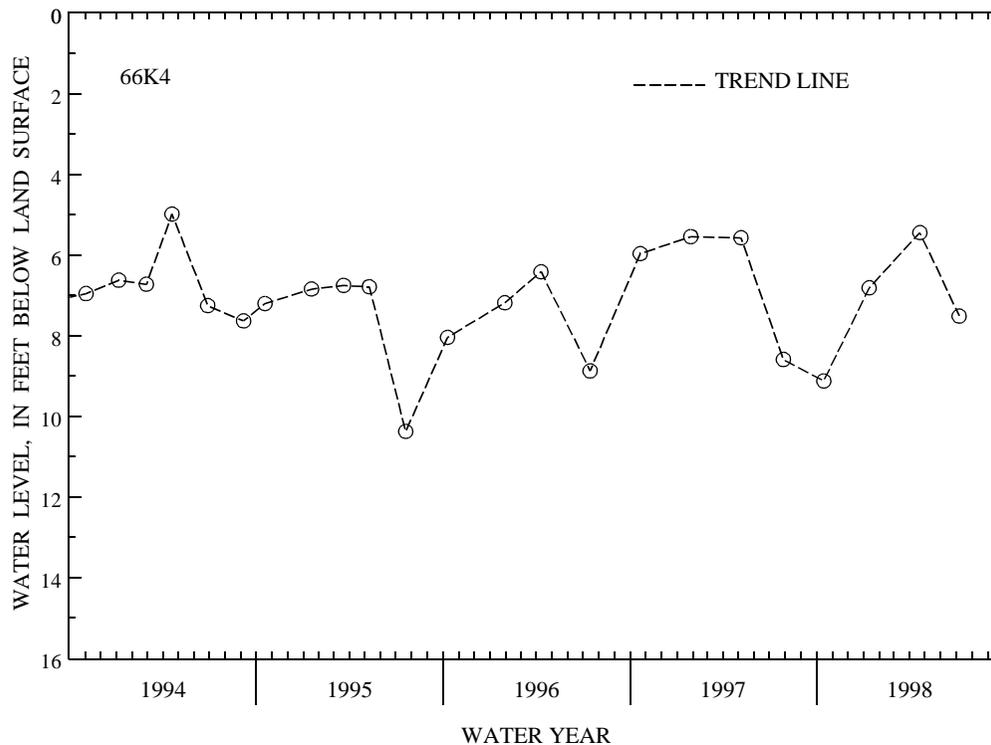
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--June 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.99 ft below land-surface datum, Apr. 25, 1984; lowest measured, 10.37 ft below land-surface datum, July 20, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	9.12	JAN 12	6.81	APR 21	5.44	JUL 07	7.51
WATER YEAR 1998	HIGHEST	5.44	APR 21, 1998				
	LOWEST	9.12	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

375225075321701. Local number, 66L 1 SOW 107C.

LOCATION.--Lat 37°52'25", long 75°32'17", Hydrologic Unit 02080110, 0.15 mi northwest of State Highway 679, 0.45 mi northeast of intersection of State Highways 679 and 790, and 0.7 mi west of Assawoman. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 305 ft, screened 295 to 305 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 0.33 ft above land-surface datum prior to Mar. 1, 1988; 0.4 ft thereafter.

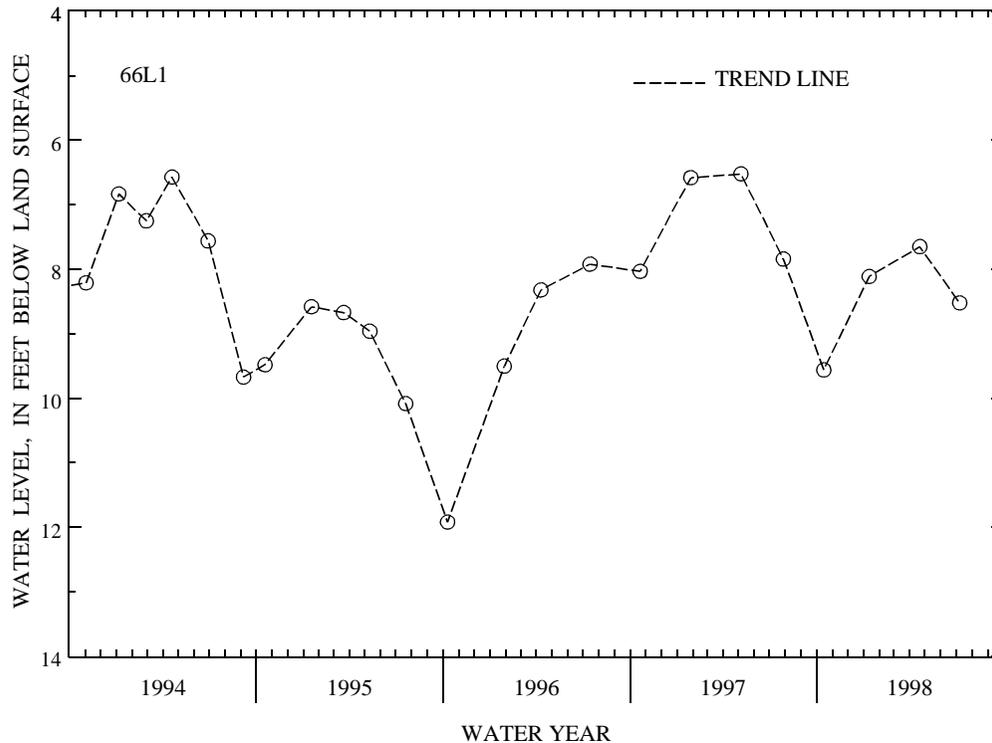
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--September 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.06 ft below land-surface datum, Jan. 4, 1984; lowest measured, 11.92 ft below land-surface datum, Oct. 10, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	9.56	JAN 12	8.11	APR 21	7.65	JUL 08	8.52
WATER YEAR 1998	HIGHEST	7.65	APR 21, 1998				
	LOWEST	9.56	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

375225075321702. Local number, 66L 2 SOW 107A.

LOCATION.--Lat 37°52'25", long 75°32'17", Hydrologic Unit 02080110, 0.15 mi northwest of State Highway 679, 0.45 mi northeast of intersection of State Highways 679 and 790, and 0.7 mi west of Assawoman. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 140 ft, screened 130 to 140 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 5 ft above sea level, from topographic map. Measuring point: Top of casing, 0.23 ft above land-surface datum prior to Mar. 1, 1988; 0.6 ft thereafter.

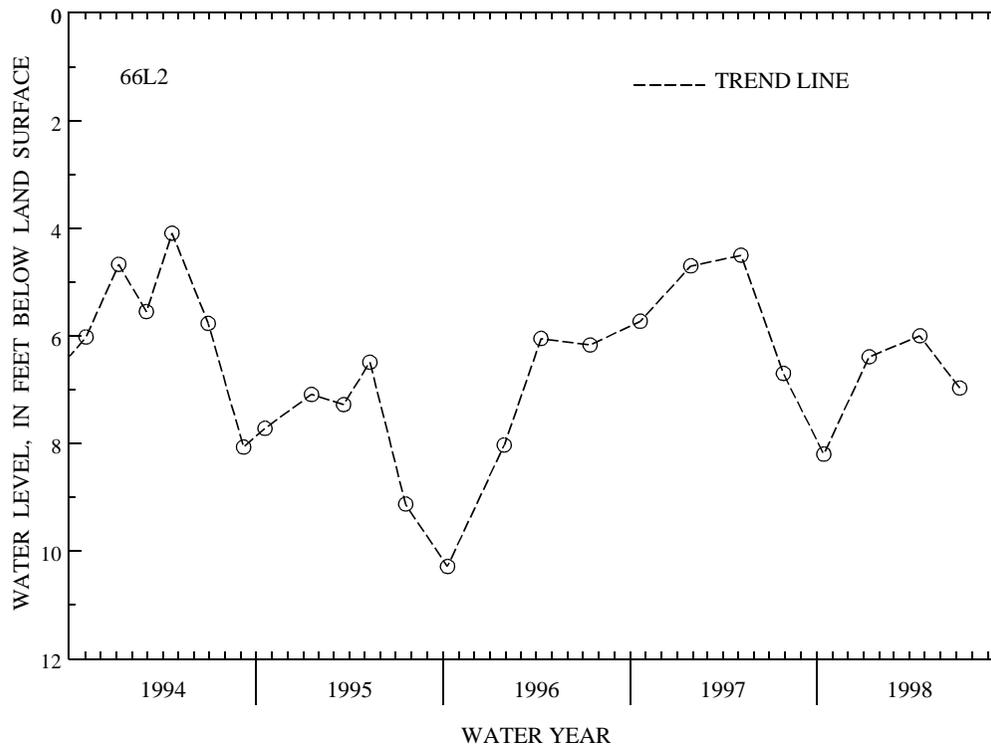
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.21 ft below land-surface datum, Apr. 25, 1984; lowest measured, 10.29 ft below land-surface datum, Oct. 10, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	8.20	JAN 12	6.39	APR 21	6.00	JUL 08	6.97
WATER YEAR 1998		HIGHEST	6.00	APR 21, 1998			
		LOWEST	8.20	OCT 15, 1997			



GROUND-WATER LEVELS

ACCOMACK COUNTY

375225075321703. Local number, 66L 3 SOW 107B.

LOCATION.--Lat 37°52'25", long 75°32'17", Hydrologic Unit 02080110, 0.15 mi northwest of State Highway 679, 0.45 mi northeast of intersection of State Highways 679 and 790, and 0.7 mi west of Assawoman. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 206 ft, screened 191 to 201 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 5 ft above sea level, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum prior to June 19, 1990; 0.3 ft thereafter.

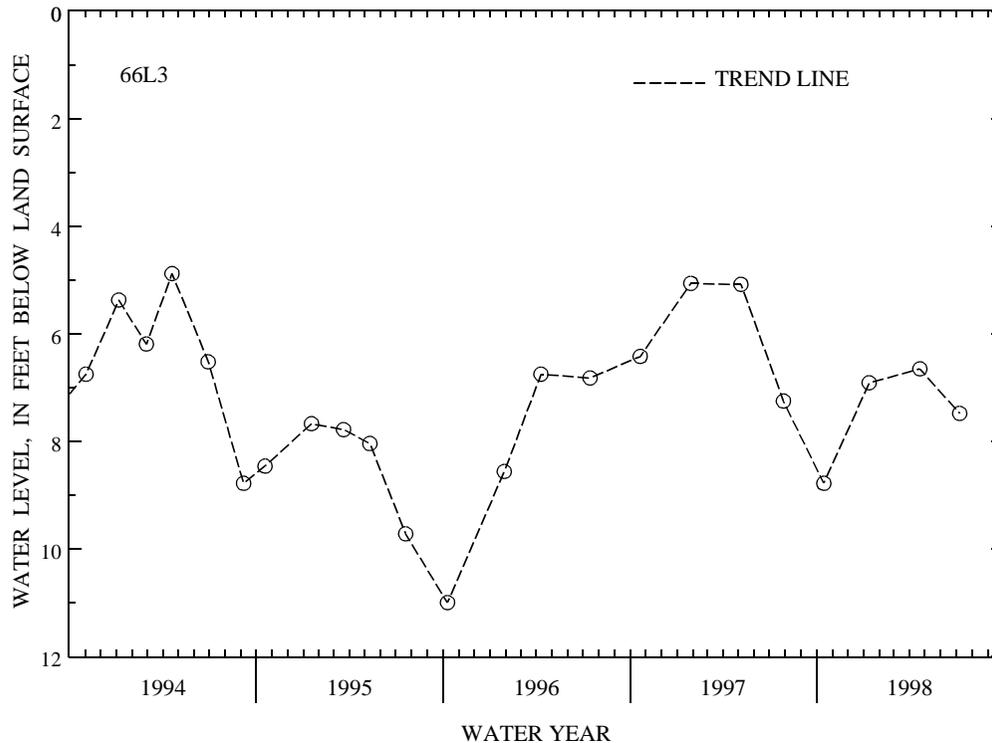
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.64 ft below land-surface datum, Apr. 25, 1984; lowest measured, 11.00 ft below land-surface datum, Oct. 10, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	8.87	JAN 12	6.91	APR 21	6.65	JUL 08	7.48
WATER YEAR 1998	HIGHEST	6.65	APR 21, 1998				
	LOWEST	8.87	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

375723075344402. Local number, 66M 17 SOW 110B.

LOCATION.--Lat 37°57'23", long 75°34'44", Hydrologic Unit 02060009, 0.25 mi northeast of State Highway 693, 0.5 mi southeast of intersection of State Highways 693 and 706, and 2.3 mi northwest of Oak Hall. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 178 ft, screened 168 to 178 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 11 ft above sea level, from topographic map. Measuring point: Top of casing, 0.45 ft above land-surface datum prior to Feb. 29, 1988; 0.75 ft thereafter.

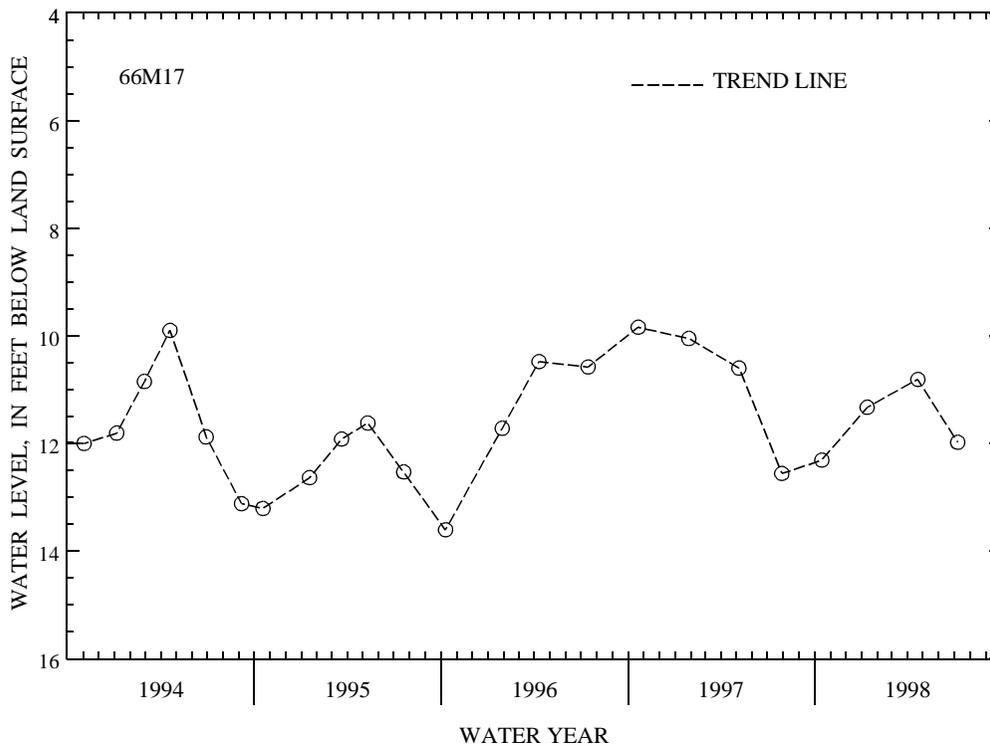
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--October 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.76 ft below land-surface datum, Apr. 1, 1980; lowest measured, 13.61 ft below land-surface datum, Oct. 10, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	12.31	JAN 12	11.33	APR 21	10.81	JUL 08	11.98
WATER YEAR 1998 HIGHEST		10.81	APR 21, 1998				
LOWEST		12.31	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

375723075344403. Local number, 66M 18 SOW 110C.

LOCATION.--Lat 37°57'23", long 75°34'44", Hydrologic Unit 02060009, 0.25 mi northeast of State Highway 693, 0.5 mi southeast of intersection of State Highways 693 and 706, and 2.3 mi northwest of Oak Hall. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 240 ft, screened 230 to 240 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 11 ft above sea level, from topographic map. Measuring point: Top of casing, 0.65 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

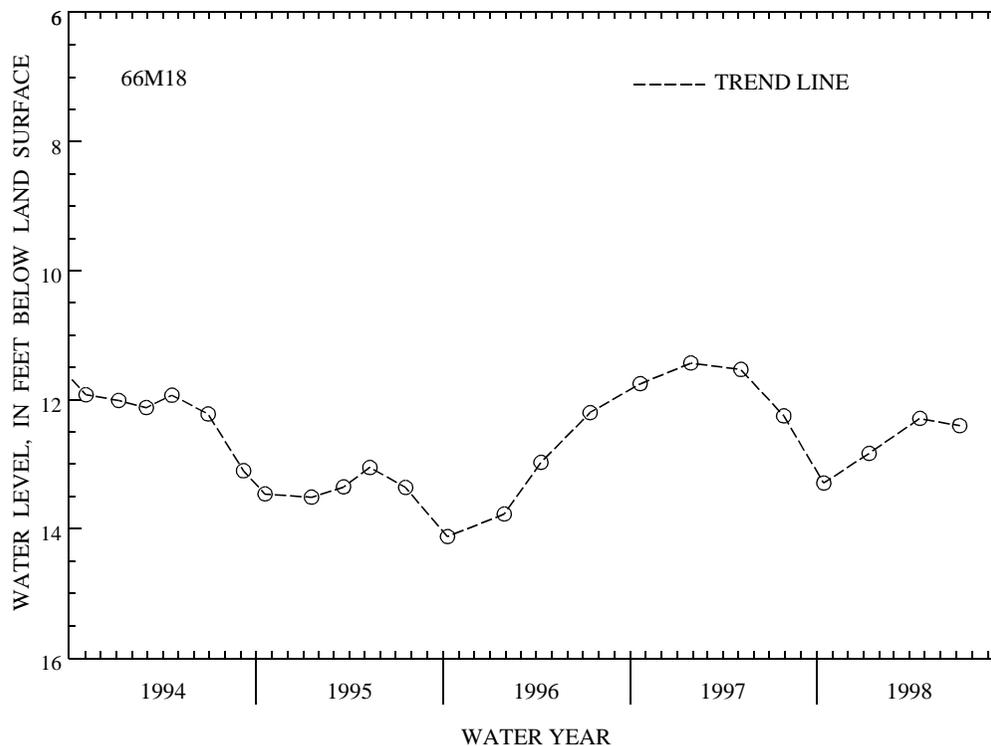
PERIOD OF RECORD.--October 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.43 ft below land-surface datum, Aug. 12, 1981; lowest measured, 14.12 ft below land-surface datum, Oct. 10, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL						
OCT 15	13.29	JAN 12	12.83	APR 21	12.29	JUL 08	12.40

WATER YEAR 1998	HIGHEST	12.29	APR 21, 1998
	LOWEST	13.29	OCT 15, 1997



GROUND-WATER LEVELS

ACCOMACK COUNTY

375723075344404. Local number, 66M 19 SOW 110S.

LOCATION.--Lat 37°57'23", long 75°34'44", Hydrologic Unit 02060009, 0.25 mi northeast of State Highway 693, 0.5 mi southeast of intersection of State Highways 693 and 706, and 2.3 mi northwest of Oak Hall. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 36 ft, screened 26 to 36 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 11 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to Feb. 29, 1988; 0.35 ft thereafter.

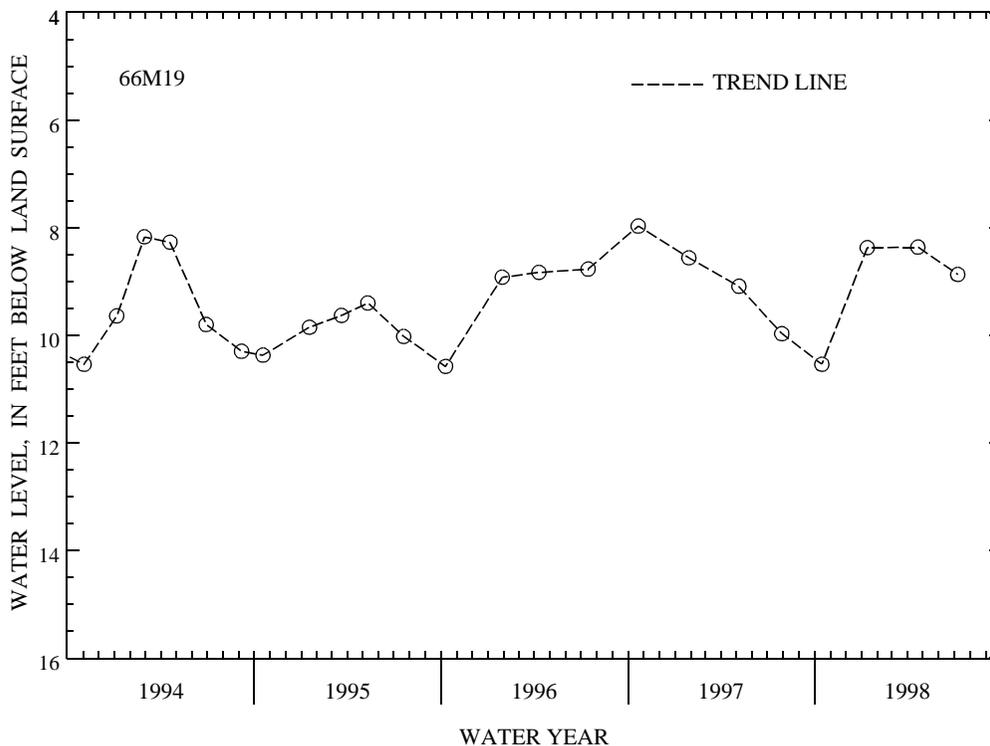
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--September 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.97 ft below land-surface datum, Oct. 21, 1996; lowest measured, 11.34 ft below land-surface datum, Nov. 6, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	10.54	JAN 12	8.37	APR 21	8.36	JUL 08	8.87
WATER YEAR 1998		HIGHEST	8.36	APR 21, 1998			
		LOWEST	10.54	OCT 15, 1997			



GROUND-WATER LEVELS

ACCOMACK COUNTY

375610075361801. Local number, 66M 23 SOW 181A.

LOCATION.--Lat 37°56'10", long 75°36'18", Hydrologic Unit 02080109, 100 ft south of State Highway 703, 0.1 mi east of intersection of State Highways 701 and 703, and 2.7 mi northwest of Makemie Park. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 1,300 ft, screened 1,290 to 1,300 ft.

INSTRUMENTATION.--Occasional measurement with manometer or chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 20, 1995, bimonthly measurement with manometer or chalked tape.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

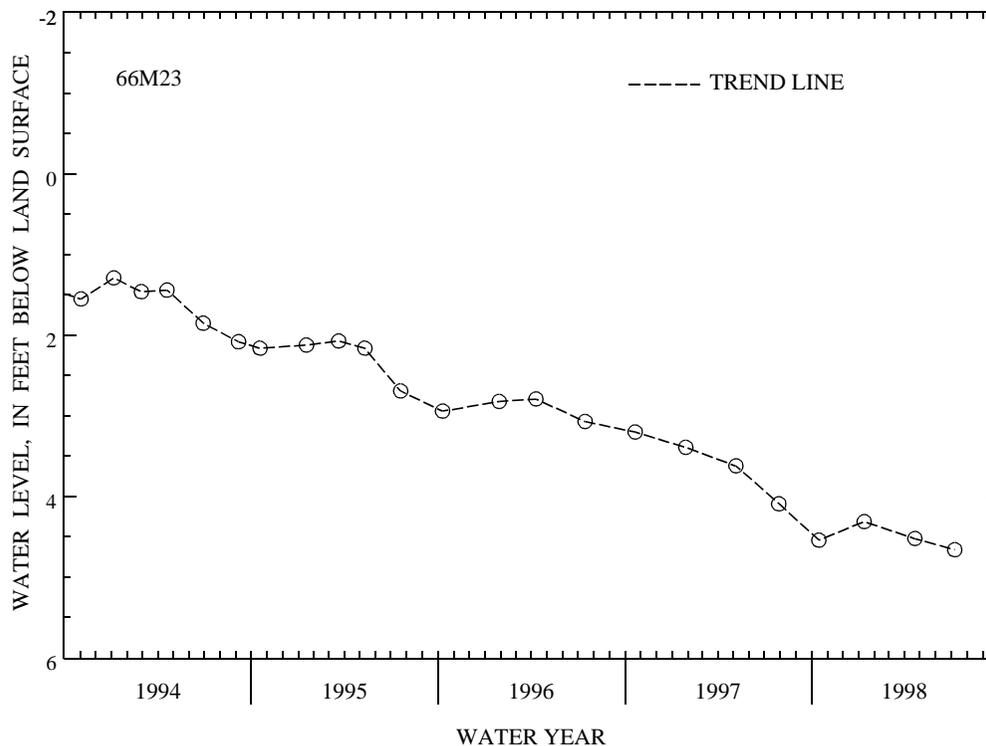
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional pumpage. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.38 ft above land-surface datum, Jan. 26, 1988; lowest measured, 4.66 ft below land-surface datum, July 8, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	4.54	JAN 12	4.31	APR 21	4.52	JUL 08	4.66
WATER YEAR 1998		HIGHEST	4.31	JAN 12, 1998			
		LOWEST	4.66	JUL 08, 1998			



GROUND-WATER LEVELS

ACCOMACK COUNTY

375610075361802. Local number, 66M 24 SOW 181B.

LOCATION.--Lat 37°56'10", long 75°36'18", Hydrologic Unit 02080109, 100 ft south of State Highway 703, 0.1 mi east of intersection of State Highways 701 and 703, and 2.7 mi northwest of Makemie Park. Owner: Virginia Department of Environmental Quality.

AQUIFER.--St. Marys-Choptank aquifer of Miocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 508 ft, screened 498 to 508 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 20, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 0.85 ft above land-surface datum.

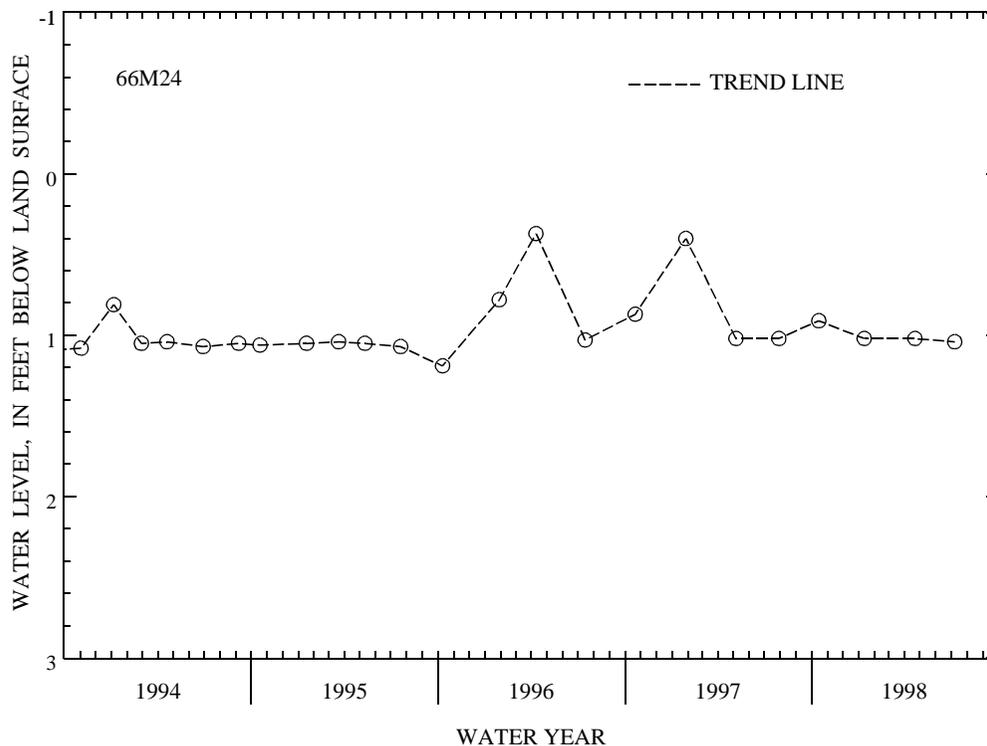
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.25 ft below land-surface datum, Mar. 7, 1989; lowest measured, 1.25 ft below land-surface datum, June 19, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	0.91	JAN 12	1.02	APR 21	1.02	JUL 08	1.04
WATER YEAR 1998 HIGHEST		0.91	OCT 15, 1997				
LOWEST		1.04	JUL 08, 1998				



GROUND-WATER LEVELS

ACCOMACK COUNTY

375610075361803. Local number, 66M 25 SOW 181C.

LOCATION.--Lat 37°56'10", long 75°36'18", Hydrologic Unit 02080109, 100 ft south of State Highway 703, 0.1 mi east of intersection of State Highways 701 and 703, and 2.7 mi northwest of Makemie Park. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 340 ft, screened 330 to 340 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 20, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 0.95 ft above land-surface datum.

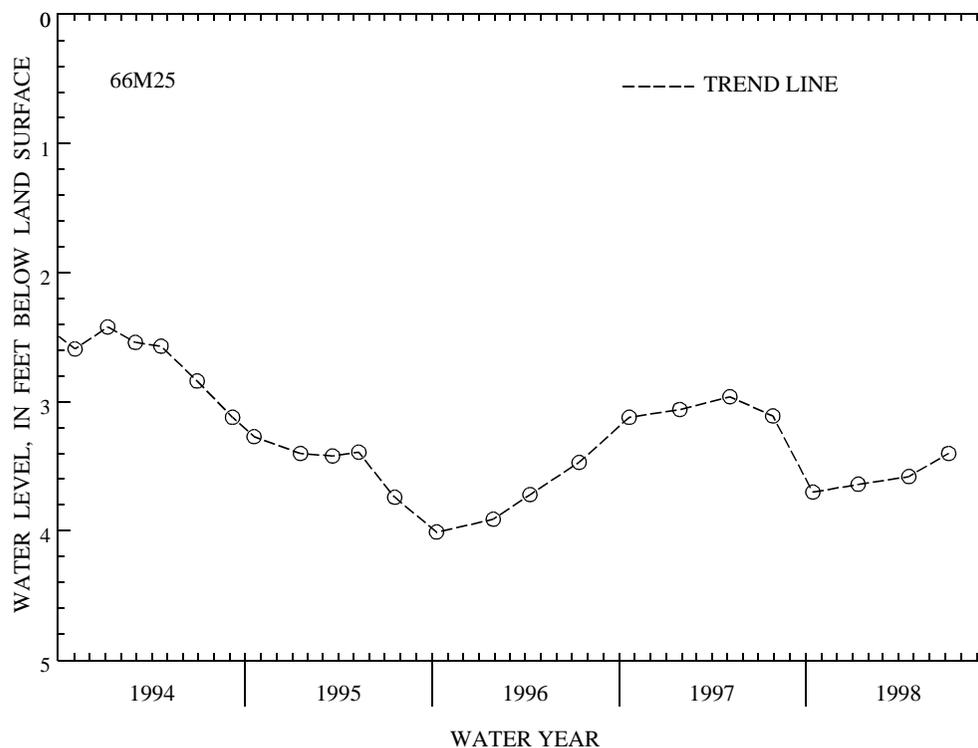
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.10 ft below land-surface datum, Apr. 28, 1993; lowest measured, 4.01 ft below land-surface datum, Oct. 10, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	3.70	JAN 12	3.64	APR 21	3.58	JUL 08	3.40
WATER YEAR 1998	HIGHEST	3.40	JUL 08, 1998				
	LOWEST	3.70	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

375610075361804. Local number, 66M 26 SOW 181D.

LOCATION.--Lat 37°56'10", long 75°36'18", Hydrologic Unit 02080109, 100 ft south of State Highway 703, 0.1 mi east of intersection of State Highways 701 and 703, and 2.7 mi northwest of Makemie Park. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 230 ft, screened 220 to 230 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 20, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

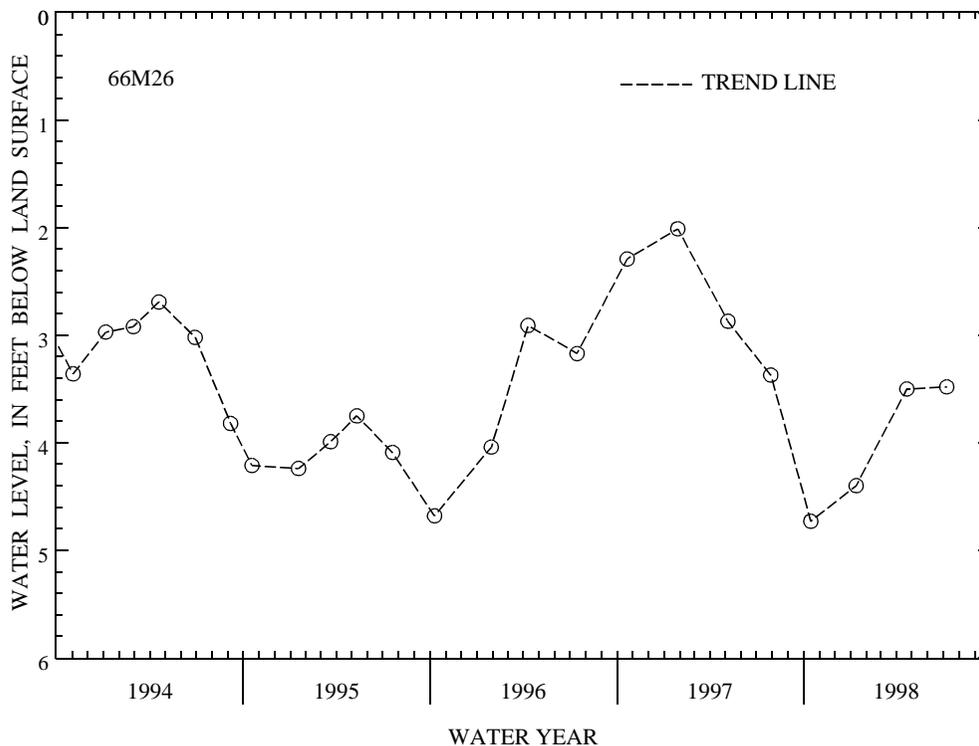
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.93 ft below land-surface datum, Apr. 28, 1993; lowest measured, 4.73 ft below land-surface datum, Oct. 15, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	4.73	JAN 12	4.40	APR 21	3.50	JUL 08	3.48
WATER YEAR 1998		HIGHEST	3.48	JUL 08, 1998			
		LOWEST	4.73	OCT 15, 1997			



GROUND-WATER LEVELS

ACCOMACK COUNTY

375610075361805. Local number, 66M 27 SOW 181E.

LOCATION.--Lat 37°56'10", long 75°36'18", Hydrologic Unit 02080109, 100 ft south of State Highway 703, 0.1 mi east of intersection of State Highways 701 and 703, and 2.7 mi northwest of Makemie Park. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 30 ft, screened 20 to 30 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 20, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 0.9 ft above land-surface datum.

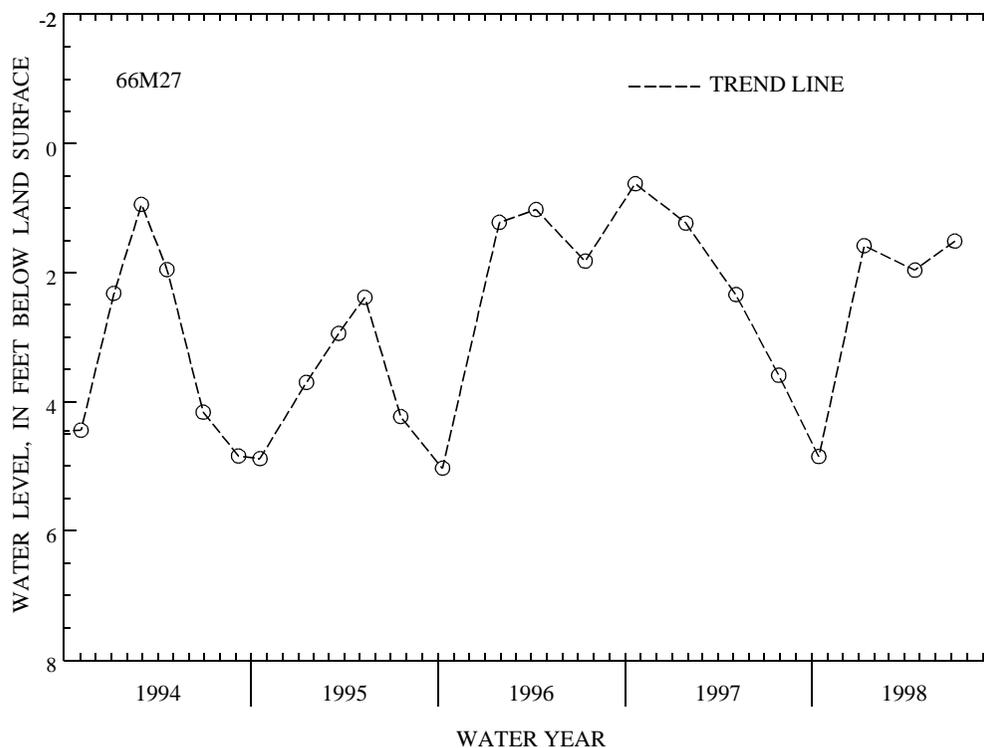
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.50 ft below land-surface datum, Aug. 8, 1989; lowest measured, 5.03 ft below land-surface datum, Oct. 10, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	4.85	JAN 12	1.58	APR 21	1.96	JUL 08	1.51
WATER YEAR 1998	HIGHEST	1.51	JUL 08, 1998				
	LOWEST	4.85	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

375635075271501. Local number, 67M 10 SOW 115A.

LOCATION.--Lat 37°56'35", long 75°27'15", Hydrologic Unit 02060010, 200 ft east of State Highway 175, 2.4 mi east of Wattsville, and 2.5 mi northeast of intersection of State Highways 175 and 798. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 52 ft, screened 32 to 52 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 20, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 13 ft above sea level, from topographic map. Measuring point: Top of casing, 0.7 ft above land-surface datum prior to Feb. 28, 1988; 1.7 ft thereafter.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division

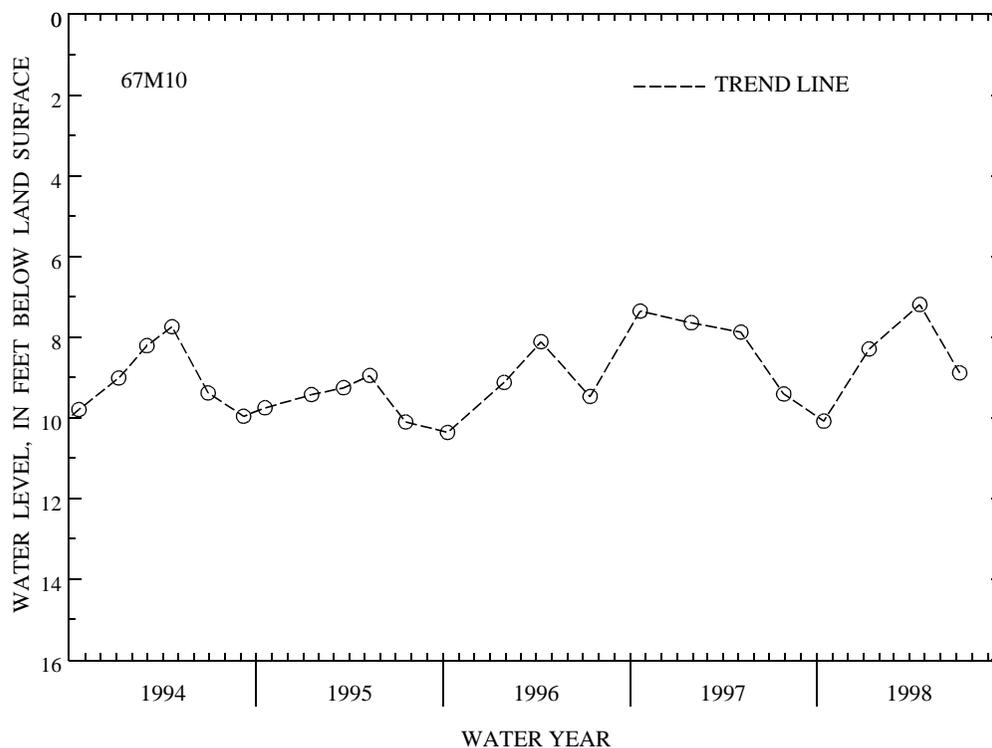
PERIOD OF RECORD.--March 1981 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.72 ft below land-surface datum, Oct. 3, 1989; lowest measured, 10.36 ft below land-surface datum, Oct. 10, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL						
OCT 15	10.08	JAN 12	8.29	APR 21	7.19	JUL 08	8.88

WATER YEAR 1998	HIGHEST	7.19	APR 21, 1998
	LOWEST	10.08	OCT 15, 1997



GROUND-WATER LEVELS

ACCOMACK COUNTY

375635075271502. Local number, 67M 11 SOW 115B.

LOCATION.--Lat 37°56'35", long 75°27'15", Hydrologic Unit 02060010, 200 ft east of State Highway 175, 2.4 mi east of Wattsville, and 2.5 mi northeast of intersection of State Highways 175 and 798. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 138 ft, screened 118 to 138 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 14 ft above sea level, from topographic map. Measuring point: Top of casing, 0.6 ft above land-surface datum prior to Feb. 29, 1988; 1.9 ft thereafter.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

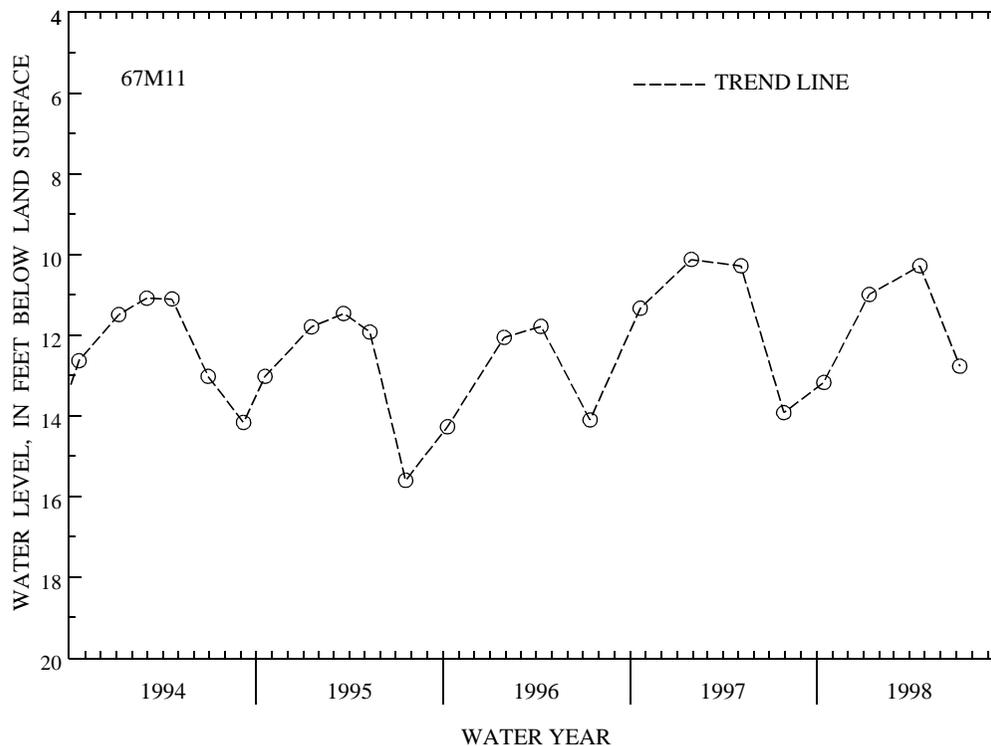
PERIOD OF RECORD.--March 1981 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.70 ft below land-surface datum, May 6, 1982; lowest measured, 15.60 ft below land-surface datum, July 20, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL						
OCT 15	13.17	JAN 12	10.99	APR 21	10.28	JUL 08	12.77

WATER YEAR 1998	HIGHEST	10.18	APR 21, 1998
	LOWEST	13.17	OCT 15, 1997



GROUND-WATER LEVELS

ALBEMARLE COUNTY

380333078264801. Local number, 43N 1 SOW 028.

LOCATION.--Lat 38°03'33", long 78°26'48", Hydrologic Unit 02080204, at Key West Subdivision, 1.1 mi east of Charlottesville. Owner: Key West Development Corporation.

AQUIFER.--Lynchburg Formation of Precambrian age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 409 ft, cased to 52 ft, open hole 52 to 409 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Apr. 10, 1981 to Oct. 19, 1995 continuous strip-chart recorder. June 25, 1974 to Apr. 10, 1981 occasional measurement with chalked tape; Prior to June 25, 1974, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 345 ft above sea level, from topographic map. Measuring point: Top of casing, 0.2 ft above land-surface datum.

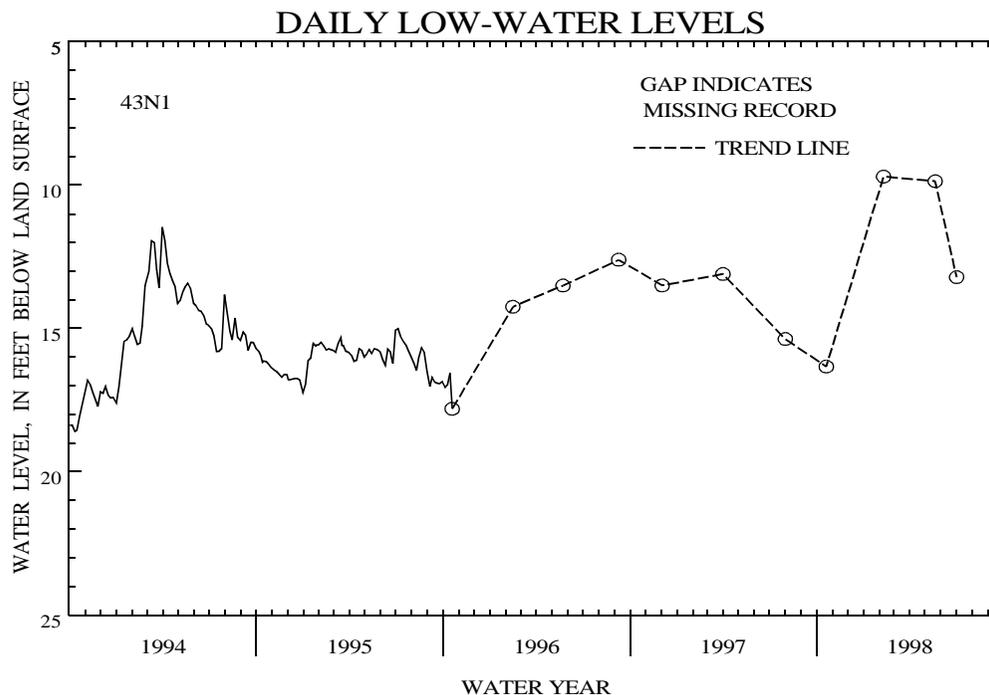
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--February 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 8.65 ft below land-surface datum, May 3, 1984; lowest recorded, 22.10 ft below land-surface datum, Nov. 30, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	16.33	FEB 09	9.70	MAY 21	9.86	JUL 02	13.21
WATER YEAR 1998		HIGHEST	9.70	FEB 09, 1998			
		LOWEST	16.33	OCT 20, 1997			



GROUND-WATER LEVELS

APPOMATTOX COUNTY

372133078493701. Local number, 40G 1 SOW 012.

LOCATION.--Lat 37°21'33", long 78°49'37", Hydrologic Unit 02080207, 0.45 mi east of State Highway 131, 300 ft north of U.S. Highway 460 in the town of Appomattox. Owner: Town of Appomattox.

AQUIFER.--Fork Mountain Formation of Cambrian age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 8 in., depth 288 ft, cased to 40 ft, open hole 40 to 288 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 15, 1967 to Dec. 1, 1995, continuous strip-chart recorder. Prior to Oct. 15, 1967, one measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 860 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

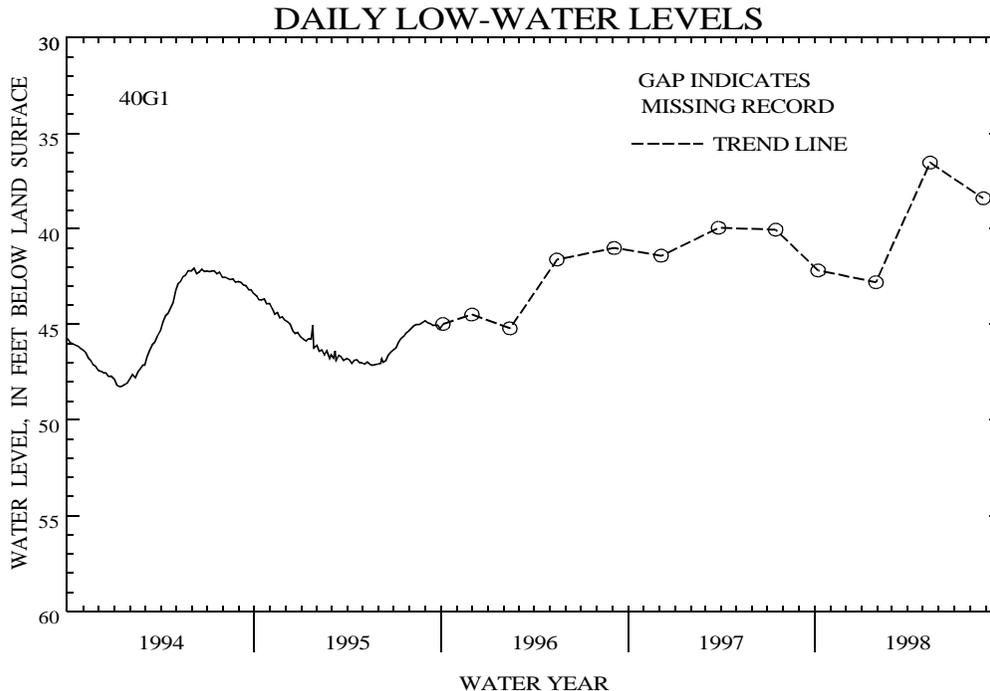
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--May 1949, October 1967 to current year. Unpublished record available May 1949 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 34.78 ft below land-surface datum, June 13, 1973; lowest recorded, 58.21 ft below land-surface datum, Nov. 17, 18, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08	42.17	JAN 29	42.79	MAY 15	36.53	AUG 27	38.40
WATER YEAR 1998		HIGHEST	36.53	MAY 15, 1998			
		LOWEST	42.79	JAN 29, 1998			



GROUND-WATER LEVELS

AUGUSTA COUNTY

382523078535501. Local number, 38P 1 SOW 070.

LOCATION.--Lat 38°07'48", long 79°04'07", Hydrologic Unit 02070005, 100 ft east of State Highway 613, 0.5 mi south of intersection of State Highway 613 and U.S. Highway 11, and 0.9 mi south of Dogwood Hill. Owner: Augusta County Water Authority.

AQUIFER.--Beekmantown Group of Early Ordovician age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 8 in. to 30 ft, diameter 6 in. from 30 to 97 ft, depth 250 ft, open hole from 97 to 250 ft.

INSTRUMENTATION.--Continuous strip-chart recorder. Prior to Jan. 10, 1974, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 1,490 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

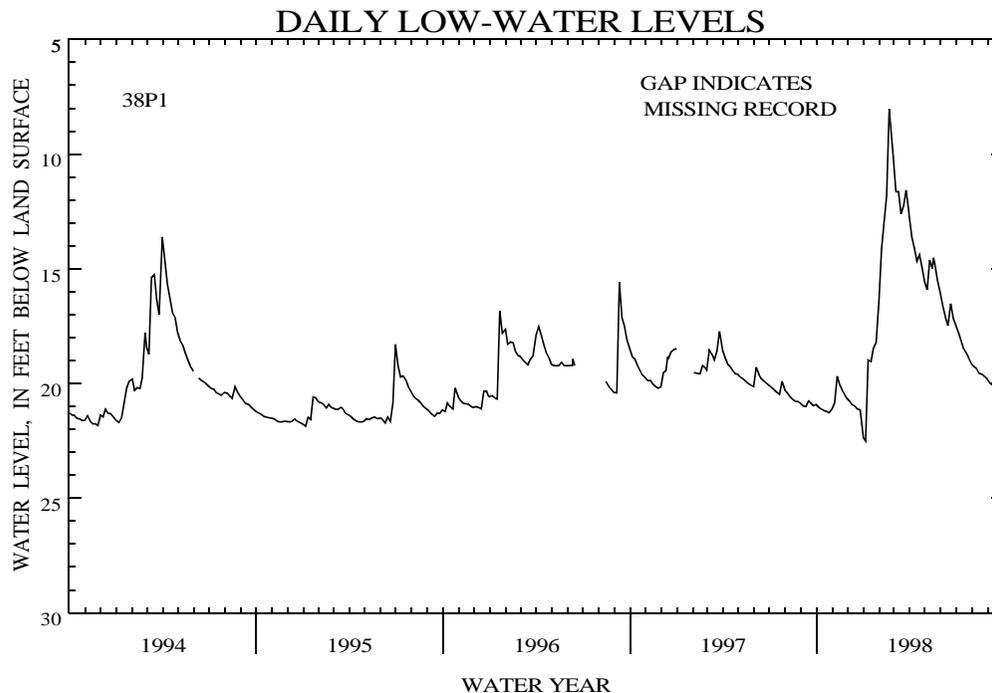
PERIOD OF RECORD.--December 1973 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 8.02 ft below land-surface datum, Feb. 20, 1998; lowest recorded, 27.02 ft below land-surface datum, Oct. 16, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.02	20.83	20.78	22.50	14.12	11.64	13.60	15.91	16.60	17.78	19.25	19.97
10	21.10	19.68	20.92	18.96	13.04	11.62	14.10	14.61	17.13	18.10	19.34	20.06
15	21.16	20.05	20.98	19.03	11.80	12.59	14.66	14.98	17.47	18.42	19.55	20.16
20	21.21	20.28	21.10	18.48	8.02	12.26	14.38	14.77	16.51	18.63	19.58	20.24
25	21.27	20.48	21.13	18.21	9.39	11.57	14.93	15.47	17.16	18.87	19.68	20.31
EOM	21.10	20.66	22.35	16.36	10.16	12.73	15.55	16.03	17.42	19.12	19.80	20.44

WATER YEAR 1997 HIGHEST INSTANTANEOUS 8.02 FEB 20, 1998
LOWEST INSTANTANEOUS 22.52 JAN 05, 1998



GROUND-WATER LEVELS

CHARLES CITY COUNTY

371956076055101. Local number, 54G 13 SOW 067.

LOCATION.--Lat 37°19'56", long 77°05'51", Hydrologic Unit 02080206, 0.6 mi east of Bowns Store on State Highway 5, 1.6 mi southwest of Charles City. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in., depth 227 ft, screened 222 to 227 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 2.4 ft above land-surface datum.

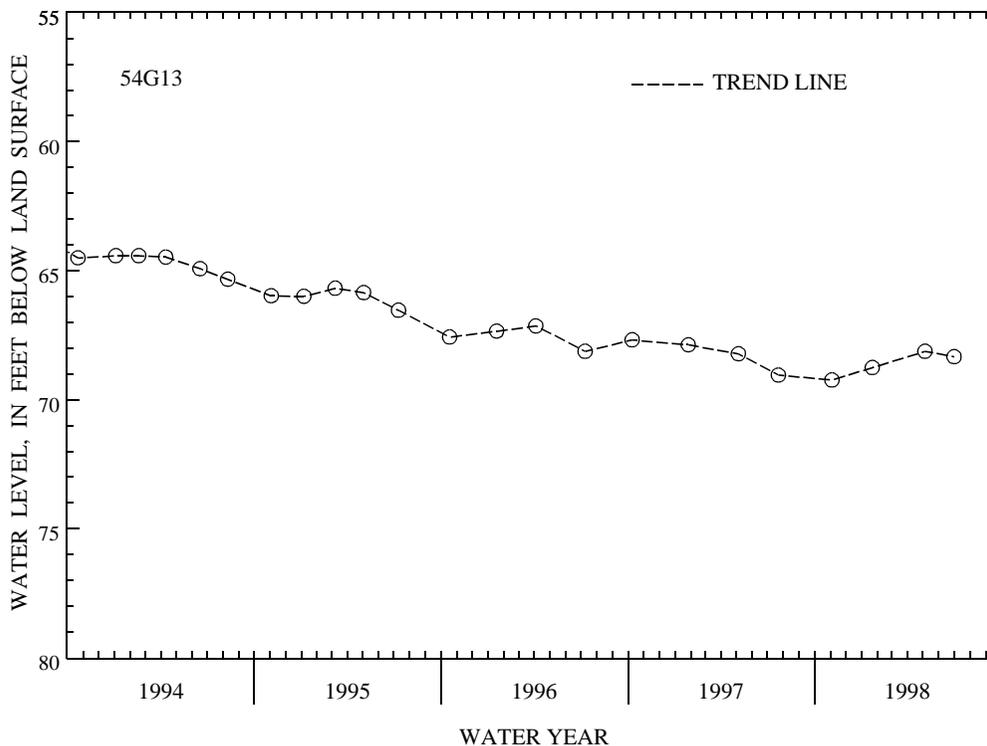
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--June 1973 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 44.63 ft below land-surface datum, June 7, 1973; lowest measured, 69.23 ft below land-surface datum, Nov. 4, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	69.23	JAN 22	68.75	MAY 04	68.12	JUL 01	68.33
WATER YEAR 1998 HIGHEST		68.12	MAY 04, 1998				
LOWEST		69.23	NOV 04, 1997				



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364852076252201. Local number, 59C 29 SOW 163A.

LOCATION.--Lat 36°48'52", long 76°25'22", Hydrologic Unit 02080208, 0.7 mi southeast of intersection of State Highways 191 and 337 in Chesapeake. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 35 ft, screened 25 to 35 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 21, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Aug. 21, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 0.9 ft above land-surface datum, prior to Mar. 11, 1996; 2.45 ft Mar. 12, 1996 to May 28, 1998; 3.74 ft thereafter.

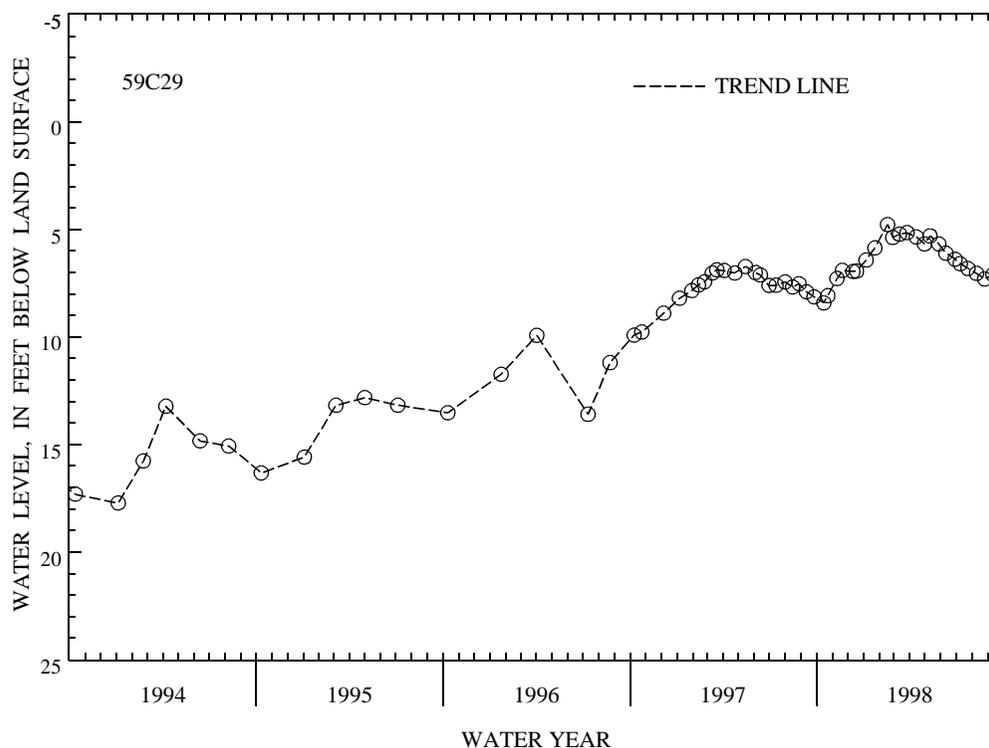
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--November 1981 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.70 ft below land-surface datum, Mar. 14, 1989; lowest measured, 18.39 ft below land-surface datum, Nov. 5, 1991.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	8.41	DEC 11	6.95	FEB 17	4.77	APR 14	5.34	JUN 11	6.10	AUG 10	7.04
23	8.08	18	6.93	27	5.37	30	5.67	29	6.38	26	7.30
NOV 10	7.28	JAN 06	6.42	MAR 12	5.22	MAY 11	5.30	JUL 09	6.59	SEP 11	7.09
21	6.90	23	5.86	27	5.15	28	5.67	24	6.81	22	6.72
WATER YEAR 1998		HIGHEST	4.77	FEB 17, 1998							
		LOWEST	8.41	OCT 15, 1997							



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364852076252202. Local number, 59C 30 SOW 163B.

LOCATION.--Lat 36°48'52", long 76°25'22", Hydrologic Unit 02080208, 0.7 mi southeast of intersection of State Highways 191 and 337 in Chesapeake. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in., depth 948 ft, screened 938 to 948 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 21, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Aug. 21, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum, prior to Mar. 11, 1996; 2.47 ft thereafter.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

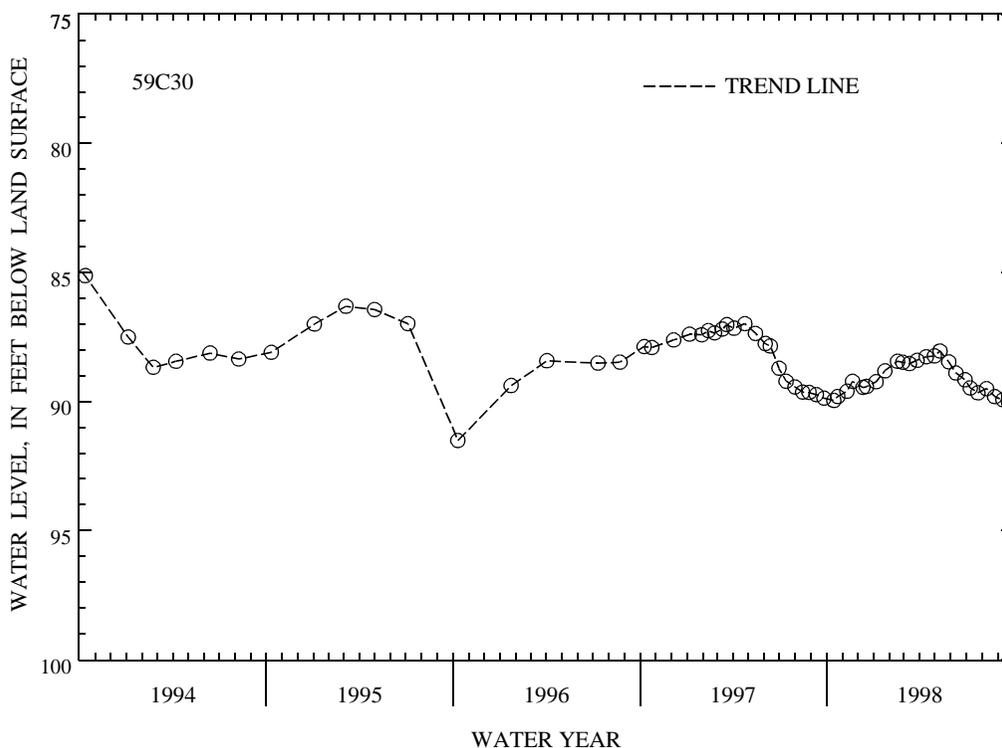
PERIOD OF RECORD.--November 1981 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 67.06 ft below land-surface datum, May 25, 1983; lowest measured, 91.51 ft below land-surface datum, Oct. 11, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL										
OCT 15	89.96	DEC 11	89.45	FEB 17	88.44	APR 14	88.26	JUN 11	88.89	AUG 10	89.50
23	89.80	18	89.42	27	88.48	30	88.23	29	89.16	26	89.81
NOV 10	89.60	JAN 06	89.23	MAR 12	88.53	MAY 11	88.04	JUL 09	89.47	SEP 11	89.93
21	89.22	23	88.81	27	88.40	28	88.46	24	89.66	22	90.02

WATER YEAR 1998	HIGHEST	88.23	APR 30, 1998
	LOWEST	89.96	OCT 15, 1997



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364852076252203. Local number, 59C 31 SOW 163C.

LOCATION.--Lat 36°48'52', long 76°25'22", Hydrologic Unit 02080208, 0.7 mi southeast of intersection of State Highways 191 and 337 in Chesapeake. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in., depth 631 ft, screened 621 to 631 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 21, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Aug. 21, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum, prior to Mar. 11, 1996; 2.88 ft thereafter.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

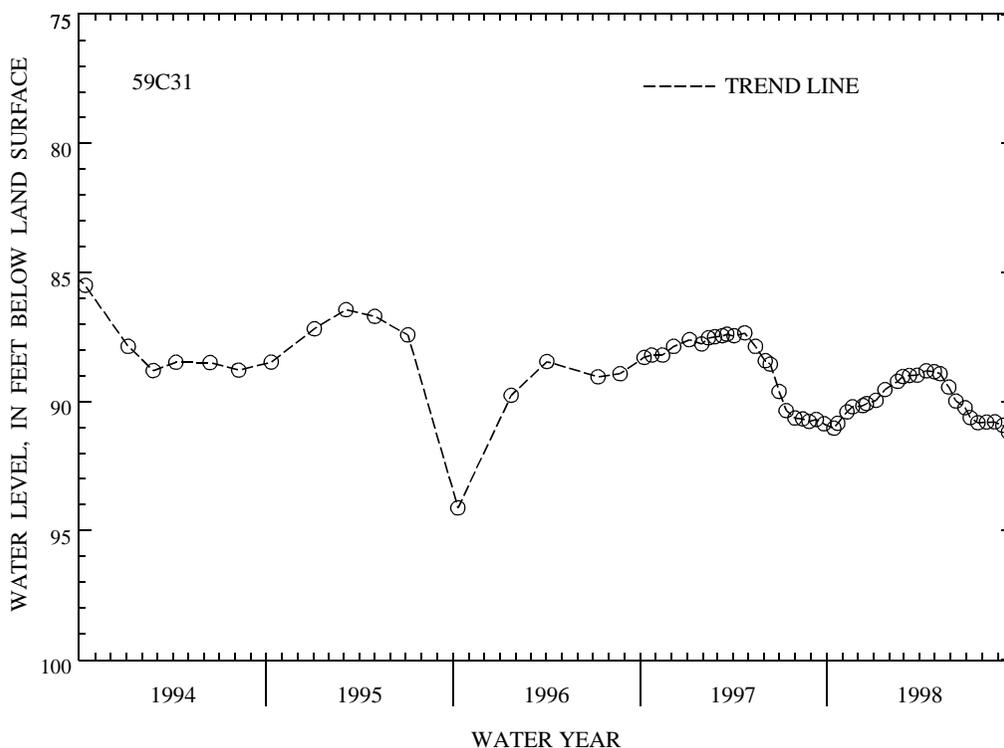
PERIOD OF RECORD.--November 1981 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 67.13 ft below land-surface datum, Feb. 23, 1983; lowest measured, 94.12 ft below land-surface datum, Oct. 11, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL										
OCT 15	91.03	DEC 11	90.16	FEB 17	89.22	APR 14	88.81	JUN 11	89.98	AUG 10	90.80
23	90.84	18	90.08	27	89.03	30	88.84	29	90.24	26	90.79
NOV 10	90.40	JAN 06	89.95	MAR 12	88.99	MAY 11	88.92	JUL 09	90.62	SEP 11	90.92
21	90.20	23	89.54	27	88.98	28	89.44	24	90.82	22	91.18

WATER YEAR 1998	HIGHEST	88.81	APR 14, 1998
	LOWEST	91.03	OCT 15, 1997



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

363836076201701. Local number, 60B 3 SOW 090A.

LOCATION.--Lat 36°38'36", long 76°20'17", Hydrologic Unit 03010205, 0.15 mi north of intersection of Benefit and West Roads, 1.5 mi north of Cornland. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 855 ft, screened 824 to 834 ft.

INSTRUMENTATION.-- Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 25, 1985 to Oct. 12, 1995, continuous strip-chart recorder. Prior to Aug. 25, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 16 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--July 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 53.80 ft below land-surface datum, July 11, 1978; lowest recorded, 80.27 ft below land-surface datum, Jan. 23, 1996.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
WATER YEAR 1998	HIGHEST		LOWEST				

GROUND-WATER LEVELS

CITY OF CHESAPEAKE

363836076201702. Local number, 60B 4 SOW 090B.

LOCATION.--Lat 36°38'36", long 76°20'17", Hydrologic Unit 03010205, 0.15 mi north of intersection of Benefit and West Roads, 1.5 mi north of Cornland. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Virginia Beach aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 556 ft, screened 525 to 535 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to July 6, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 16 ft above sea level, from topographic map. Measuring point: Top of casing, 2.05 ft above land-surface datum prior to Mar. 2, 1988; 1.2 ft thereafter.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

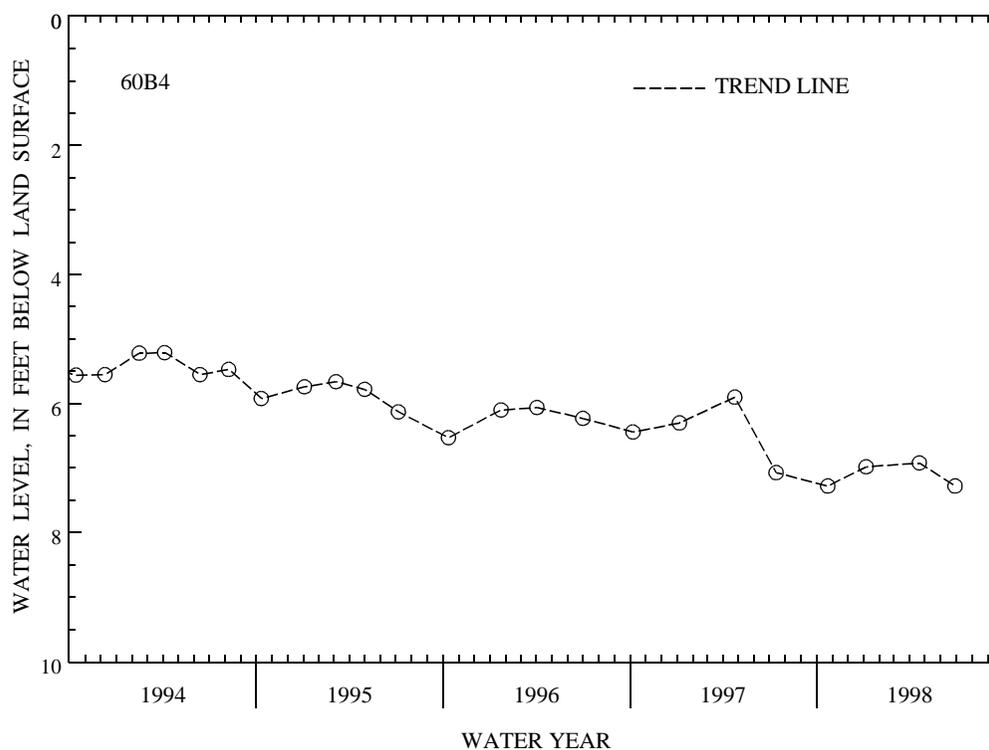
PERIOD OF RECORD.--February 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.20 ft above land-surface datum, Feb. 1, 1978; lowest measured, 7.28 ft below land-surface datum, Oct. 23, 1997, June 29, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL						
OCT 23	7.28	JAN 06	6.98	APR 20	6.92	JUN 29	7.28

WATER YEAR 1998	HIGHEST	6.92	APR 20, 1998
	LOWEST	7.28	OCT 23, 1997, JUN 29, 1998



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364615076182101. Local number, 60C 41 SOW 164.

LOCATION.--Lat 36°46'15", long 76°18'21", Hydrologic Unit 02080208, 50 ft north of entrance road to Virginia Power powerplant, 500 ft south of Military Highway in Chesapeake. Owner: Virginia Power.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in. to 400 ft, diameter 4 in. from 400 to 928 ft, depth 928 ft, screened 770 to 780 ft, 875 to 885 ft, 918 to 928 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Nov. 25, 1982 to Oct. 12, 1995, continuous strip-chart recorder. Prior to Nov. 25, 1982, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum prior to July 15, 1987; 1.5 ft thereafter.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

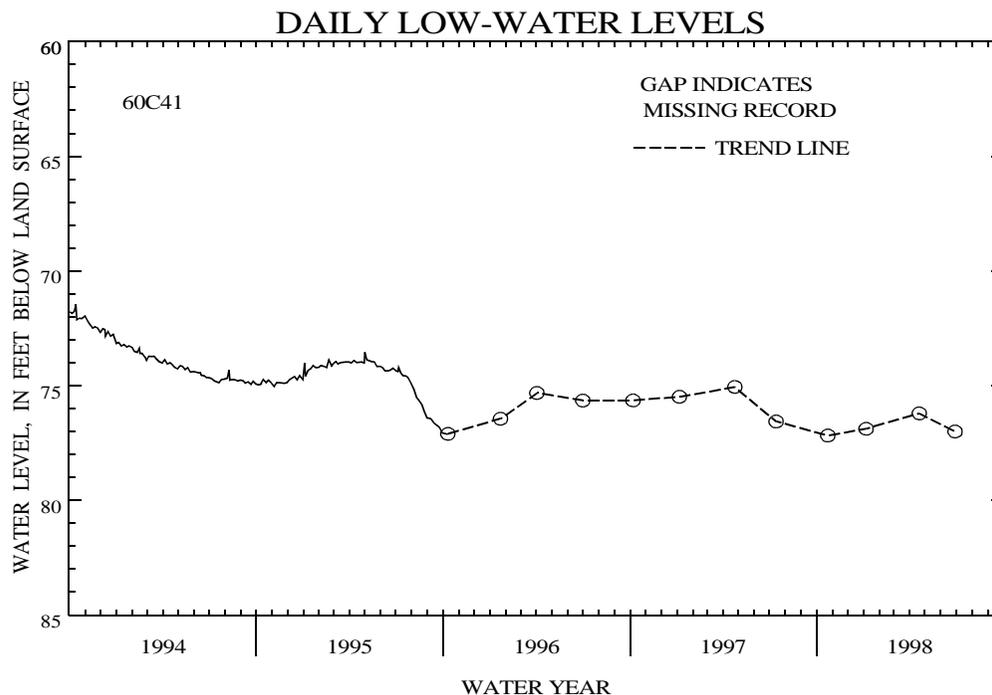
PERIOD OF RECORD.--February 1982 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 55.22 ft below land-surface datum, Mar. 15, 1983; lowest recorded, 77.17 ft below land-surface datum, Oct. 23, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL						
OCT 23	77.17	JAN 06	76.87	APR 20	76.20	JUN 29	76.99

WATER YEAR 1998	HIGHEST	76.20	APR 20, 1998
	LOWEST	77.17	OCT 23, 1997



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364227076074706. Local number, 61B 12 SOW 091E.

LOCATION.--Lat 36°42'27", long 76°07'47", Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Fentress. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 1,630 ft, diameter 2 in. from 1,630 to 1,830 ft, depth 1,830 ft, screened 1,820 to 1,830 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 6, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

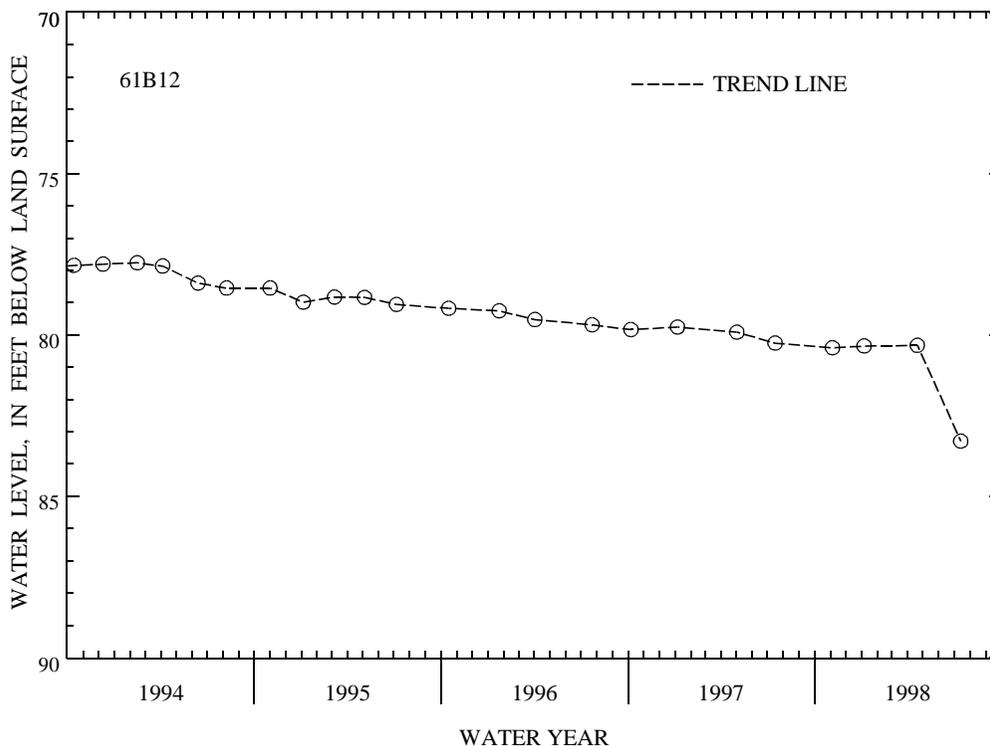
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. Low water-level drawdown after April 1998 is the result of pumping of the well. Cause of nonrecovery to pre-pumpage level is unknown but is under investigation.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 41.50 ft below land-surface datum, June 21, 1989; lowest measured, 83.29 ft below land-surface datum, July 14, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	80.39	JAN 06	80.34	APR 20	80.32	JUL 14	83.29
WATER YEAR 1998		HIGHEST	80.32	APR 20, 1998			
		LOWEST	83.29	JUL 14, 1998			



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364227076074707. Local number, 61B 13 SOW 091F.

LOCATION.--Lat 36°42'27", long 76°07'47", Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Fentress. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 1,270 ft, diameter 2 in. from 1,270 to 1,390 ft, depth 1,390 ft, screened 1,370 to 1,380 ft.

INSTRUMENTATION.--Continuous strip-chart recorder. July 6, 1995 to Feb. 13, 1997, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 6, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

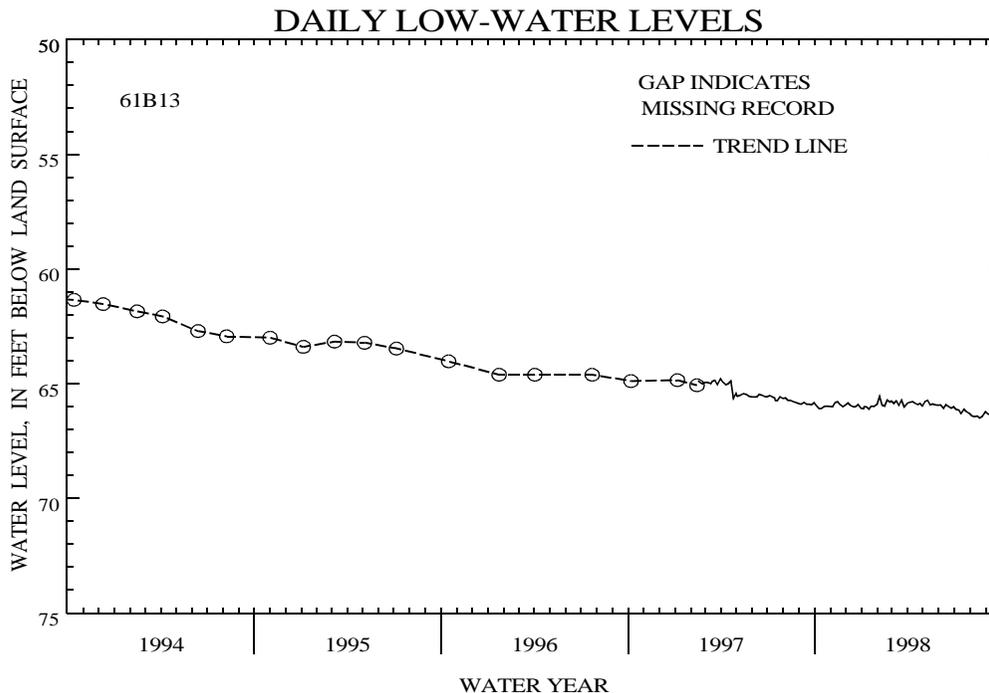
PERIOD OF RECORD.--March 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 49.00 ft below land-surface datum, Aug. 10, 1989; lowest measured, 66.53 ft below land-surface datum, Sept. 25-27, 29, 30, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	65.95	66.00	65.83	66.08	65.53	65.85	65.80	65.78	65.91	66.12	66.40	66.31
10	66.08	65.81	65.93	66.00	65.92	65.74	65.78	65.72	66.07	66.13	66.42	66.33
15	66.06	65.77	66.00	66.10	65.96	65.94	65.84	65.91	65.91	66.29	66.40	66.42
20	65.98	65.91	66.00	65.97	65.70	65.72	65.90	65.87	65.99	66.11	66.50	66.42
25	65.97	66.00	65.90	65.98	65.80	66.01	65.86	65.91	66.07	66.22	66.43	66.53
EOM	65.98	65.92	66.06	65.90	65.75	65.86	65.96	65.92	66.00	66.29	66.22	66.53

WATER YEAR 1998 HIGHEST INSTANTANEOUS 65.28 FEB 05, 1998
 LOWEST INSTANTANEOUS 66.53 SEP 25-27, 29, 30, 1998



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364227076074709. Local number, 61B 15 SOW 091H.

LOCATION.--Lat 36°42'27", long 76°07'47", Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Fentress. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Virginia Beach aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 700 ft, diameter 2 in. from 674 to 790 ft, depth 790 ft, screened 759 to 769 ft.

INSTRUMENTATION.--Occasional measurement with manometer by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 6, 1995, bimonthly measurement with manometer.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

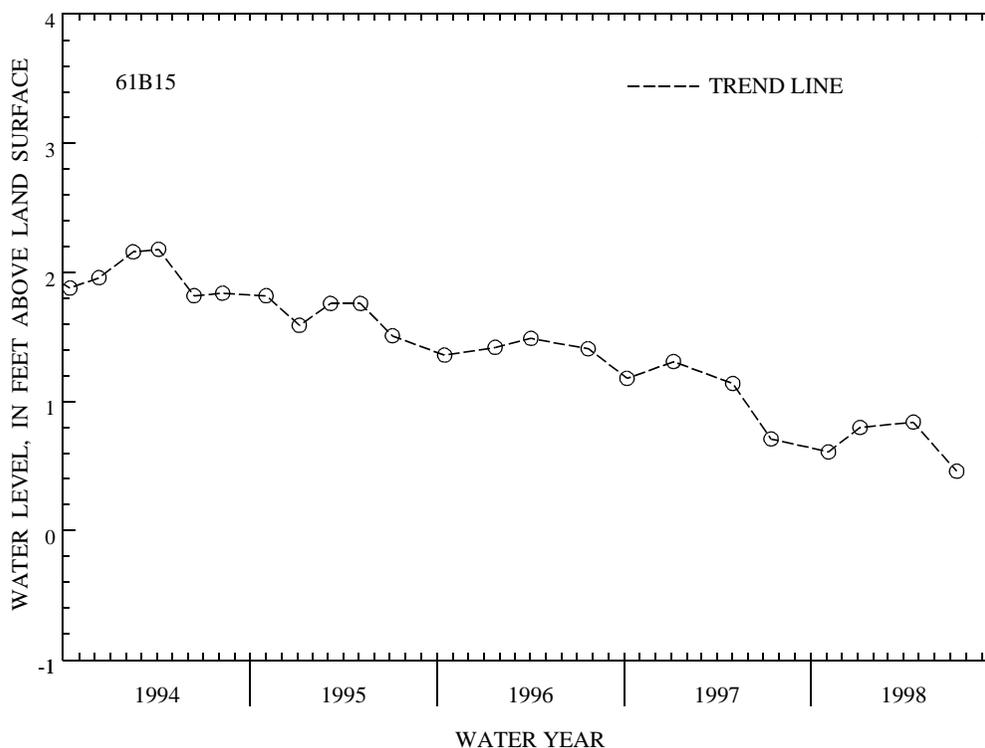
PERIOD OF RECORD.--March 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.75 ft above land-surface datum, Apr. 20, 1989; lowest measured, 0.46 ft above land-surface datum, July 14, 1998.

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	0.61	JAN 06	0.80	APR 20	0.84	JUL 14	0.46
WATER YEAR 1998 HIGHEST		0.84	APR 20, 1998				
LOWEST		0.46	JUL 14, 1998				

NOTE.--Flowing well; readings are above land-surface datum.



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364227076074710. Local number, 61B 16 SOW 091J.

LOCATION.--Lat 36°42'27", long 76°07'47", Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Fentress. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Chickahominy-Piney Point aquifer of Eocene-Oligocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 602 ft, diameter 2 in. from 586 to 690 ft, depth 690 ft, screened 670 to 680 ft.

INSTRUMENTATION.--Occasional measurement with manometer by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 6, 1995, bimonthly measurement with manometer.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

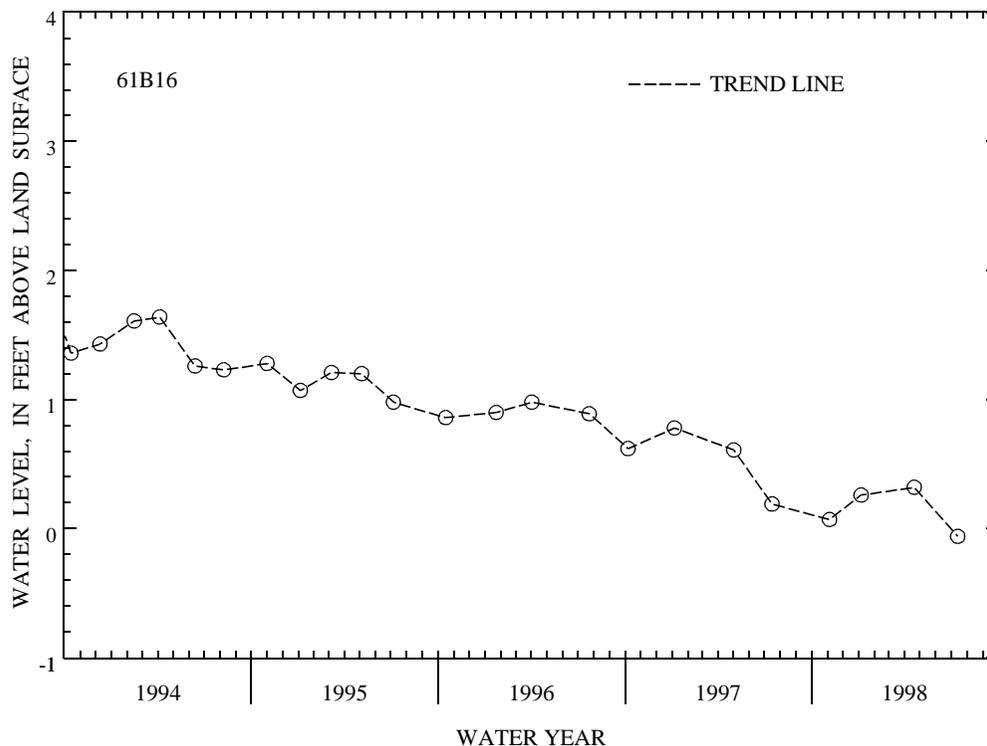
PERIOD OF RECORD.--March 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.31 ft above land-surface datum, Mar. 13, 1989; lowest measured, 0.06 ft below land-surface datum, July 14, 1998.

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	0.07	JAN 06	0.26	APR 20	0.32	JUL 14	-0.06
WATER YEAR 1998	HIGHEST	0.32	APR 20, 1998				
	LOWEST	-0.06	JUL 14, 1998				

NOTE.--Flowing well; readings are above land-surface datum.



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364227076074711. Local number, 61B 17 SOW 091K.

LOCATION.--Lat 36°42'27", long 76°07'47", Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Fentress. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 78 ft, diameter 2 in. from 78 to 108 ft, depth 108 ft, screened 88 to 98 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 6, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

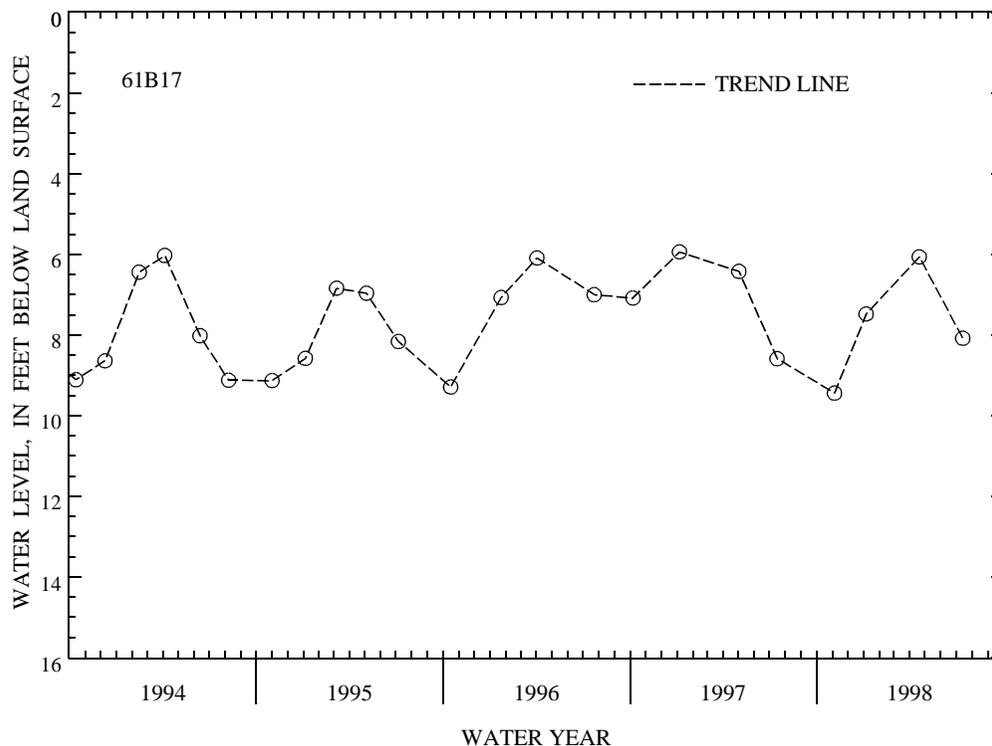
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.00 ft below land-surface datum, Jan. 30, 1991; lowest measured, 9.44 ft below land-surface datum, Nov. 5, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	9.44	JAN 06	7.48	APR 20	6.06	JUL 14	8.08
WATER YEAR 1998	HIGHEST	6.06	APR 20, 1998				
	LOWEST	9.44	NOV 05, 1997				



GROUND-WATER LEVELS
CITY OF CHESAPEAKE

364227076074713. Local number, 61B 19 SOW 091M.

LOCATION.--Lat 36°42'27", long 76°07'47", Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Fentress. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 20 ft, screened 10 to 20 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 6, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

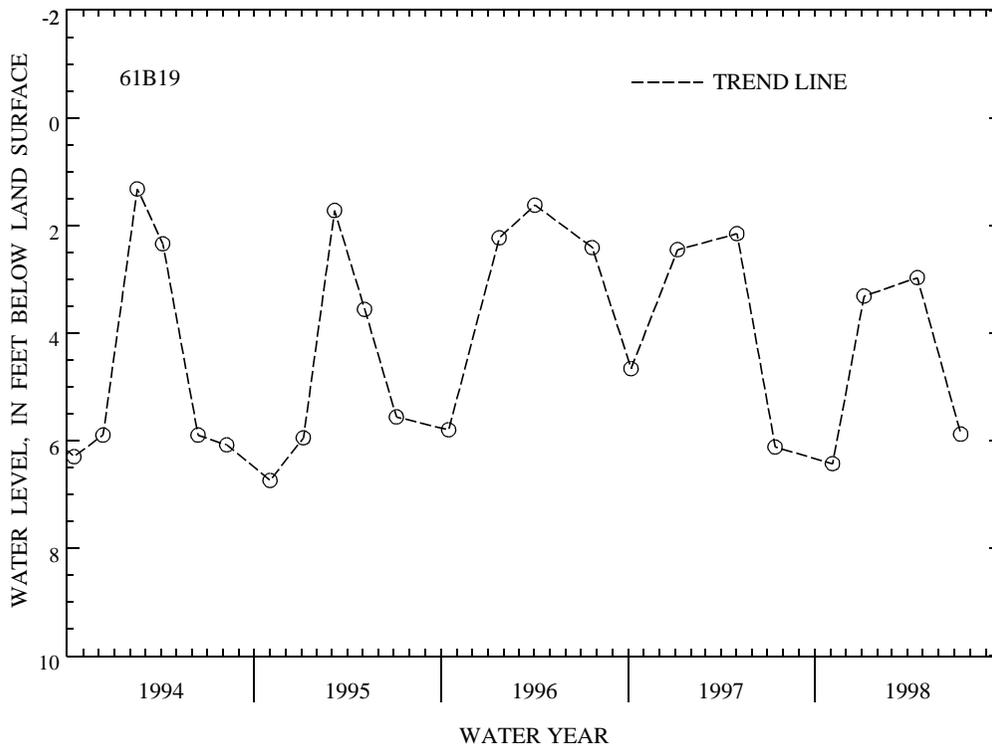
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.09 ft below land-surface datum, Feb. 26, 1992; lowest measured, 6.74 ft below land-surface datum, Nov. 1, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	6.43	JAN 06	3.31	APR 20	2.97	JUL 14	5.88
WATER YEAR 1998	HIGHEST	2.97	APR 20, 1998				
	LOWEST	6.43	NOV 05, 1997				



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364227076074702. Local number, 61B 5 SOW 091B.

LOCATION.--Lat 36°42'27", long 76°07'47", Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Fentress. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 1,060 ft, screened 1,040 to 1,060 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to July 6, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

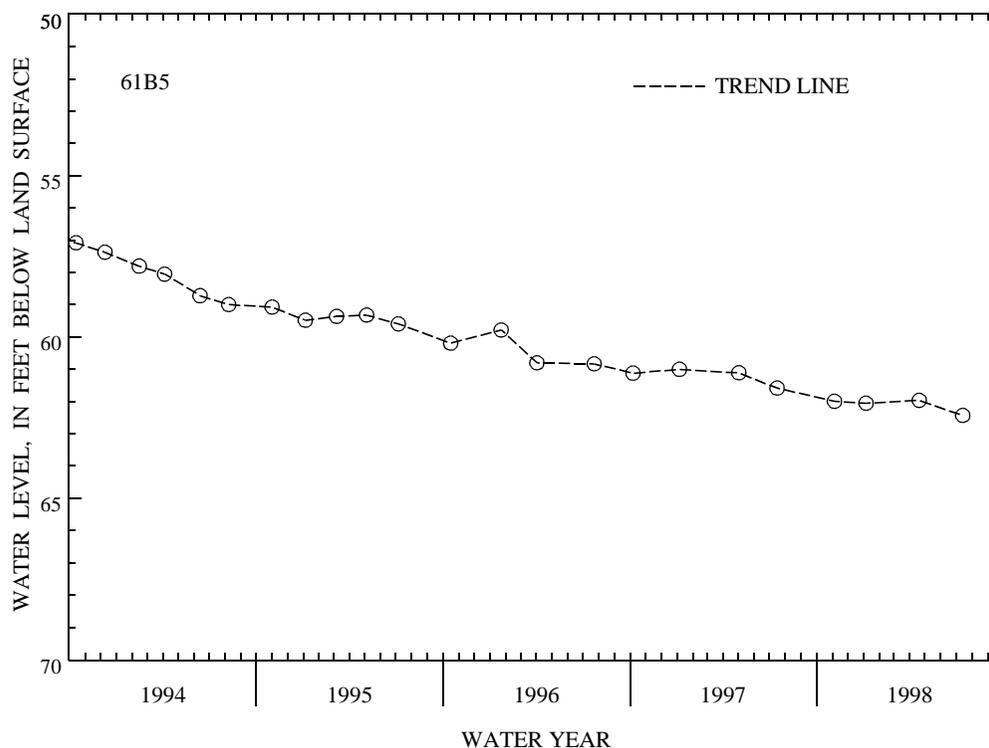
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--June 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.83 ft below land-surface datum, Aug. 28, 1980; lowest measured, 62.43 ft below land-surface datum, July 14, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	61.99	JAN 06	62.05	APR 20	61.96	JUL 14	62.43
WATER YEAR 1998		HIGHEST	61.96	APR 20, 1998			
		LOWEST	62.43	JUL 14, 1998			



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364227076074703. Local number, 61B 6 SOW 091C.

LOCATION.--Lat 36°42'27", long 76°07'47", Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Fentress. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Virginia Beach aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 780 ft, screened 760 to 780 ft.

INSTRUMENTATION.--Occasional measurement with manometer by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to July 6, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with manometer.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 7.0 ft above land-surface datum prior to Jan. 11, 1989; 1.2 ft thereafter.

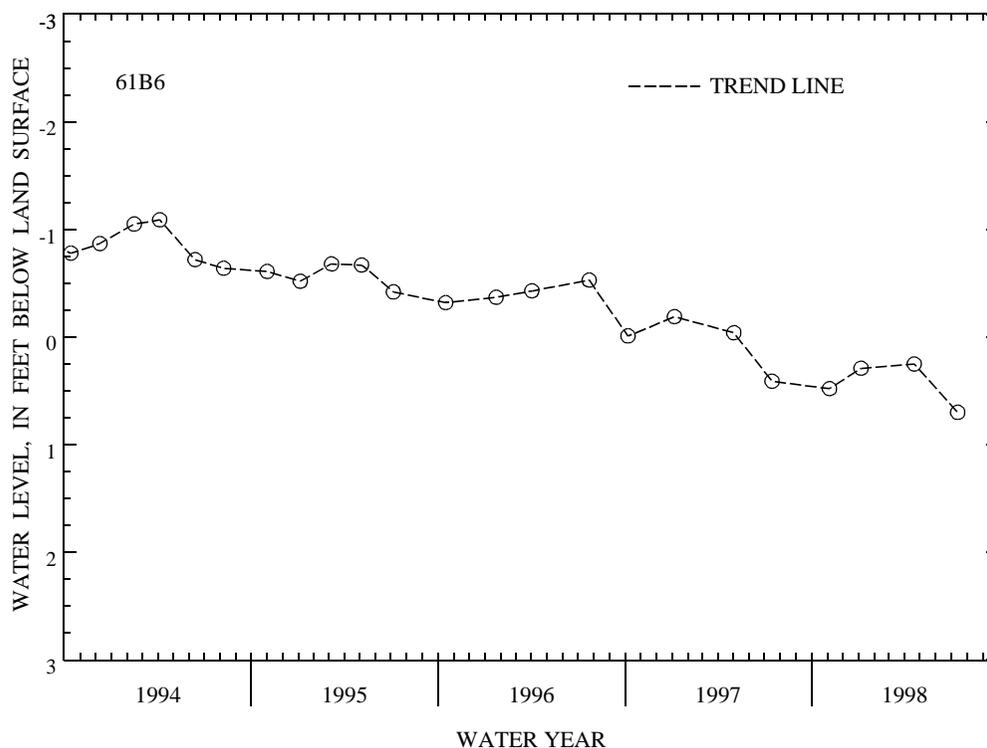
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--July 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.37 ft above land-surface datum, July 26, 1979; lowest measured, 0.70 ft below land-surface datum, July 14, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL		
NOV 05	0.48	JAN 06	0.29	APR 20	0.25	JUL 14	0.70		
WATER YEAR 1998		HIGHEST	0.25	APR 20, 1998		LOWEST	0.70	JUL 14, 1998	



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364231076140801. Local number, 61B 8 SOW 134.

LOCATION.--Lat 36°42'31", long 76°14'08", Hydrologic Unit 03010205, at Great Bridge Junior High School, in Great Bridge. Owner: Virginia Department of Environmental Quality.

AQUIFER.--St. Marys-Choptank aquifer of Miocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 8 in., depth 100 ft, screened 84 to 94 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 20 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum.

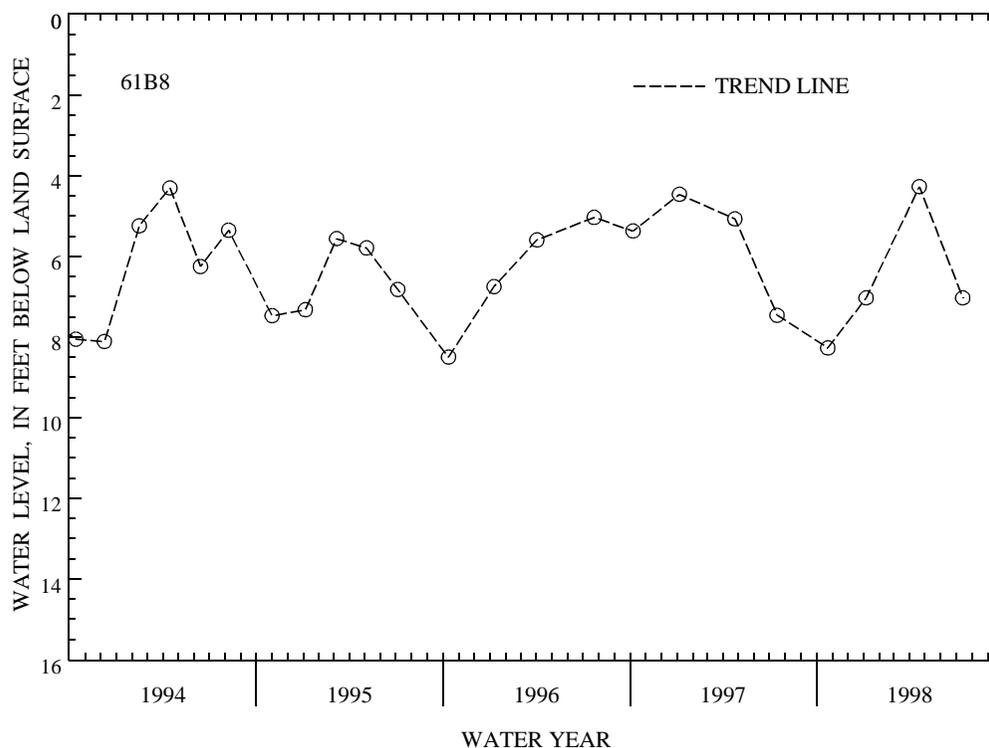
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--January 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.80 ft below land-surface datum, Apr. 14, 1993; lowest measured, 16.07 ft below land-surface datum, Sept. 18, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	8.27	JAN 06	7.03	APR 20	4.27	JUL 14	7.03
WATER YEAR 1998	HIGHEST	4.27	APR 20, 1998				
	LOWEST	8.27	OCT 23, 1997				



GROUND-WATER LEVELS

GLOUCESTER COUNTY

372621076404201. Local number, 57H 20 SOW 192A.

LOCATION.--Lat 37°26'21", long 76°40'42", Hydrologic Unit 02080107, 80 ft north of State Highway 684 (Starvation Road), 1.1 mi northeast of intersection of State Highways 617 and 684. Owner: St. Laurent Paper Products Corporation (formerly Chesapeake Corporation).

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. 200 ft, diameter 2 in. 200 to 910 ft, depth 910 ft, screened 900 to 910 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of inner casing, 1.5 ft above land-surface datum.

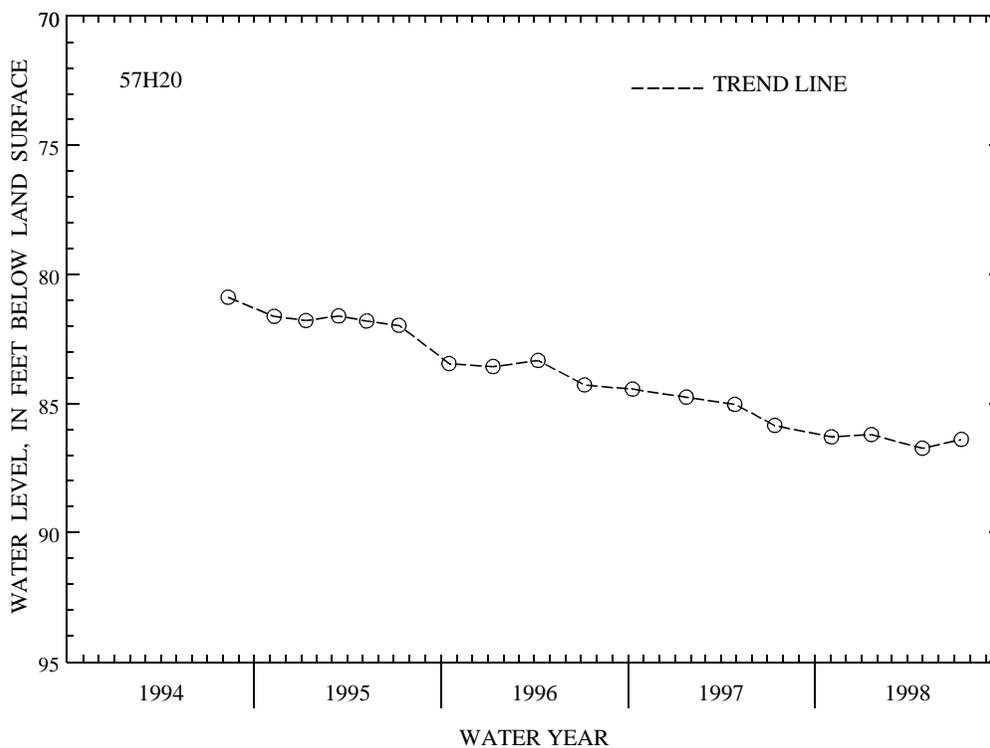
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 80.59 ft below land-surface datum, June 24, 1994; lowest measured, 86.73 ft below land-surface datum, Apr. 30, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 03	86.29	JAN 20	86.20	APR 30	86.73	JUL 15	86.39
WATER YEAR 1998	HIGHEST	86.20	JAN 20, 1998				
	LOWEST	86.73	APR 30, 1998				



GROUND-WATER LEVELS

GLOUCESTER COUNTY

372621076404202. Local number, 57H 21 SOW 192B.

LOCATION.--Lat 37°26'21", long 76°40'42", Hydrologic Unit 02080107, 80 ft north of State Highway 684 (Starvation Road), 1.1 mi northeast of intersection of State Highways 617 and 684. Owner: St. Laurent Paper Products Corporation (formerly Chesapeake Corporation).

AQUIFER.--Upper Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. 200 ft, diameter 2 in. 200 to 480 ft, depth 480 ft, screened 470 to 480 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of inner casing, 1.6 ft above land-surface datum.

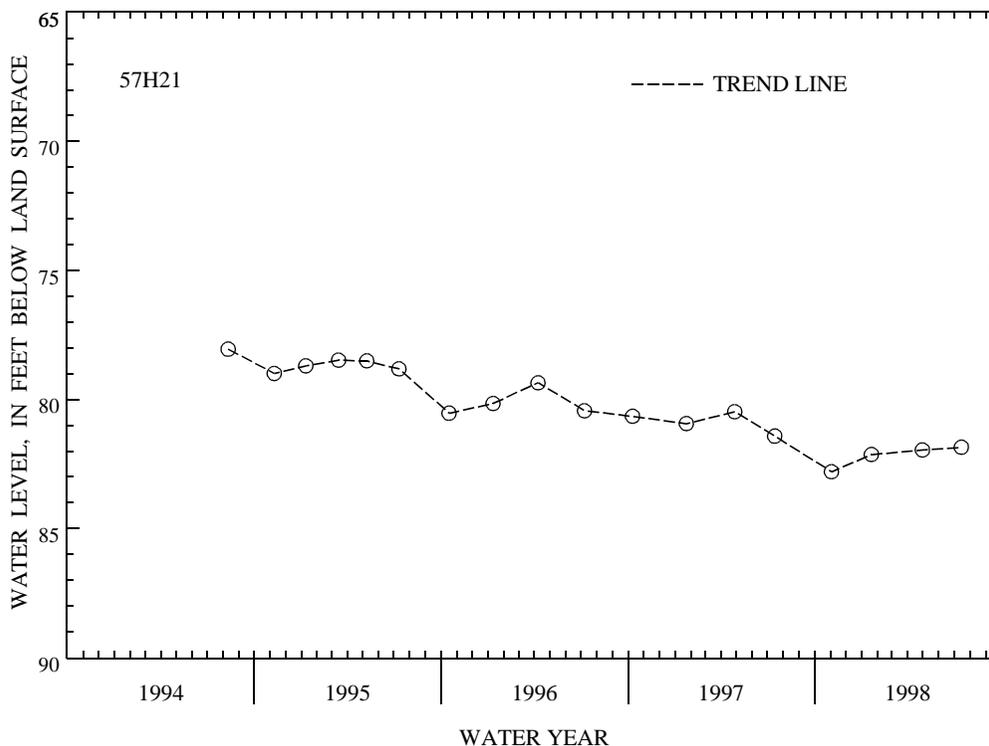
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 77.63 ft below land-surface datum, June 24, 1994; lowest measured, 82.80 ft below land-surface datum, Nov. 3, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 03	82.80	JAN 20	82.13	APR 30	81.95	JUL 15	81.85
WATER YEAR 1998 HIGHEST		81.85	JUL 15, 1998				
LOWEST		82.80	NOV 03, 1997				



GROUND-WATER LEVELS

GLOUCESTER COUNTY

372621076404203. Local number, 57H 22 SOW 192C.

LOCATION.--Lat 37°26'21", long 76°40'42", Hydrologic Unit 02080107, 80 ft north of State Highway 684 (Starvation Road), 1.1 mi northeast of intersection of State Highways 617 and 684. Owner: St. Laurent Paper Products Corporation (formerly Chesapeake Corporation).

AQUIFER.--Aquia aquifer of Pleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. 200 ft, diameter 2 in. 200 to 370 ft, depth 370 ft, screened 350 to 370 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of inner casing, 1.7 ft above land-surface datum.

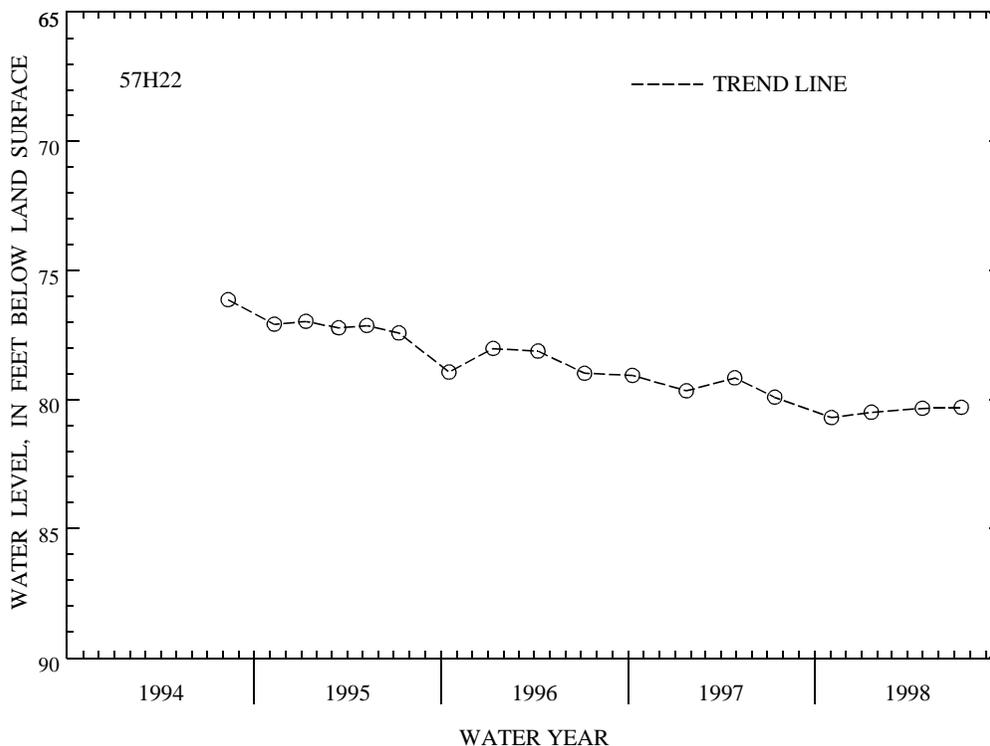
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 75.78 ft below land-surface datum, June 24, 1994; lowest measured, 80.70 ft below land-surface datum, Nov 3, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 03	80.70	JAN 20	80.49	APR 30	80.34	JUL 15	80.30
WATER YEAR 1998 HIGHEST		80.30	JUL 15, 1998				
LOWEST		80.70	NOV 03, 1997				



GROUND-WATER LEVELS

GLOUCESTER COUNTY

372331076312602. Local number, 58H 6 SOW 168A.

LOCATION.--Lat 37°23'31", long 76°31'26", Hydrologic Unit 02080102, at entrance to Gloucester County landfill, 0.3 mi east of U.S. Highway 17, and 1.4 mi south of Gloucester. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 1,300 ft, screened 1,290 to 1,300 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. June 11, 1985, to July 7, 1995, bimonthly measurement with chalked tape. Prior to June 11, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 75 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

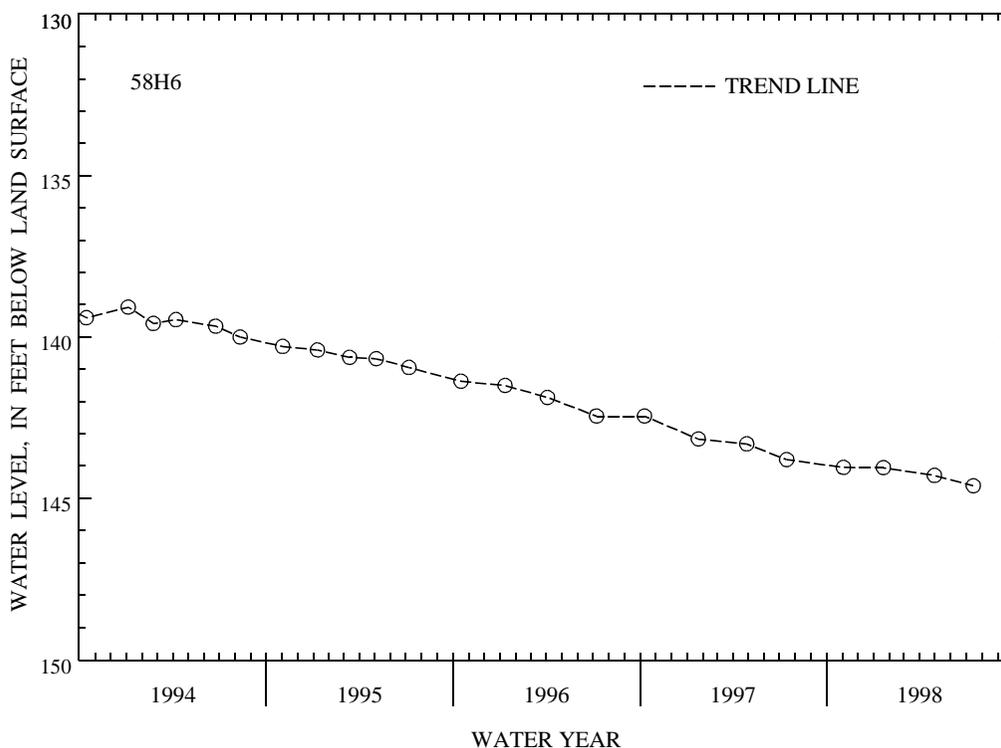
PERIOD OF RECORD.--August 1982 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 125.26 ft below land-surface datum, Feb. 14, 1983; lowest measured, 144.61 ft below land-surface datum, July 15, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL						
NOV 03	144.04	JAN 20	144.05	APR 30	144.29	JUL 15	144.61

WATER YEAR 1998	HIGHEST	144.04	NOV 03, 1997
	LOWEST	144.61	JUL 15, 1998



GROUND-WATER LEVELS

GLOUCESTER COUNTY

372331076312602. Local number, 58H 7 SOW 168B.

LOCATION.--Lat 37°23'31", long 76°31'26", Hydrologic Unit 02080102, at entrance to Gloucester County landfill, 0.3 mi east of U.S. Highway 17, and 1.4 mi south of Gloucester. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 186 ft, diameter 2 in. from 186 to 960 ft, depth 960 ft, screened 950 to 960 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 7, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 75 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. Low water level in June 1996 is the result of the well being pumped for water-quality sampling.

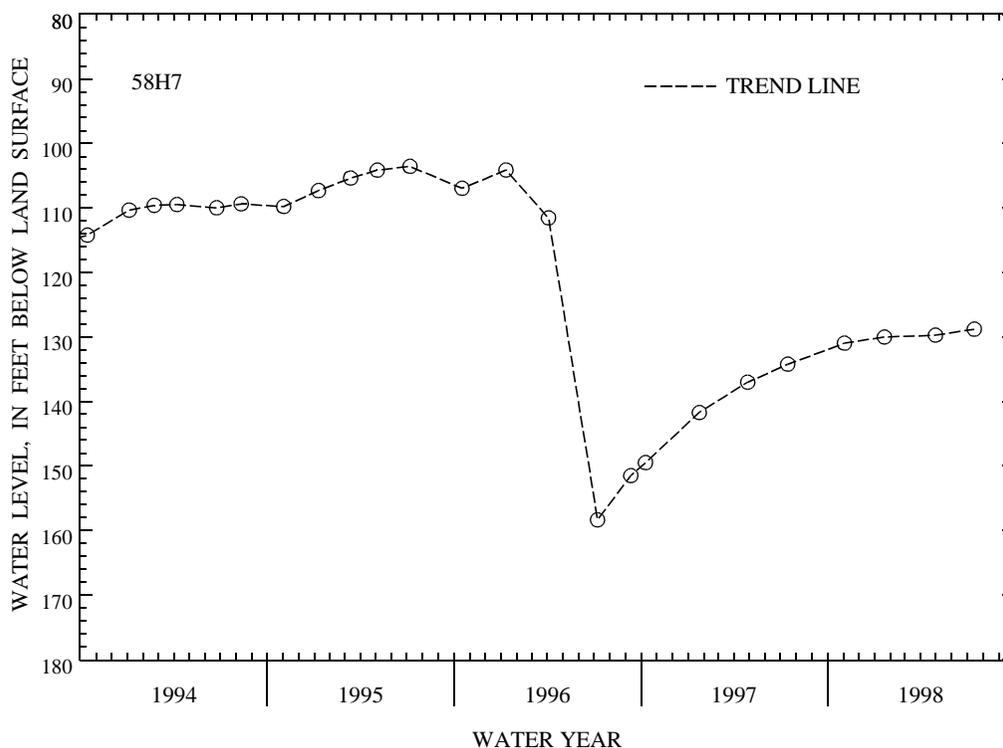
PERIOD OF RECORD.--June 1985 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 33.55 ft below land-surface datum, Nov. 20, 1985; lowest measured, 158.32 ft below land-surface datum, July 8, 1996.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL						
NOV 03	130.94	JAN 20	129.99	APR 30	129.70	JUL 15	128.78

WATER YEAR 1998	HIGHEST	128.78	JUL 15, 1998
	LOWEST	130.94	NOV 03, 1997



GROUND-WATER LEVELS

GLOUCESTER COUNTY

372331076312604. Local number, 58H 8 SOW 168C.

LOCATION.--Lat 37°23'31", long 76°31'26", Hydrologic Unit 02080102, at entrance to Gloucester County landfill, 0.3 mi east of U.S. Highway 17, and 1.4 mi south of Gloucester. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 40 ft, screened 30 to 40 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 7, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 75 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

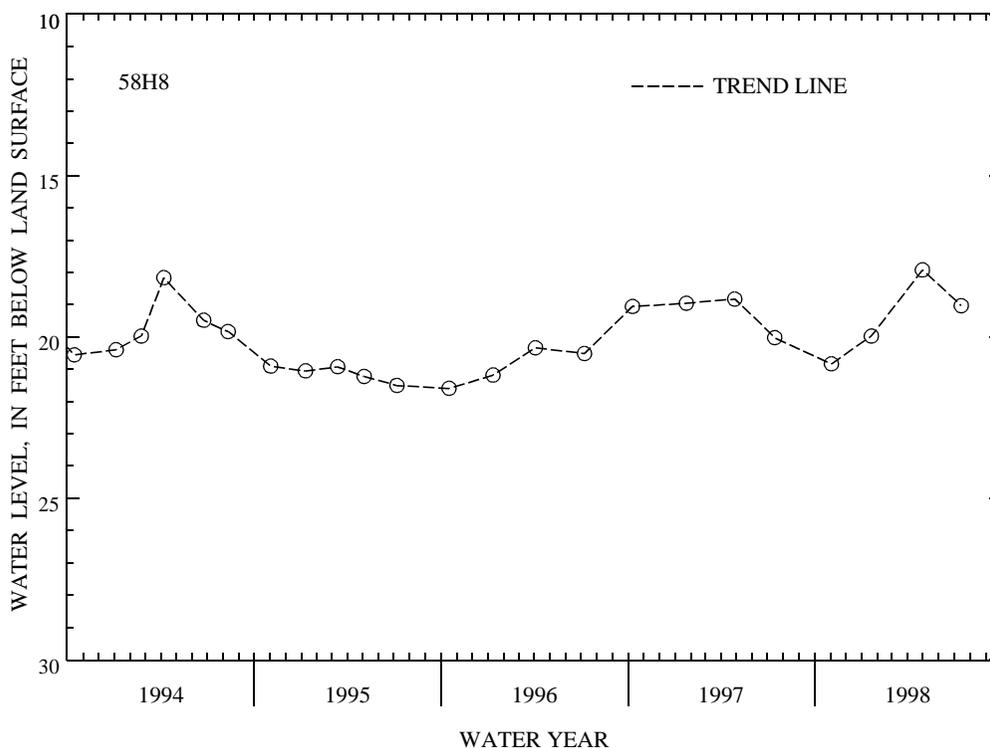
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--June 1985 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.00 ft below land-surface datum, Apr. 20, 1993; lowest measured, 21.81 ft below land-surface datum, Sept. 23, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 03	20.83	JUN 20	19.97	APR 30	17.92	JUL 15	19.03
WATER YEAR 1998 HIGHEST		17.92	APR 30, 1998				
LOWEST		20.83	NOV 03, 1997				



GROUND-WATER LEVELS

HANOVER COUNTY

373737077083201. Local number, 53K 19 SOW 080.

LOCATION.--Lat 37°37'37", long 77°08'32", Hydrologic Unit 02080106, 500 ft northeast of State Highway 606, 0.15 mi west of intersection of State Highways 606 and 629, and 4.6 mi east of Old Church. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Dug unused water well, diameter 30 in., depth 35 ft, cased to 35 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 3, 1985 to July 11, 1995, bimonthly measurement with chalked tape. May 20, 1978, to Oct. 2, 1985, occasional measurement with chalked tape. Prior to May 20, 1978, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 130 ft above sea level, from topographic map. Measuring point: Top of casing, 0.85 ft above land-surface datum.

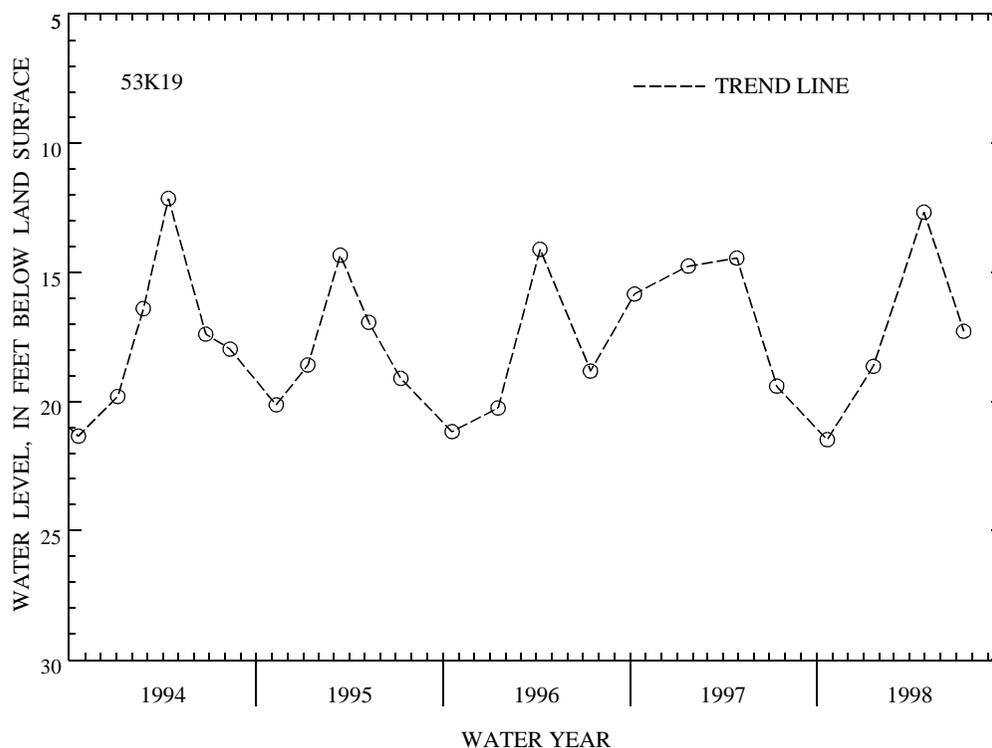
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--January 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.05 ft below land-surface datum, Jan. 25, 1978; lowest measured, 22.85 ft below land-surface datum, Aug. 3, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	21.48	JAN 20	18.63	APR 29	12.66	JUL 16	17.28
WATER YEAR 1998		HIGHEST	12.66	APR 29, 1998			
		LOWEST	21.48	OCT 22, 1997			



GROUND-WATER LEVELS

HENRICO COUNTY

373607077331401. Local number, 50J 1 SOW 023.

LOCATION.--Lat 37°36'07", long 77°33'14", Hydrologic Unit 02080205, 200 ft north of Three Chopt Road, 1.0 mi south-east of intersection of Three Chopt Road and Parham Road in Richmond. Owner: E. L. Gilman.

AQUIFER.--Petersburg Granite of Mississippian age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 10 in., depth 300 ft, cased to 68 ft, open hole 68 to 300 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 17, 1995, bimonthly measurement with chalked tape. June 5, 1974, to Sept. 30, 1985, occasional measurement with chalked tape. Prior to June 5, 1974, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 275 ft above sea level, from topographic map. Measuring point: Top of casing, 1.88 ft above land-surface datum.

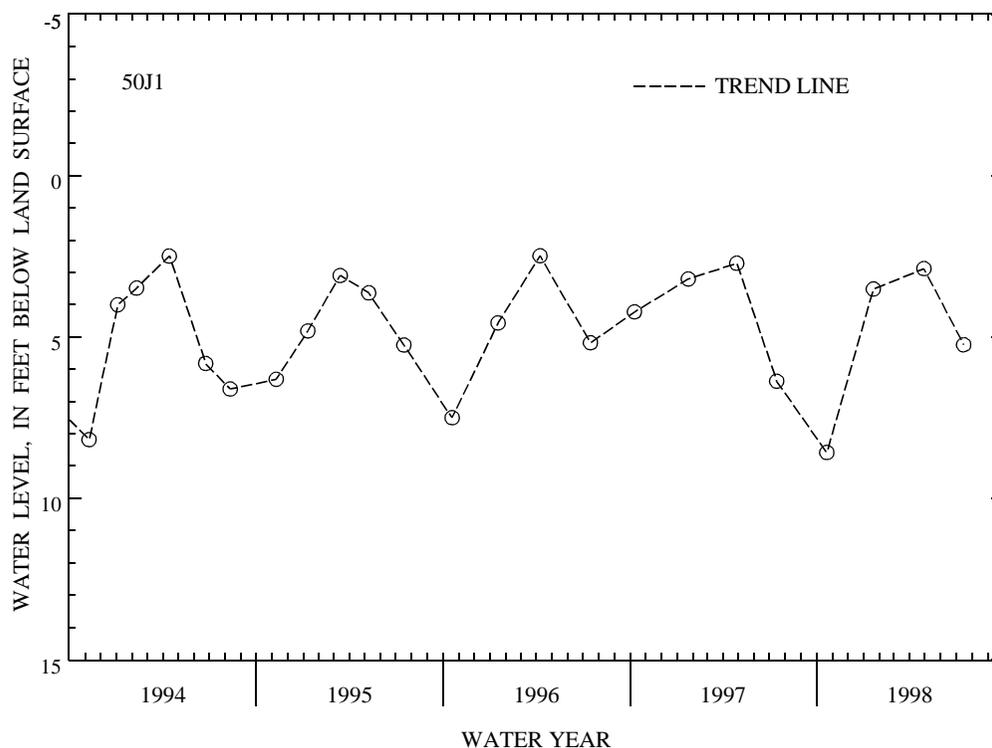
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--May 1969 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.48 ft below land-surface datum, June 5, 1970; lowest recorded, 10.43 ft below land-surface datum, Jan. 5, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	8.58	JAN 20	3.51	APR 29	2.88	JUL 16	5.24
WATER YEAR 1998 HIGHEST		2.88	APR 29, 1998				
LOWEST		8.58	OCT 21, 1997				



GROUND-WATER LEVELS

HENRICO COUNTY

373817077282501. Local number, 51K 4 SOW 137.

LOCATION.--Lat 37°38'17", long 77°28'25", Hydrologic Unit 02080206, 50 ft east of entrance to J. Sargeant Reynolds Community College, 0.9 mi west of intersection of Parham Road and U.S. Highway 1, and 0.9 mi west of Yellow Tavern. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Petersburg Granite of Mississippian age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in., depth 280 ft, cased to 35 ft, open hole 35 to 280 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 17, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 180 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Sept. 9, 1980; 1.5 ft thereafter.

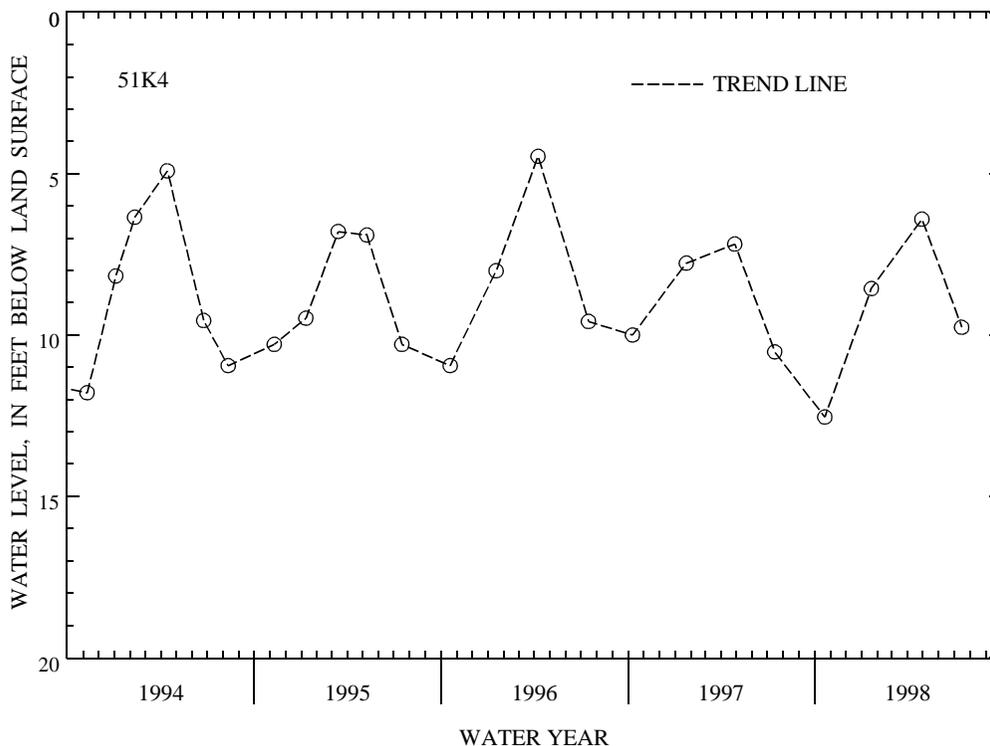
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--April 1980 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.37 ft below land-surface datum, Apr. 30, 1987; lowest measured, 12.54 ft below land-surface datum, Oct. 21, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	12.54	JAN 20	8.56	APR 29	6.41	JUL 16	9.76
WATER YEAR 1998	HIGHEST	6.41	APR 29, 1998				
	LOWEST	12.54	OCT 21, 1997				



GROUND-WATER LEVELS

HENRICO COUNTY

372936077211101. Local number, 52H 3 SOW 136.

LOCATION.--Lat 37°29'36", long 77°21'11", Hydrologic Unit 02080206, 100 ft west of Laburnum Avenue, 0.9 mi north of intersection of Laburnum Avenue and Darbytown Road, and 2.4 mi southwest of Sandston. Owner: Nabisco Incorporated.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 209 ft, screened 149 to 159 ft, 199 to 209 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 25, 1985, to July 17, 1995, bimonthly measurement with chalked tape. Prior to Mar. 25, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 150 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

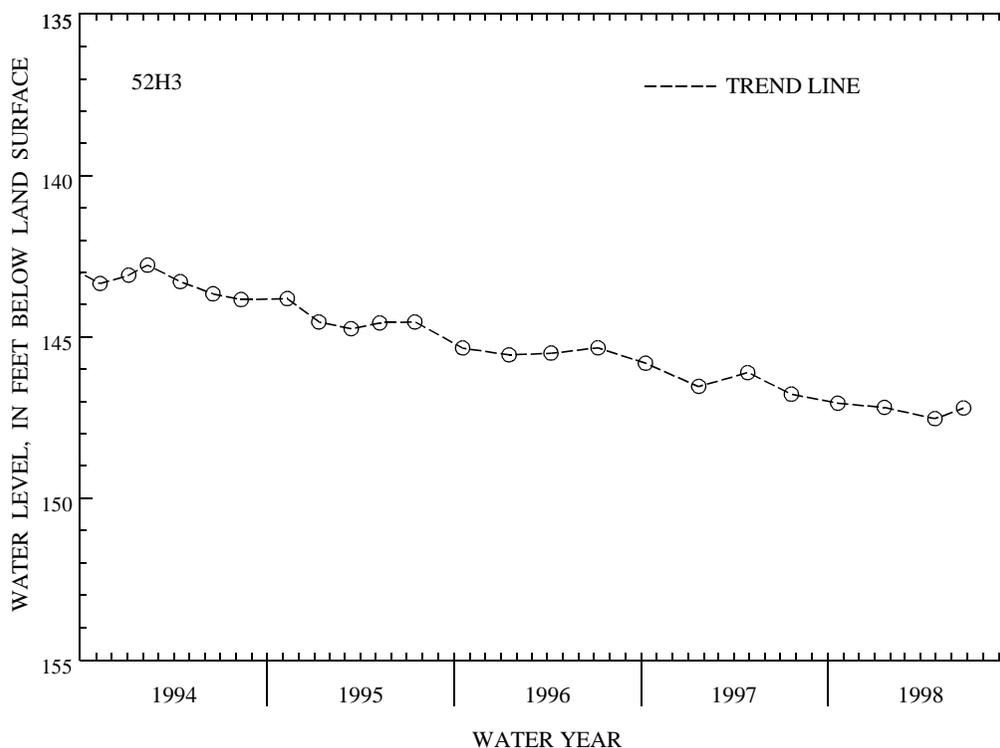
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--December 1974 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 131.42 ft below land-surface datum, Dec. 2, 1974; lowest measured, 147.53 ft below land-surface datum, Apr. 29, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	147.05	JAN 20	147.18	APR 29	147.53	JUN 24	147.20
WATER YEAR 1998	HIGHEST	147.05	OCT 21, 1997				
	LOWEST	147.53	APR 29, 1998				



GROUND-WATER LEVELS
ISLE OF WIGHT COUNTY

364814076440701. Local number, 57C 25 SOW 149A.

LOCATION.--Lat 36°48'14", long 76°44'07", Hydrologic Unit 02080208, at Windsor Community Center in Windsor.
Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 26 ft, screened 16 to 26 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 19, 1985, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 70 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

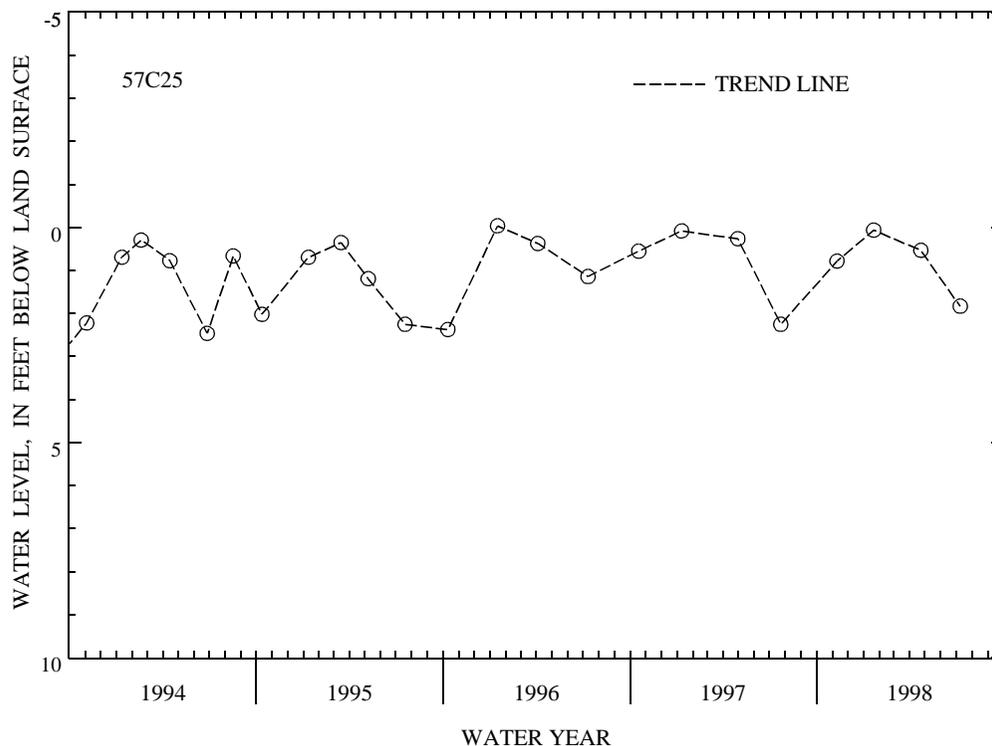
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--March 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.27 ft above land-surface datum, Feb. 23, 1987; lowest measured, 3.29 ft below land-surface datum, July 22, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 10	0.78	JAN 21	0.06	APR 23	0.53	JUL 09	1.83
WATER YEAR 1998	HIGHEST	0.06	JAN 21, 1998				
	LOWEST	1.83	JUL 09, 1998				



GROUND-WATER LEVELS

ISLE OF WIGHT COUNTY

364814076440702. Local number, 57C 26 SOW 149B.

LOCATION.--Lat 36°48'14", long 76°44'07", Hydrologic Unit 02080208, at Windsor Community Center in Windsor.
Owner: Virginia Department of Environmental Quality.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 380 ft, screened 370 to 380 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 19, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 70 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

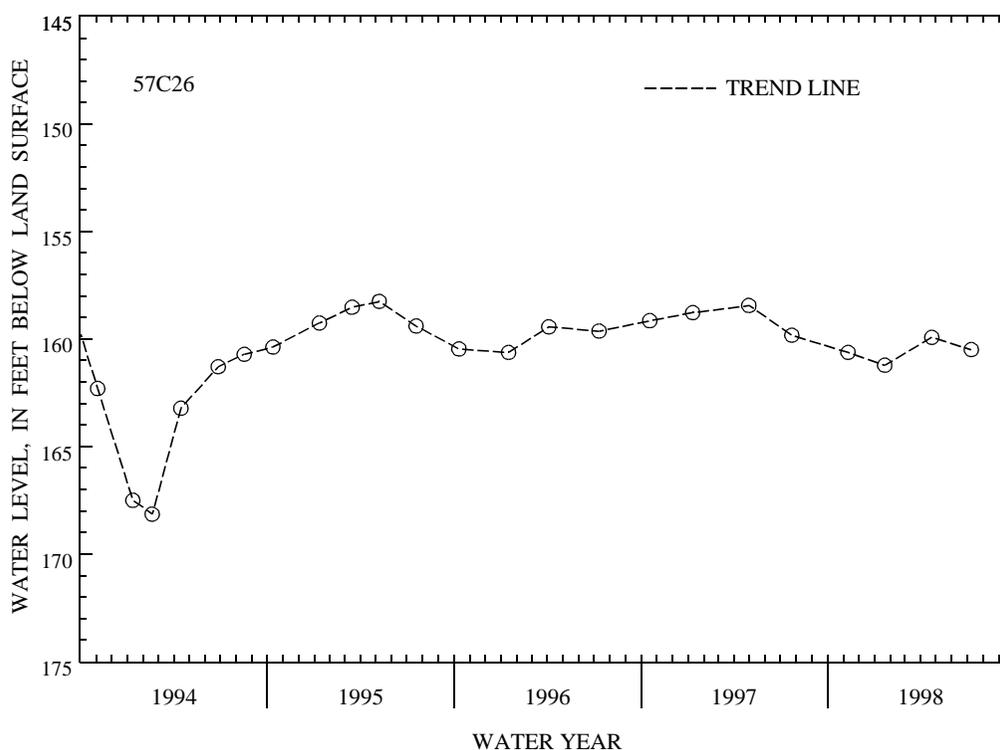
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--March 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 144.42 ft below land-surface datum, Feb. 25, 1986; lowest measured, 168.14 ft below land-surface datum, Feb. 18, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 10	160.62	JAN 21	161.22	APR 23	159.92	JUL 09	160.49
WATER YEAR 1998 HIGHEST		159.92	APR 23, 1998				
LOWEST		161.22	JAN 21, 1998				



GROUND-WATER LEVELS
ISLE OF WIGHT COUNTY

364814076440704. Local number, 57C 28 SOW 149D.

LOCATION.--Lat 36°48'14", long 76°44'07", Hydrologic Unit 02080208, at Windsor Community Center in Windsor.
Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 807 ft, screened 797 to 807 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 19, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 70 ft above sea level, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

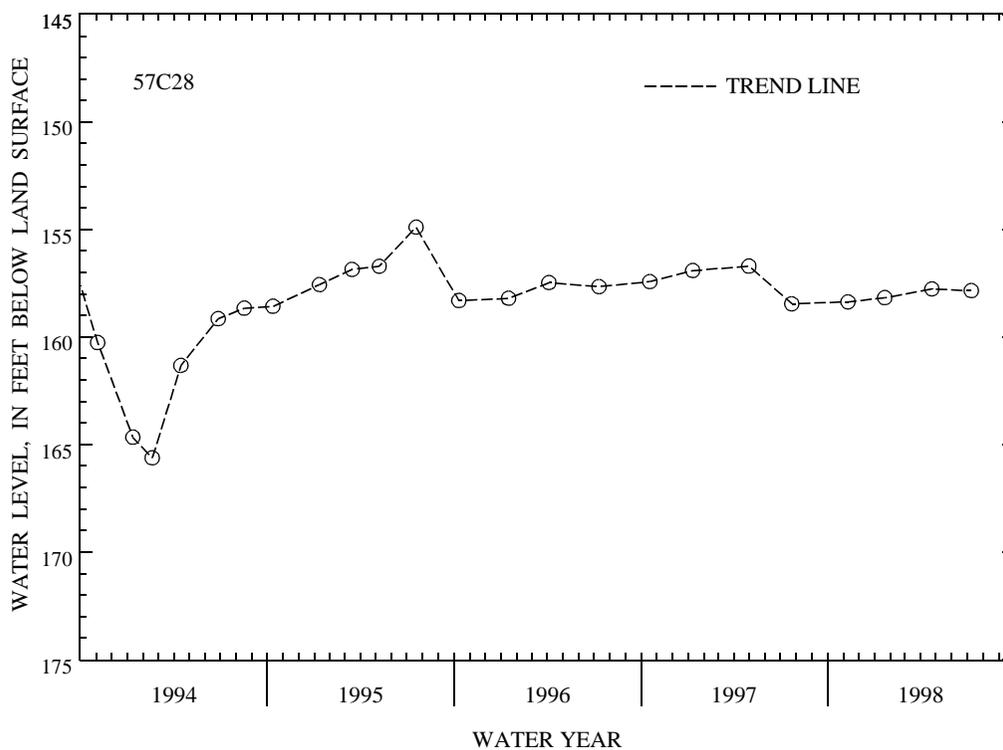
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--March 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 142.80 ft below land-surface datum, Feb. 25, 1986; lowest measured, 165.62 ft below land-surface datum, Feb. 18, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 10	158.36	JAN 21	158.17	APR 23	157.76	JUL 09	157.84
WATER YEAR 1998	HIGHEST	157.76	APR 23, 1998				
	LOWEST	158.36	NOV 10, 1997				



GROUND-WATER LEVELS

ISLE OF WIGHT COUNTY

365751076433501. Local number, 57D 21 SOW 143A.

LOCATION.--Lat 36°57'51", long 76°43'35", Hydrologic Unit 03010202, 50 ft west of State Highway 652, 0.5 mi south of State Highway 682, and 1.8 mi southwest of Magnet. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 650 ft, screened 640 to 650 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 73 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

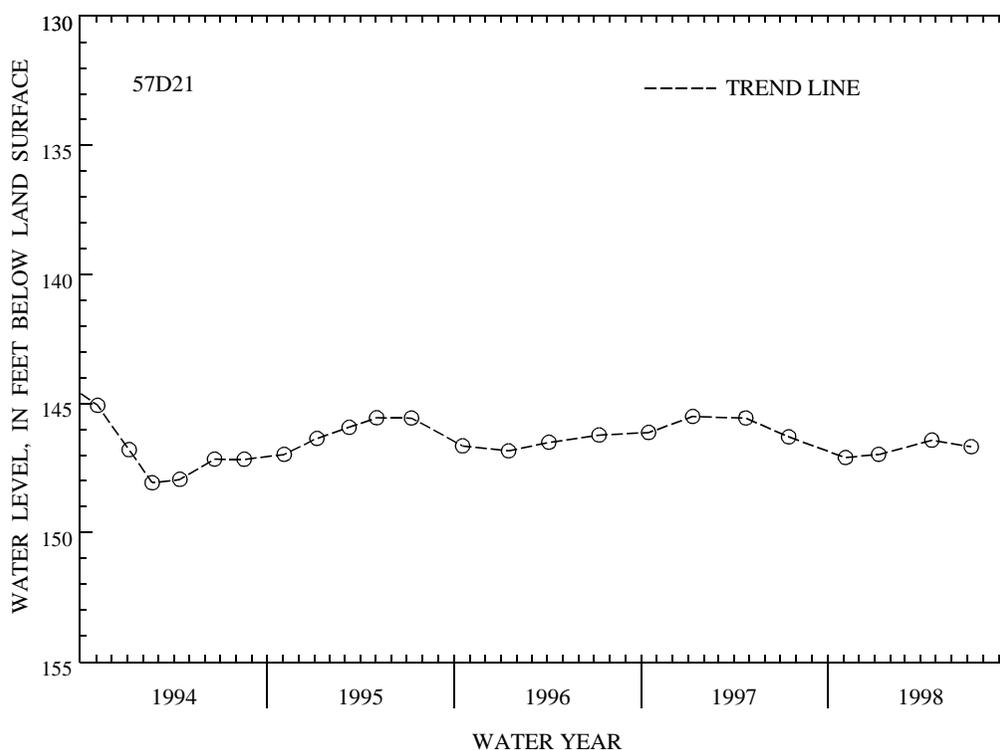
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 122.60 ft below land-surface datum, Aug. 27, 1980; lowest measured, 148.07 ft below land-surface datum, Feb. 18, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	147.09	JAN 09	146.97	APR 23	146.42	JUL 09	146.67
WATER YEAR 1998	HIGHEST	146.42	APR 23, 1998				
	LOWEST	147.09	NOV 05, 1997				



GROUND-WATER LEVELS
ISLE OF WIGHT COUNTY

365751076433502. Local number, 57D 22 SOW 143B.

LOCATION.--Lat 36°57'51", long 76°43'35", Hydrologic Unit 03010202, 50 ft west of State Highway 652, 0.5 mi south of State Highway 682, and 1.8 mi southwest of Magnet. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 350 ft, screened 340 to 350 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 73 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

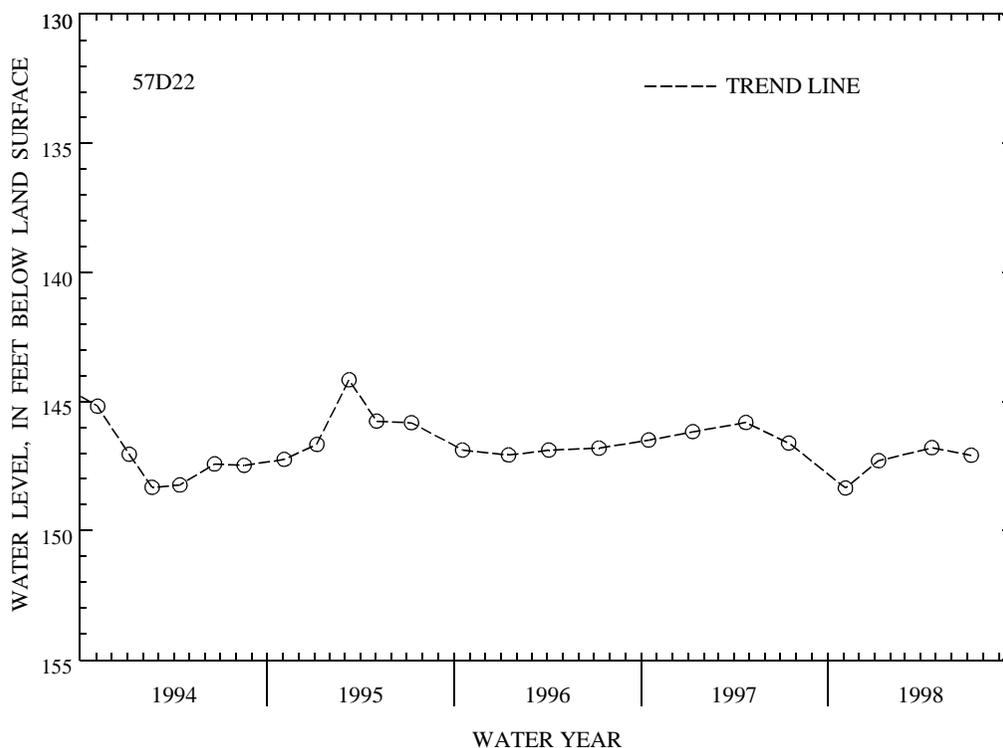
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 125.10 ft below land-surface datum, Apr. 24, May 29, 1980; lowest measured, 148.35 ft below land-surface datum, Nov. 5, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	148.35	JAN 09	147.29	APR 23	146.79	JUL 09	147.08
WATER YEAR 1998	HIGHEST	146.79	APR 23, 1998				
	LOWEST	148.35	NOV 05, 1997				



GROUND-WATER LEVELS

ISLE OF WIGHT COUNTY

365751076433503. Local number, 57D 23 SOW 143C.

LOCATION.--Lat 36°57'51", long 76°43'35", Hydrologic Unit 03010202, 50 ft west of State Highway 652, 0.5 mi south of State Highway 682, and 1.8 mi southwest of Magnet. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 18 ft, screened 8 to 18 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 73 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

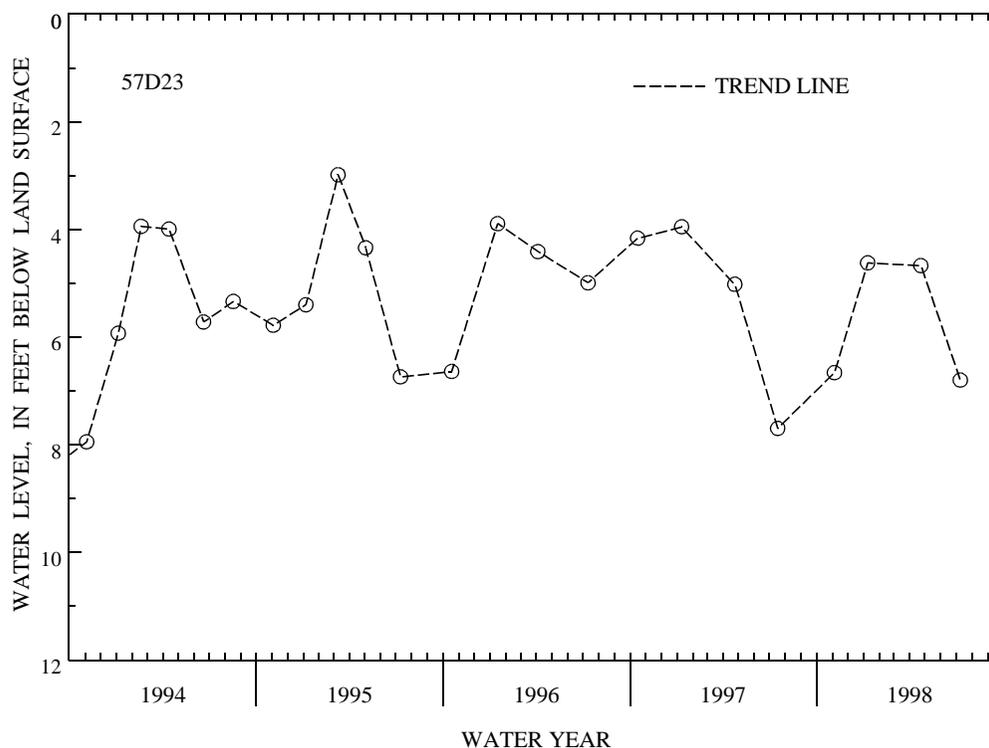
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.29 ft below land-surface datum, Feb. 23, 1987; lowest measured, 8.70 ft below land-surface datum, Aug. 11, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	6.66	JAN 09	4.62	APR 23	4.67	JUL 09	6.80
WATER YEAR 1998		HIGHEST	4.62	JAN 09, 1998			
		LOWEST	6.80	JUL 09, 1998			



GROUND-WATER LEVELS

ISLE OF WIGHT COUNTY

370253076431201. Local number, 57E 14 SOW 144A.

LOCATION.--Lat 37°02'53", long 76°43'12", Hydrologic Unit 02080208, 0.5 mi east of State Highway 627, 1.0 mi north of State Highway 621, and 2.5 mi southwest of Rushmere. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 590 ft, diameter 3 in. from 590 to 600 ft, depth 600 ft, screened 590 to 600 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 86 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

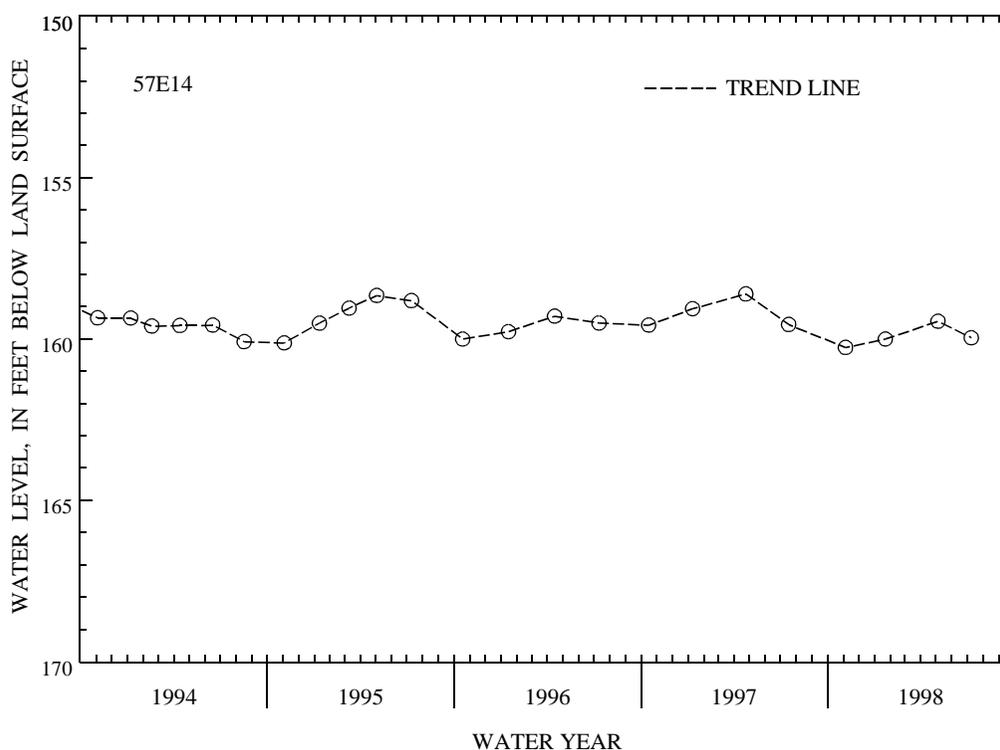
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 139.49 ft below land-surface datum, Apr. 24, 1980; lowest measured, 160.26 ft below land-surface datum, Nov. 5, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	160.26	JAN 22	160.00	MAY 05	159.45	JUL 09	159.96
WATER YEAR 1998	HIGHEST	159.45	MAY 05, 1998				
	LOWEST	160.26	NOV 05, 1997				



GROUND-WATER LEVELS
ISLE OF WIGHT COUNTY

370253076431202. Local number, 57E 15 SOW 144C.

LOCATION.--Lat 37°02'53", long 76°43'12", Hydrologic Unit 02080208, 0.5 mi east of State Highway 627, 1.0 mi north of State Highway 621, and 2.5 mi southwest of Rushmere. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 20 ft, screened 10 to 20 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 86 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

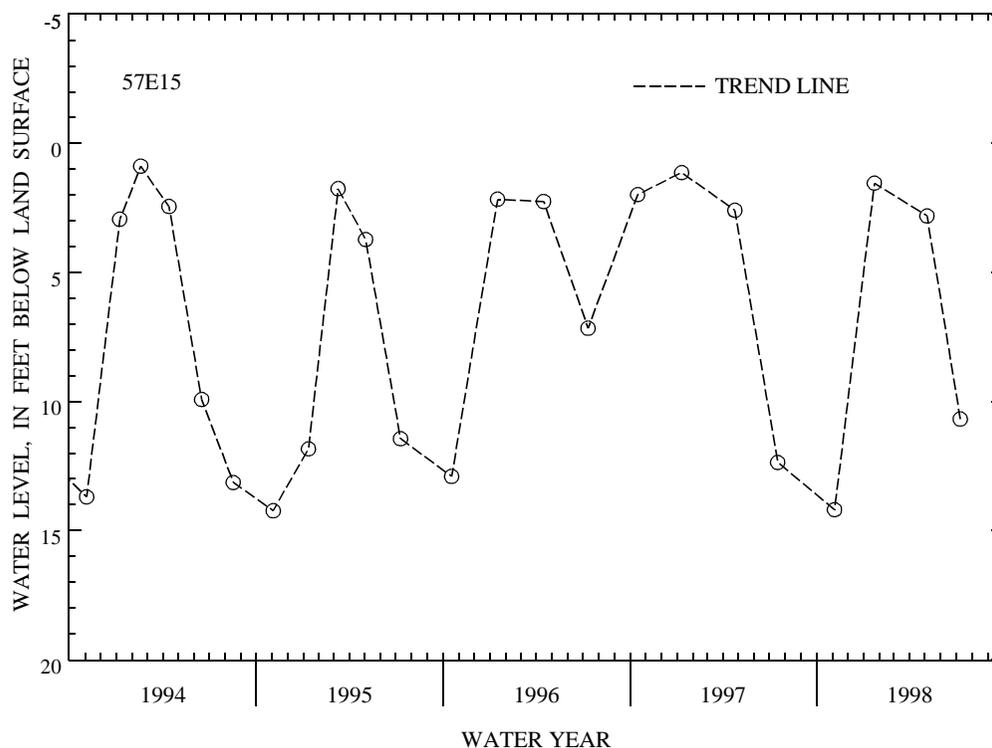
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.88 ft below land-surface datum, Feb. 17, 1994; lowest measured, 14.23 ft below land-surface datum, Nov. 3, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	14.19	JAN 22	1.54	MAY 05	2.81	JUL 09	10.68
WATER YEAR 1998	HIGHEST	1.54	JAN 22, 1998				
	LOWEST	14.19	NOV 05, 1997				



GROUND-WATER LEVELS

JAMES CITY COUNTY

371311076463601. Local number, 56F 1 SOW 018.

LOCATION.--Lat 37°13'11", long 76°46'36", Hydrologic Unit 02080206, 1,100 ft southwest of Colonial Parkway, 0.5 mi west of State Highway 682, and 0.6 mi north of Jamestown. Owner: U.S. Department of Interior, Colonial National Historical Park.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 4 in., depth 346 ft, screened 336 to 346 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 7, 1995, bimonthly measurement with chalked tape. Sept. 30, 1980, to Sept. 30, 1985, occasional measurement with chalked tape. Prior to Sept. 30, 1980, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top edge of recorder shelf, 3.15 ft above land-surface datum.

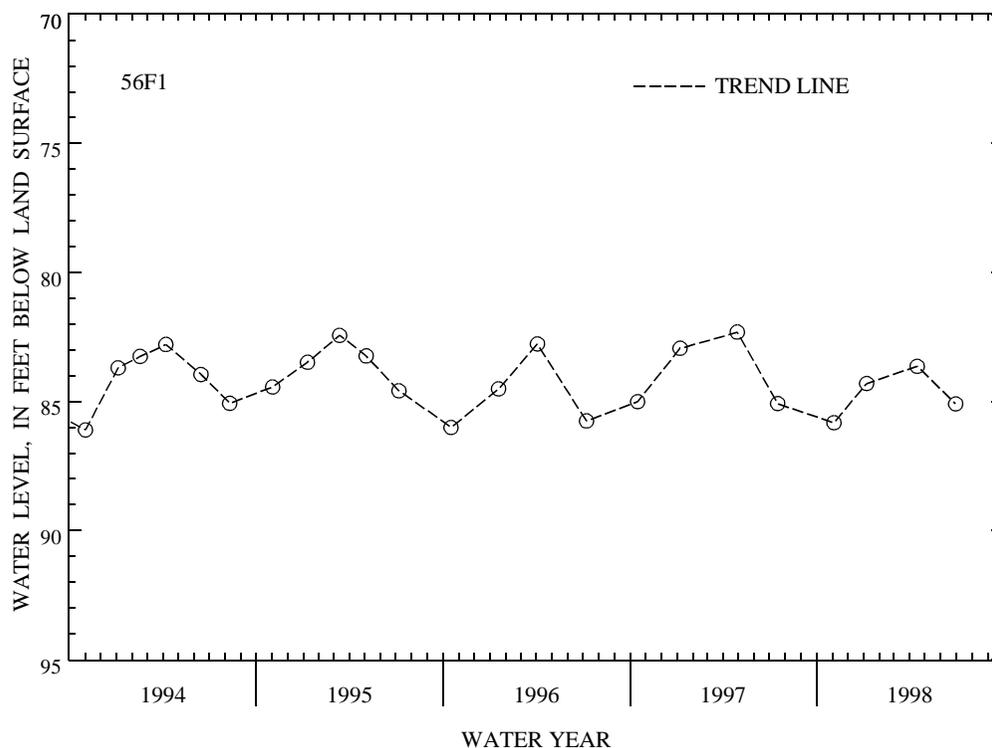
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--May 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 43.29 ft below land-surface datum, May 8, 1969; lowest measured, 86.10 ft below land-surface datum, Nov. 1, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	85.82	JAN 07	84.30	APR 16	83.63	JUN 30	85.09
WATER YEAR 1998 HIGHEST		83.63	APR 16, 1998				
LOWEST		85.82	NOV 04, 1997				



GROUND-WATER LEVELS

JAMES CITY COUNTY

372314076480401. Local number, 56H 22 SOW 135A.

LOCATION.--Lat 37°23'14", long 76°48'04", Hydrologic Unit 02080107, 100 ft south of State Highway 754, 0.2 mi east of intersection of U.S. Highway 60 and State Highway 754, and 0.5 mi north of Toano. Owner: James City Service Authority.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 2 in., depth 645 ft, screened 625 to 645 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 105 ft above sea level, from topographic map. Measuring point: Top of casing, 0.50 ft above land-surface datum prior to Mar. 3, 1988; at land-surface datum Mar. 3, 1988, to Mar. 1, 1989; 0.50 ft below land-surface datum prior to May 5, 1997; 0.85 ft below land surface datum thereafter.

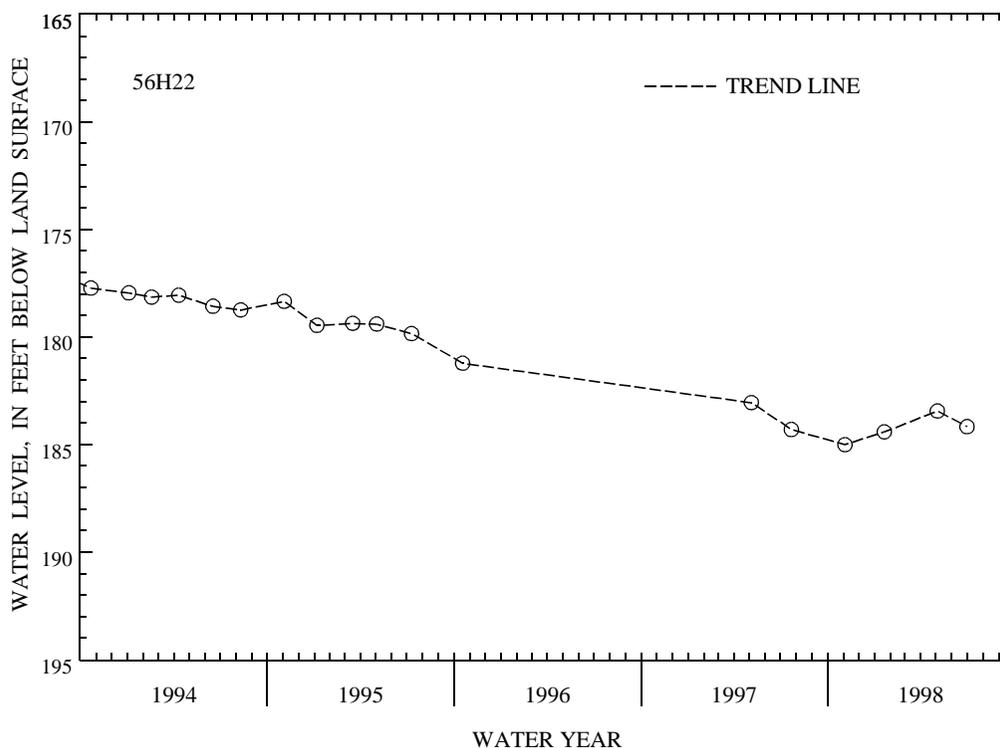
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown and occasional local pumpage.

PERIOD OF RECORD.--March 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 154.85 ft below land-surface datum, Apr. 5, 1979; lowest measured, 185.00 ft below land-surface datum, Nov. 4, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	185.00	JAN 20	184.41	MAY 04	184.33	JUL 01	184.17
WATER YEAR 1998	HIGHEST	184.17	JUL 01, 1998				
	LOWEST	185.00	NOV 04, 1997				



GROUND-WATER LEVELS

JAMES CITY COUNTY

372314076480402. Local number, 56H 31 SOW 135B.

LOCATION.--Lat 37°23'14", long 76°48'04", Hydrologic Unit 02080107, 100 ft south of State Highway 754, 0.2 mi east of intersection of State Highway 754 and U.S. Highway 60, and 0.5 mi north of Toano. Owner: James City Service Authority.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 4 in., depth 30 ft, screened 20 to 30 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 95 ft above sea level, from topographic map. Measuring point: Top of casing, 0.3 ft above land-surface datum prior to Mar. 3, 1988; at land-surface datum Mar. 3, 1988, to Mar. 1, 1989; 0.2 ft below land-surface datum prior to May 5, 1997; 0.95 ft below land surface datum thereafter.

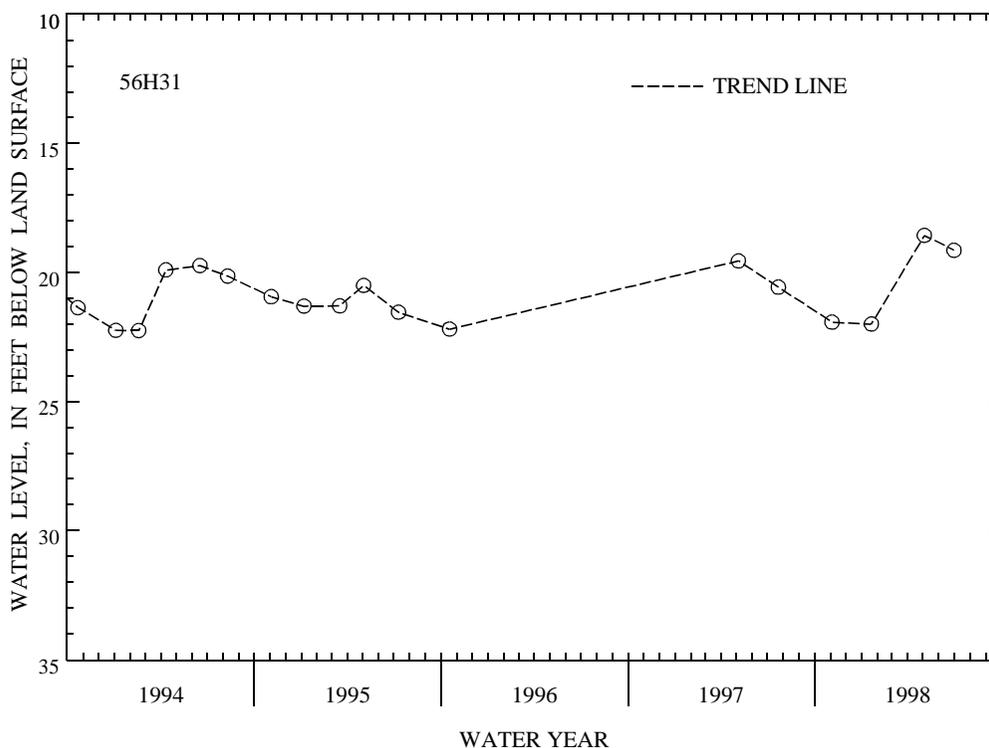
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--August 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.28 ft below land-surface datum, June 8, 1984; lowest measured, 23.80 ft below land-surface datum, Mar. 1, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	21.92	JAN 20	22.00	MAY 04	18.56	JUL 01	19.14
WATER YEAR 1998	HIGHEST	18.56	MAY 04, 1998				
	LOWEST	22.00	JAN 20, 1998				



GROUND-WATER LEVELS

JAMES CITY COUNTY

372315076415001. Local number 57H 14 SOW 095.

LOCATION.--Lat 37°23'15", long 76°41'50", Hydrologic Unit 02080107, 500 ft north of State Highway 606, 0.8 mi east of intersection of State Highway 606 and 646, and 3.3 mi east of Croaker. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 4 in., depth 123 ft, screened 118 to 123 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 95 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Mar. 3, 1988; 1.4 ft thereafter.

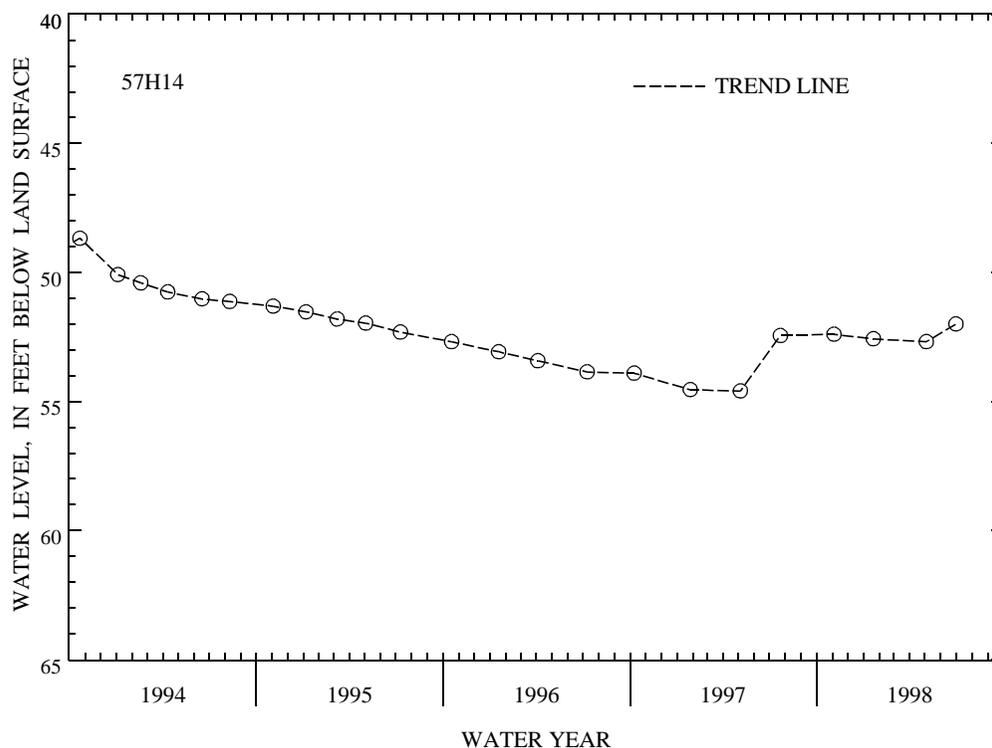
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--September 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 45.00 ft below land-surface datum, Sept. 21, 1978; lowest measured, 54.64 ft below land-surface datum, Apr. 19, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	52.39	JAN 20	52.57	MAY 04	52.86	JUL 01	51.99
WATER YEAR 1998 HIGHEST		51.99	JUL 01, 1998				
LOWEST		52.86	MAY 04, 1998				



GROUND-WATER LEVELS
KING AND QUEEN COUNTY

374328077012801. Local number, 54K 6 SOW 064.

LOCATION.--Lat 37°43'28", long 77°01'28", Hydrologic Unit 02080105, 100 ft west of State Highway 629, 0.2 mi southeast of Walkerton, and 0.25 mi south of intersection of State Highways 629 and 634. Owner: C. L. Walker.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in. to 66 ft, diameter 4 in. from 66 to 390 ft, depth 390 ft, screened 341 to 372 ft, 376 to 387 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 3, 1985, to July 11, 1995, bimonthly measurement with chalked tape. Apr. 30, 1979, to Oct. 2, 1985, occasional measurement with chalked tape. Jan. 5, 1974, to Apr. 30, 1979, continuous strip-chart recorder. Prior to Jan. 5, 1974, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 5 ft above sea level, from topographic map. Measuring point: Top of casing, 2.17 ft above land-surface datum prior to Nov. 18, 1985; 1.3 ft thereafter.

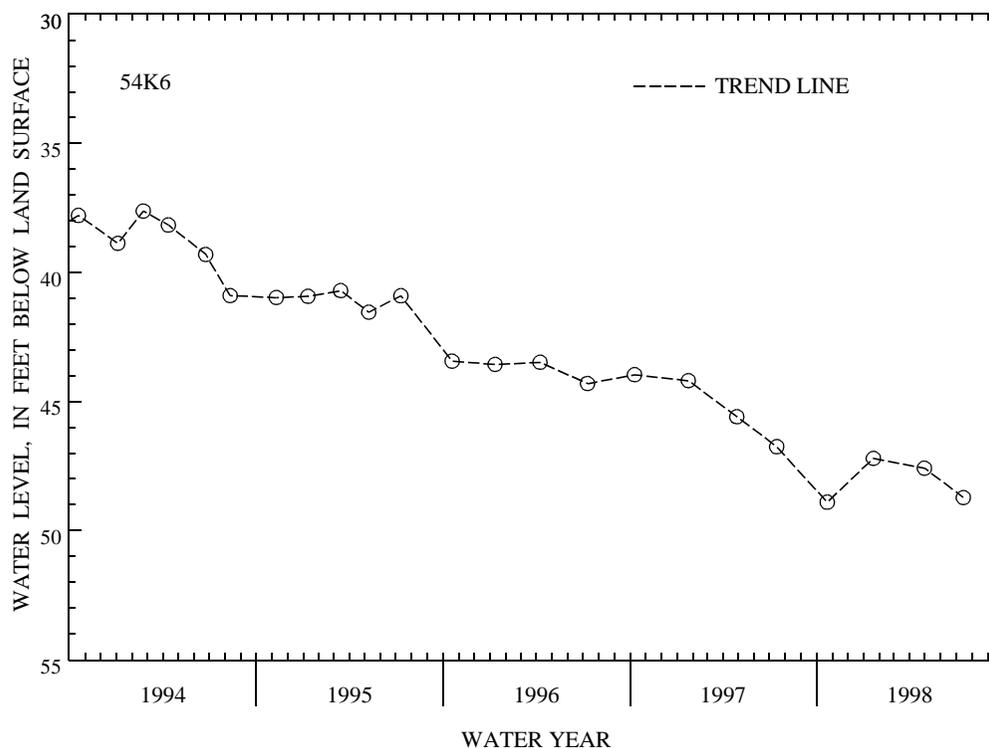
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

PERIOD OF RECORD.--August 1972 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.82 ft below land-surface datum, Aug. 1, 1972; lowest measured, 48.90 ft below land-surface datum, Oct. 22, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	48.90	JAN 20	47.20	APR 30	47.58	JUL 15	48.72
WATER YEAR 1998		HIGHEST	47.20	JAN 20, 1998			
		LOWEST	48.90	OCT 22, 1997			



GROUND-WATER LEVELS

LANCASTER COUNTY

374249076230101. Local number, 59K 1 SOW 015.

LOCATION.--Lat 37°42'49", long 76°23'01", Hydrologic Unit 02080104, at Lancaster County High School in Kilmarnock.
Owner: Lancaster County Public Schools.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 4 in. to 163 ft, diameter 2 in. from 163 to 716 ft, depth 716 ft, screened 706 to 716 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 2, 1985, to July 11, 1995, bimonthly measurement with chalked tape. Sept. 30, 1976, to Oct. 1, 1985, occasional measurement with chalked tape. Prior to Sept. 30, 1976, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 85 ft above sea level, from topographic map. Measuring point: Top of casing, at land-surface datum prior to July 29, 1991; 0.75 ft above land-surface datum thereafter.

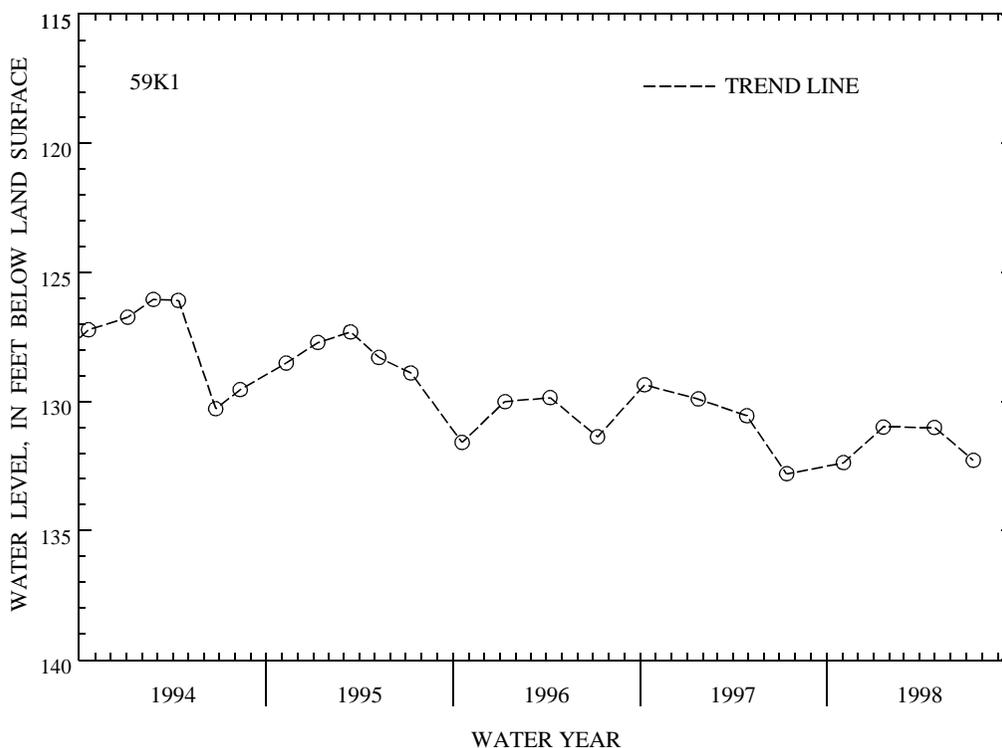
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

PERIOD OF RECORD.--October 1967 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 95.89 ft below land-surface datum, Feb. 20, 1968; lowest measured, 132.80 ft below land-surface datum, July 15, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 03	132.37	JAN 20	130.99	APR 30	131.00	JUL 15	132.28
WATER YEAR 1998	HIGHEST	130.99	JAN 20, 1998				
	LOWEST	132.37	NOV 03, 1997				



GROUND-WATER LEVELS

LOUDOUN COUNTY

391542077423801. Local number, 49Y 1 SOW 022.

LOCATION.--Lat 39°15'42", long 77°42'38", Hydrologic Unit 02070008, 4.2 mi southeast of Harpers Ferry. Owner: American Telephone and Telegraph Company.

AQUIFER.--Bedrock of Precambrian or Cambrian age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6.5 in., depth 516 ft, cased to 45 ft, open hole 45 to 516 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Oct. 1, 1996, bimonthly measurement with chalked tape. Sept. 30, 1974, to Sept. 30, 1985, occasional measurement with chalked tape. Prior to Sept. 30, 1974, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,100 ft above sea level, from topographic map. Measuring point: Top of casing, at land-surface datum.

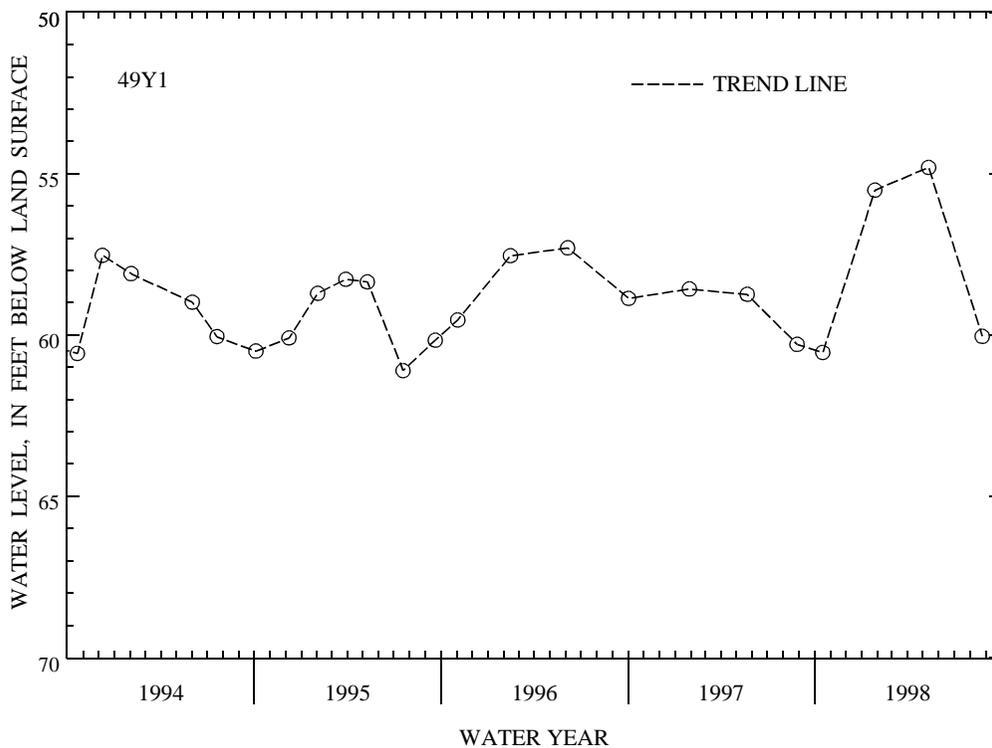
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--August 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 48.00 ft below land-surface datum, June 22, 1972; lowest measured, 61.80 ft below land-surface datum, Dec. 2, 1992.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	60.54	JAN 27	55.51	MAY 12	54.80	AUG 25	60.04
WATER YEAR 1998 HIGHEST		54.80	MAY 12, 1998				
LOWEST		60.54	OCT 17, 1997				



GROUND-WATER LEVELS

LOUISA COUNTY

380217078133701. Local number, 45N 1.

LOCATION.--Lat 38°02'17", long 78°13'43", Hydrologic Unit 02080106, off State Highway 640 on Tyler property, 0.9 mi southeast of Thelma, and 3 mi southwest of Boswells Tavern. Owner: Tyler.

AQUIFER.--Metagraywacke, quartzose schist, and melange of Cambrian age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in., depth 56 ft, length of casing unknown.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 500 ft above sea level, from topographic map. Measuring point: Top of casing, 1.95 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction.

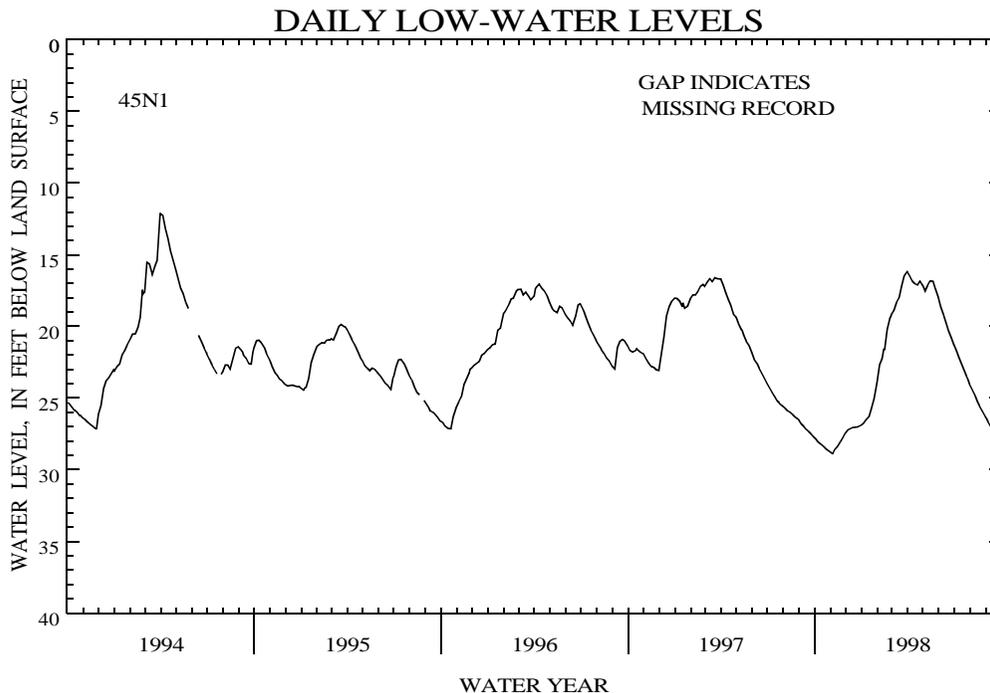
PERIOD OF RECORD.--July 1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 10.63 ft below land-surface datum, Apr. 18, 19, 1993; lowest measured, 35.17 ft below land-surface datum, Dec. 2, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	27.90	28.87	27.22	26.75	22.68	18.88	16.49	17.52	18.64	21.69	24.38	26.63
10	28.12	28.55	27.12	26.50	22.23	18.35	16.83	17.12	19.22	22.18	24.74	26.95
15	28.27	28.35	27.04	26.29	21.58	18.01	17.02	16.80	19.70	22.57	25.20	27.26
20	28.41	28.07	27.02	25.74	20.20	17.18	17.10	16.83	20.35	23.05	25.57	27.55
25	28.60	27.77	27.00	25.01	19.45	16.49	16.83	17.37	20.80	23.48	25.87	27.83
EOM	28.74	27.44	26.88	23.89	19.17	16.18	17.10	17.96	21.20	24.02	26.27	28.12

WATER YEAR 1998	HIGHEST INSTANTANEOUS	16.06	MAR 28, 1998
	LOWEST INSTANTANEOUS	28.88	NOV 06, 07, 1997



GROUND-WATER LEVELS

LOUISA COUNTY

380131078001001. Local number, 46N 1 SOW 056.

LOCATION.--Lat 38°01'31", long 78°00'10", Hydrologic Unit 02080106, 200 ft northeast of intersection of U.S. Highway 33 and State Highway 208 in Louisa. Owner: Town of Louisa.

AQUIFER.--Metamorphosed sedimentary and volcanic rocks of unknown age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 132 ft, length of casing unknown.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 4, 1985, to Sept. 30, 1993, bimonthly measurement with chalked tape. Mar. 31, 1979, to Oct. 4, 1985, occasional measurement with chalked tape. Prior to Mar. 31, 1979, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 455 ft above sea level, from topographic map. Measuring point: Top of casing, 0.6 ft above land-surface datum.

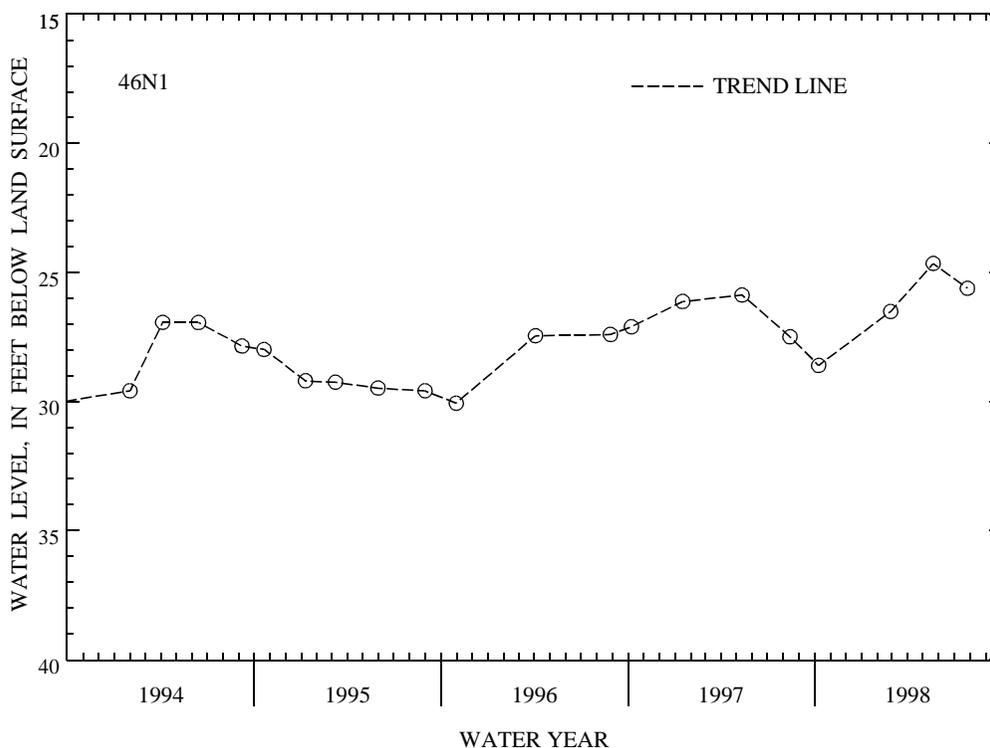
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 24.65 ft below land-surface datum, May 21, 1998; lowest measured, 34.78 ft below land-surface datum, Dec. 8, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	28.60	FEB 27	26.51	MAY 21	24.65	JUL 27	25.61
WATER YEAR 1998		HIGHEST	24.65	MAY 21, 1998			
		LOWEST	28.60	OCT 09, 1997			



GROUND-WATER LEVELS

CITY OF NEWPORT NEWS

371027076335601. Local number, 58F 1 SOW 002.

LOCATION.--Lat 37°10'27", long 76°33'56", Hydrologic Unit 02080206, on shore of Lee Hall Reservoir, 0.15 mi north of intersection of State Highway 105 and U.S. Highway 60, and 0.65 mi northeast of Fort Eustis in Newport News. Owner: City of Newport News.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 10 in. to 431.3 ft, diameter 8 in. from 431.3 to 443 ft, diameter 6 in. from 443 to 497 ft, depth 497 ft, screened 476 to 493 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 20 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 2.3 ft above land-surface datum.

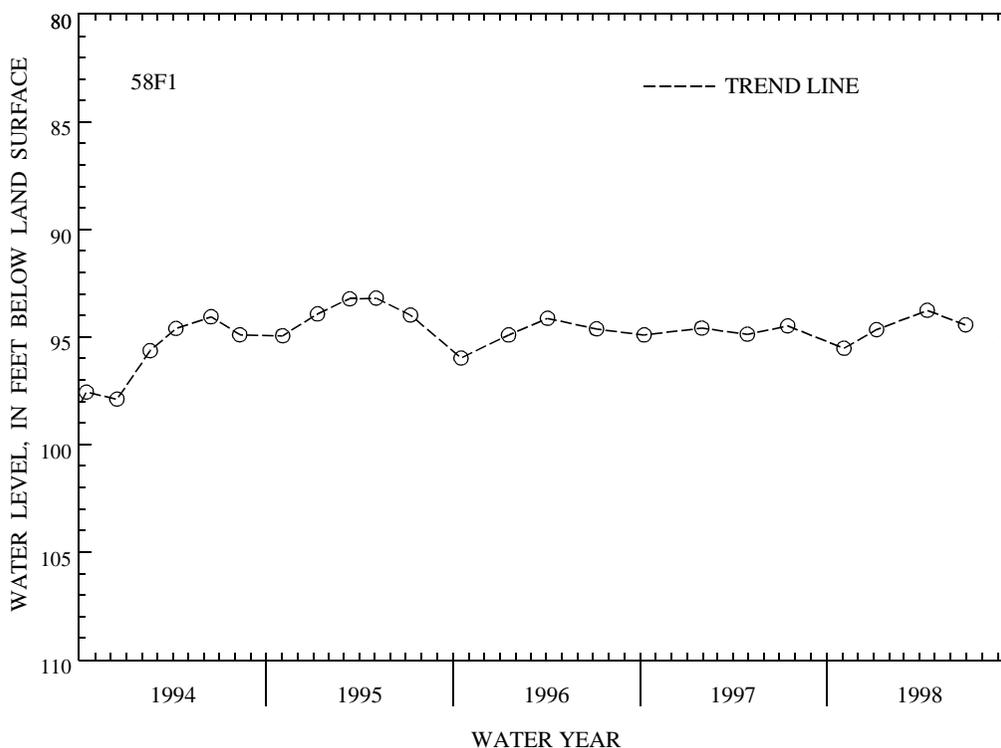
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--January 1968 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 54.76 ft below land-surface datum, May 10, 1969; lowest measured, 100.37 ft below land-surface datum, Aug. 18, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	95.52	JAN 07	94.65	APR 16	93.76	JUN 30	94.43
WATER YEAR 1998		HIGHEST	93.76	APR 16, 1998			
		LOWEST	95.52	NOV 04, 1997			



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

371307075583501. Local number, 63F 15 SOW 105A.

LOCATION.--Lat 37°13'07", 75°58'35", Hydrologic Unit 02080109, 50 ft south of State Highway 644, 0.3 mi west of intersection of State Highway 644 and U.S. Highway 13, and 1.3 mi north of Cheapside. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 130 ft, screened 120 to 130 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 5, 1985 to Oct. 24, 1995, continuous strip-chart recorder. Prior to Oct. 5, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 31.97 ft above sea level. Measuring point: Top of recorder shelf, 1.1 ft above land-surface datum prior to July 21, 1987; 1.4 ft thereafter.

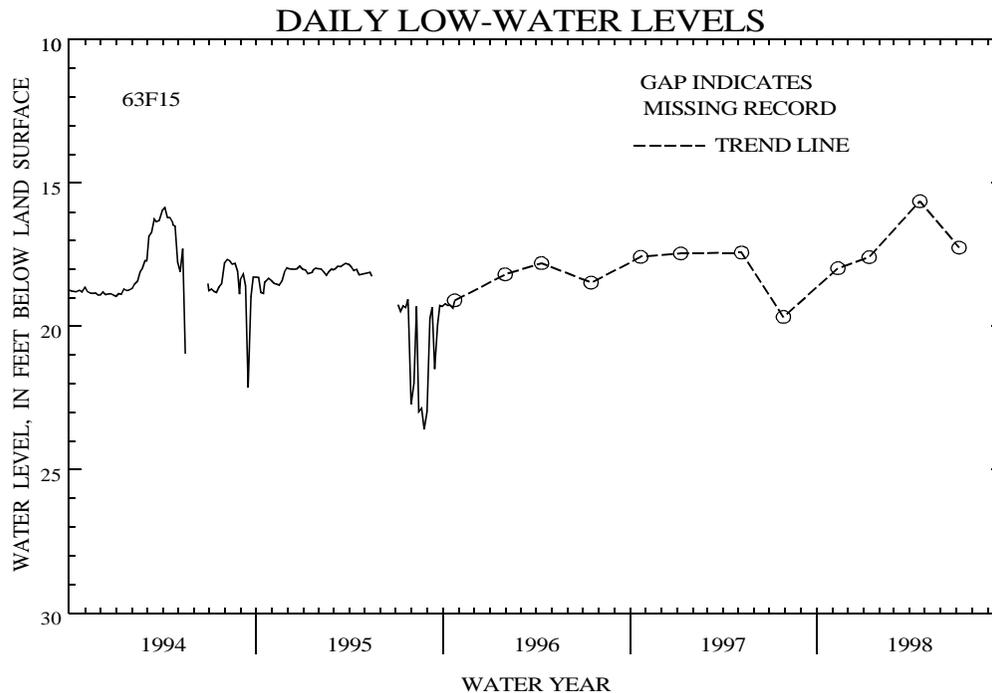
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction. Water level affected by local pumpage.

PERIOD OF RECORD.--June 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.44 ft below land-surface datum, Apr. 12, 1982; lowest recorded, 24.62 ft below land-surface datum, June 15, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	17.97	JAN 12	17.58	APR 21	15.63	JUL 07	17.25
WATER YEAR 1998	HIGHEST	15.63	APR 21, 1998				
	LOWEST	17.97	NOV 12, 1997				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

371307075583502. Local number, 63F 16 SOW 105C.

LOCATION.--Lat 37°13'07", long 75°58'35", Hydrologic Unit 02080109, 50 ft south of State Highway 644, 0.3 mi west of intersection of State Highway 644 and U.S. Highway 13, and 1.3 mi north of Cheapside. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 285 ft, screened 275 to 285 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 31.16 ft above sea level. Measuring point: Top of casing, 0.1 ft above land-surface datum prior to Mar. 1, 1994; 0.6 ft thereafter.

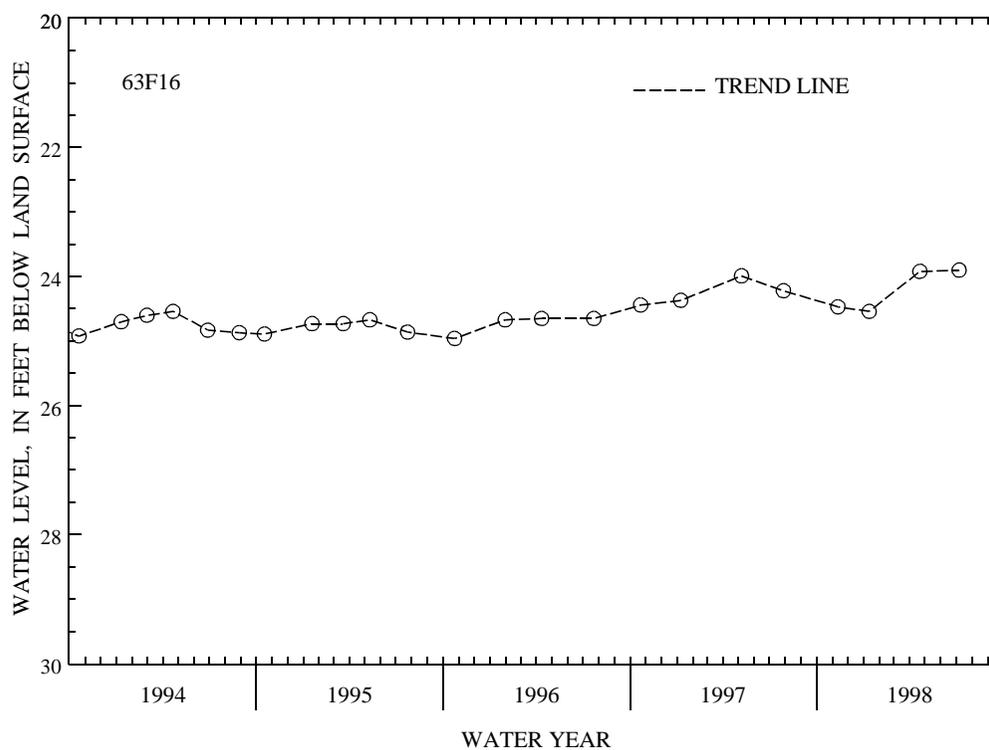
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--June 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.90 ft below land-surface datum, July 7, 1998; lowest measured, 29.58 ft below land-surface datum, May 23, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	24.47	JAN 12	24.54	APR 21	23.92	JUL 07	23.90
WATER YEAR 1998	HIGHEST	23.90	JUL 07, 1998				
	LOWEST	24.54	JAN 12, 1998				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

371307075583503. Local number, 63F 17 SOW 105B.

LOCATION.--Lat 37°13'07", long 75°58'35", Hydrologic Unit 02080109, 50 ft south of State Highway 644, 0.3 mi west of intersection of State Highway 644 and U.S. Highway 13, and 1.3 mi north of Cheapside. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 196 ft, screened 186 to 196 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 31.50 ft above sea level. Measuring point: Top of casing, 0.5 ft above land-surface datum, prior to July 22, 1996. 1.0 ft thereafter.

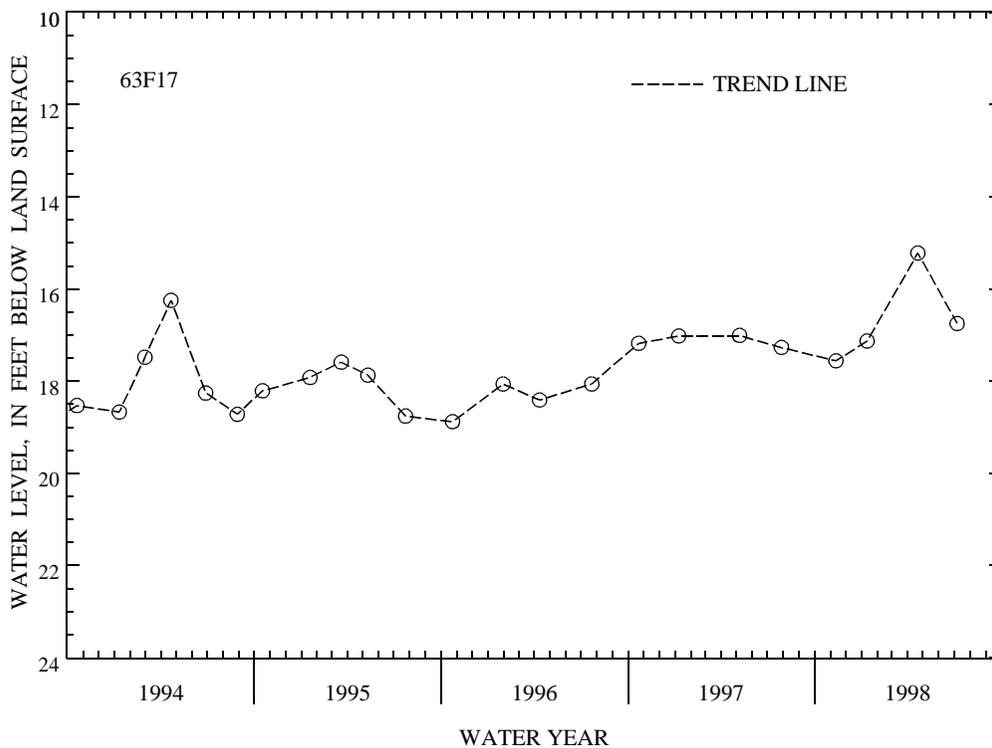
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--June 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.22 ft below land-surface datum, Apr. 21, 1998; lowest measured, 21.68 ft below land-surface datum, Feb. 11, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	17.56	JAN 12	17.13	APR 21	15.22	JUL 07	16.75
WATER YEAR 1998 HIGHEST		15.22	APR 21, 1998				
LOWEST		17.56	NOV 12, 1997				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

371307075583601. Local number, 63F 34.

LOCATION.--Lat 37°13'07", long 75°58'36", Hydrologic Unit 02080109, 50 ft south of State Highway 644, 0.35 mi west of intersection of U.S. Highway 13 and State Highway 644, and 1.55 mi northwest of Capeville. Owner: U.S. Geological Survey.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Driven observation water well, diameter 2 in., depth 13 ft, screened 10 to 13 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 16 to Sept. 30, 1989, bimonthly measurement with chalked tape by USGS personnel. Jan. 22, 1988, to Aug. 16, 1989, digital recorder--60-minute punch. Prior to Jan. 22, 1988, bimonthly measurement with chalked tape.

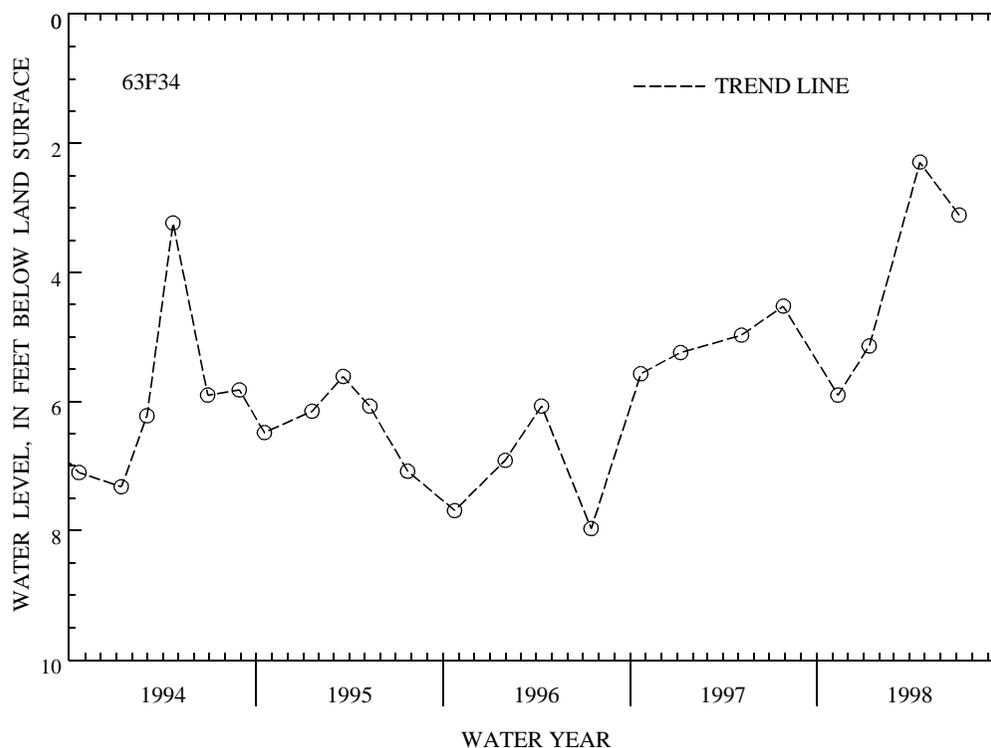
DATUM.--Elevation of land-surface datum is 31.15 ft above sea level. Measuring point: Top of casing, 1.85 ft above land-surface datum.

PERIOD OF RECORD.--September 1987 to current year. Unpublished records available prior to October 1987 in files of the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.29 ft below land-surface datum, Apr. 21, 1998; lowest measured, 9.08 ft below land-surface datum, Feb. 4, 5, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	5.90	JAN 12	5.14	APR 21	2.29	JUL 07	3.11
WATER YEAR 1998		HIGHEST	2.29	APR 21, 1998			
		LOWEST	5.90	NOV 12, 1997			



GROUND-WATER LEVELS
NORTHAMPTON COUNTY

370807075570802. Local number, 63F 51 SOW 182A

LOCATION.--Lat 37°08'07", long 75°57'08", Hydrologic Unit 02080110, at Kiptopeke Wildlife Refuge, 0.6 mi southeast of State Highway 600, 0.8 mi southeast of Kiptopeke, and 0.9 mi southeast of intersection of State Highway 600 and U.S. Highway 13. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 1,730 ft, screened 1,720 to 1,730 ft.

INSTRUMENTATION.--Occasional measurement with manometer and/or chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 24, 1995, bimonthly measurement with manometer and/or chalked tape.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

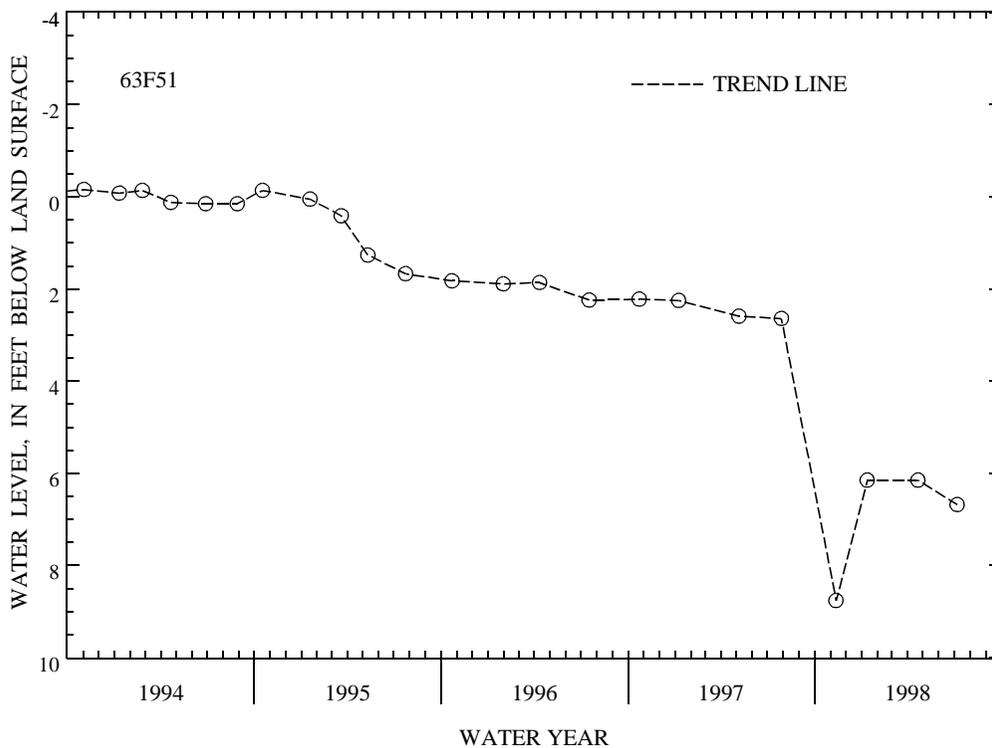
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by occasional pumpage for water-quality sampling.

PERIOD OF RECORD.--May 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.35 ft above land-surface datum, May 7, 1990; lowest measured, 8.76 ft below land-surface datum, Nov. 12, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	8.76	JAN 12	6.15	APR 21	6.15	JUL 07	6.68
WATER YEAR 1998 HIGHEST		6.15	JAN 12, 1998, APR 21, 1998				
LOWEST		8.76	NOV 12, 1997				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

370807075570803. Local number, 63F 52 SOW 182B.

LOCATION.--Lat 37°08'07", long 75°57'08", Hydrologic Unit 02080110, at Kiptopeke Wildlife Refuge, 0.6 mi southeast of State Highway 600, 0.8 mi southeast of Kiptopeke, and 0.9 mi southeast of intersection of State Highway 600 and U.S. Highway 13. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 1,040 ft, diameter 2 in. from 1,040 to 1,320 ft, depth 1,320 ft, screened 1,300 to 1,320 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 24, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

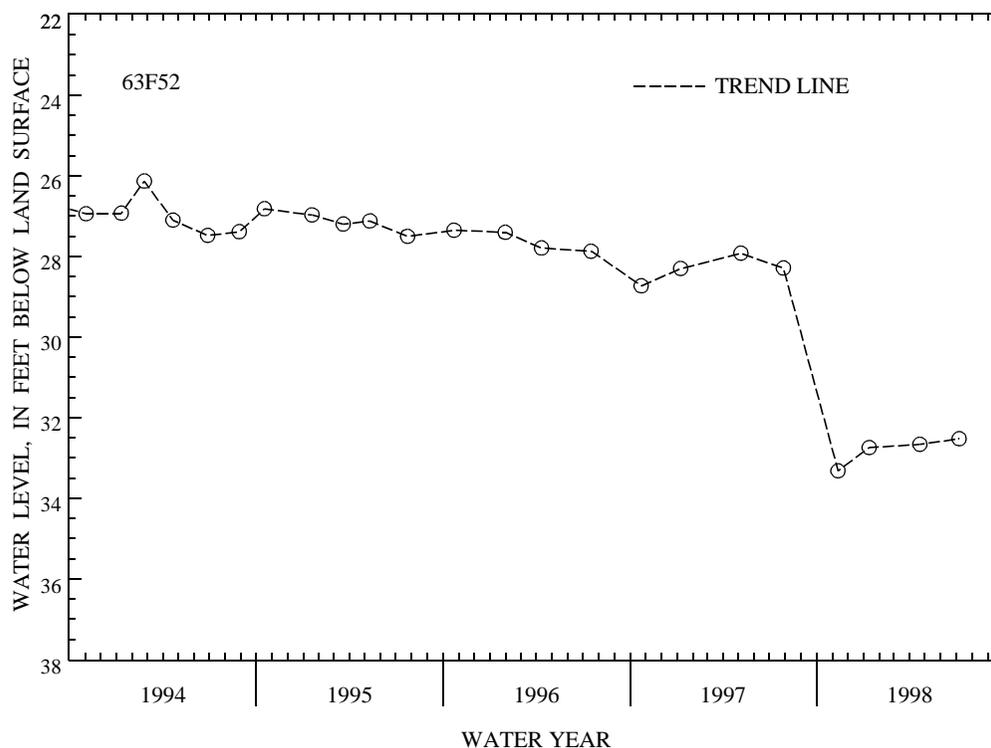
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by occasional pumpage for water-quality sampling.

PERIOD OF RECORD.--May 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.12 ft below land-surface datum, Dec. 3, 1990; lowest measured, 33.32 ft below land-surface datum, Nov. 12, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	33.32	JAN 12	32.74	APR 21	32.66	JUL 07	32.52
WATER YEAR 1998	HIGHEST	32.52	JUL 07, 1998				
	LOWEST	33.32	NOV 12, 1997				



GROUND-WATER LEVELS
NORTHAMPTON COUNTY

370807075570804. Local number, 63F 53 SOW 182C.

LOCATION.--Lat 37°08'07", long 75°57'08", Hydrologic Unit 02080110, at Kiptopeke Wildlife Refuge, 0.6 mi south-east of State Highway 600, 0.8 mi southeast of Kiptopeke, and 0.9 mi southeast of intersection of State Highway 600 and U.S. Highway 13. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 188 ft, diameter 2 in. from 188 to 220 ft, depth 220 ft, screened 210 to 220 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

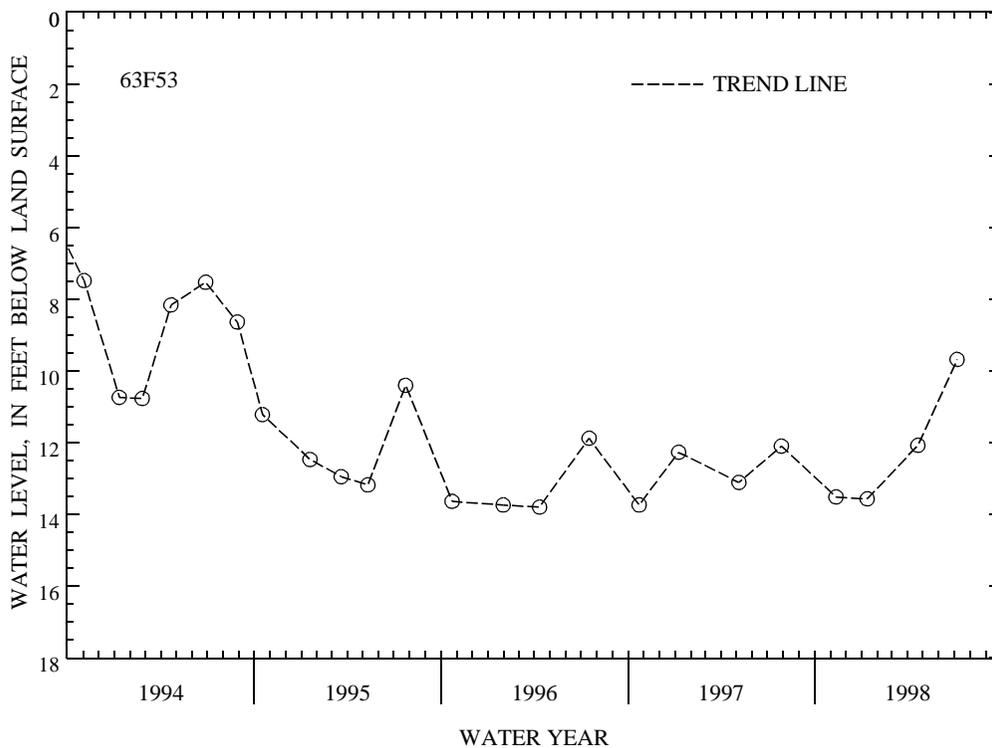
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--May 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.90 ft below land-surface datum, Jan. 22, 1991; lowest measured, 13.80 ft below land-surface datum, Apr. 11, 1996.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	13.52	JAN 12	13.57	APR 21	12.08	JUL 07	9.68
WATER YEAR 1998 HIGHEST		9.68	JUL 07, 1998				
LOWEST		13.57	JAN 12, 1998				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

370807075570805. Local number, 63F 54 SOW 182D.

LOCATION.--Lat 37°08'07", long 75°57'08", Hydrologic Unit 02080110, at Kiptopeke Wildlife Refuge, 0.6 mi southeast of State Highway 600, 0.8 mi southeast of Kiptopeke, and 0.9 mi southeast of intersection of State Highway 600 and U.S. Highway 13. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 55 ft, screened 45 to 55 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 24, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

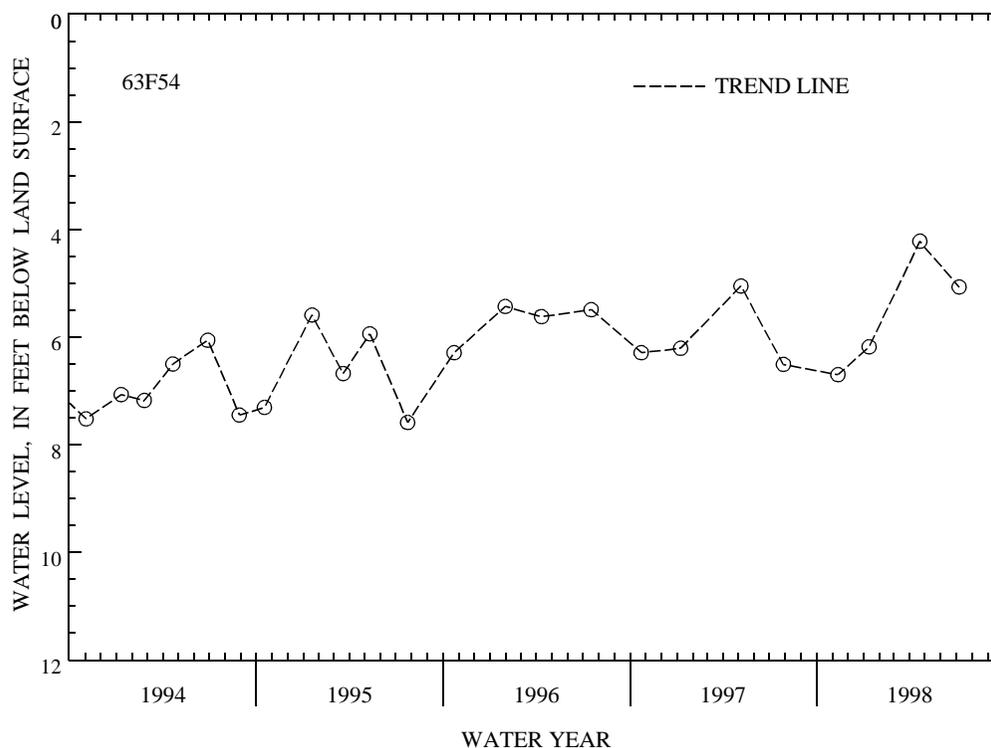
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--May 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.22 ft below land-surface datum, Apr. 21, 1998; lowest measured, 7.90 ft below land-surface datum, July 8, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	6.70	JAN 12	6.18	APR 21	4.22	JUL 07	5.07
WATER YEAR 1998	HIGHEST	4.22	APR 21, 1998				
	LOWEST	6.70	NOV 12, 1997				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

370807075570806. Local number, 63F 55 SOW 182E.

LOCATION.--Lat 37°08'07", long 75°57'08", Hydrologic Unit 02080110, at Kiptopeke Wildlife Refuge, 0.6 mi southeast of State Highway 600, 0.8 mi southeast of Kiptopeke, and 0.9 mi southeast of intersection of State Highway 600 and U.S. Highway 13. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 20 ft, screened 10 to 20 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 24, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

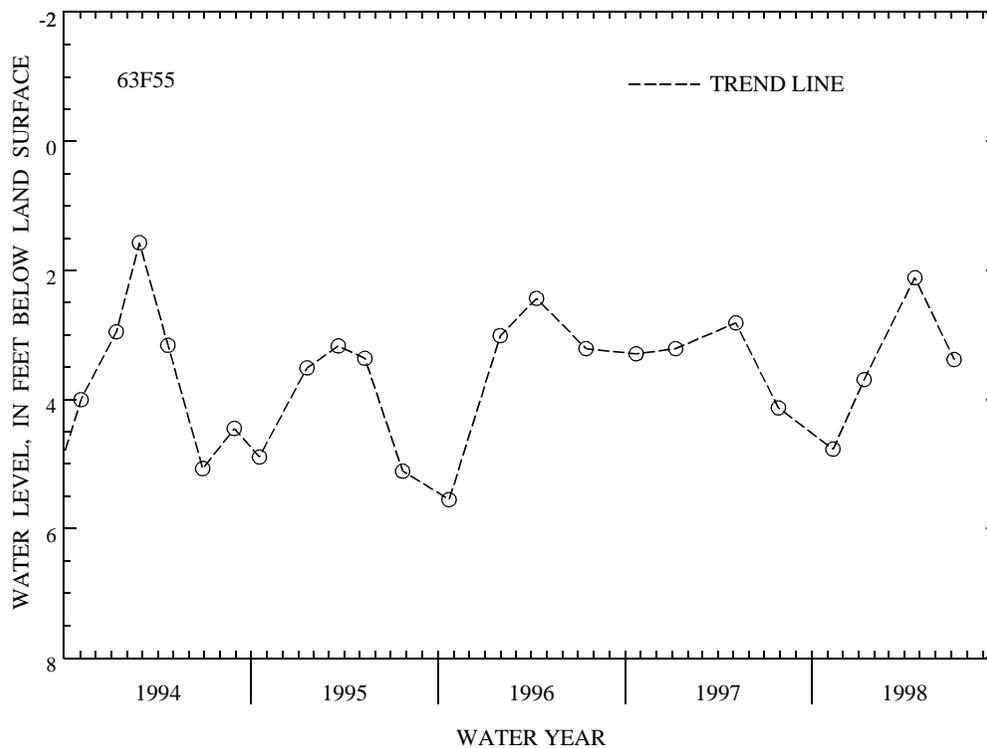
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--May 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.57 ft below land-surface datum, Feb. 24, 1994; lowest measured, 6.20 ft below land-surface datum, Oct. 9, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	4.77	JAN 12	3.69	APR 21	2.11	JUL 07	3.38
WATER YEAR 1998	HIGHEST	2.11	APR 21, 1998				
	LOWEST	4.77	NOV 12, 1997				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

371709075560801. Local number, 63G 15 SOW 104C.

LOCATION.--Lat 37°17'09", long 75°56'08", Hydrologic Unit 02080110, 50 ft north of State Highway 639, 0.1 mi east of intersection of State Highways 600 and 639, and 0.7 mi west of Oyster. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 310 ft, screened 300 to 310 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. July 15, 1985 to Oct. 23, 1995, continuous strip-chart recorder. Prior to July 15, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 28 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 1.24 ft above land-surface datum prior to Nov. 10, 1986; 1.75 ft prior to June 4, 1996. Top of casing, 1.50 ft thereafter.

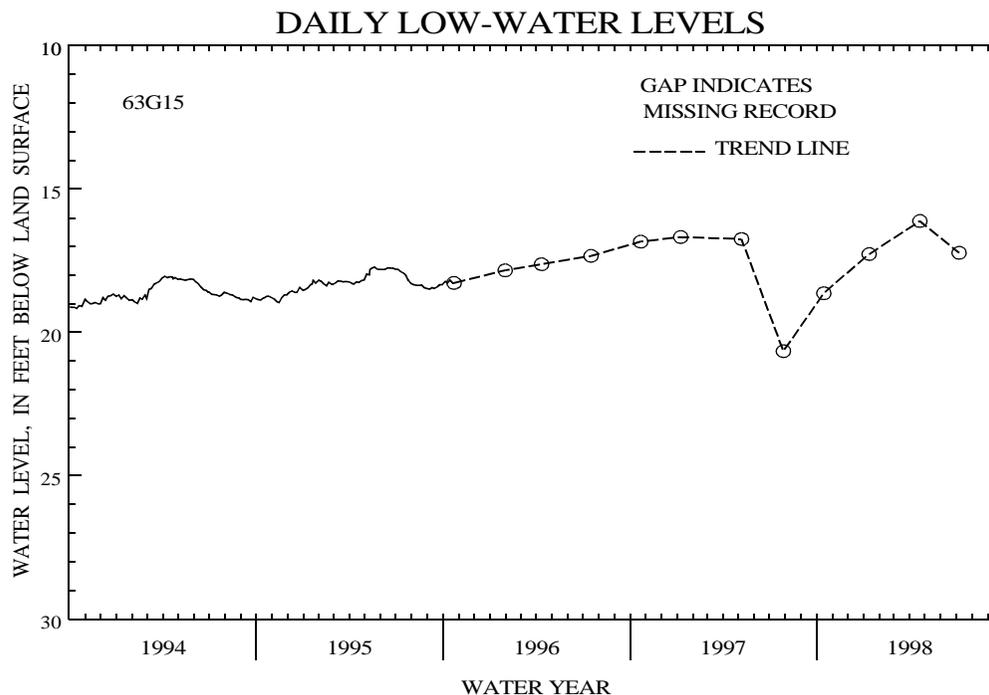
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by pumpage.

PERIOD OF RECORD.--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 16.11 ft below land-surface datum, Apr. 21, 1998; lowest measured, 27.96 ft below land-surface datum, Oct. 8, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	18.63	JAN 12	17.26	APR 21	16.11	JUL 07	17.22
WATER YEAR 1998	HIGHEST	16.11	APR 21, 1998				
	LOWEST	18.63	OCT 15, 1997				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

371709075560802. Local number, 63G 16 SOW 104B.

LOCATION.--Lat 37°17'09", 75°56'08", Hydrologic Unit 02080110, 50 ft north of State Highway 639, 0.1 mi east of intersection of State Highways 600 and 639, and 0.7 mi west of Oyster. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 240 ft, screened 230 to 240 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 28 ft above sea level, from topographic map. Measuring point: Top of casing, 0.4 ft above land-surface datum prior to Feb. 29, 1988; 0.9 ft thereafter.

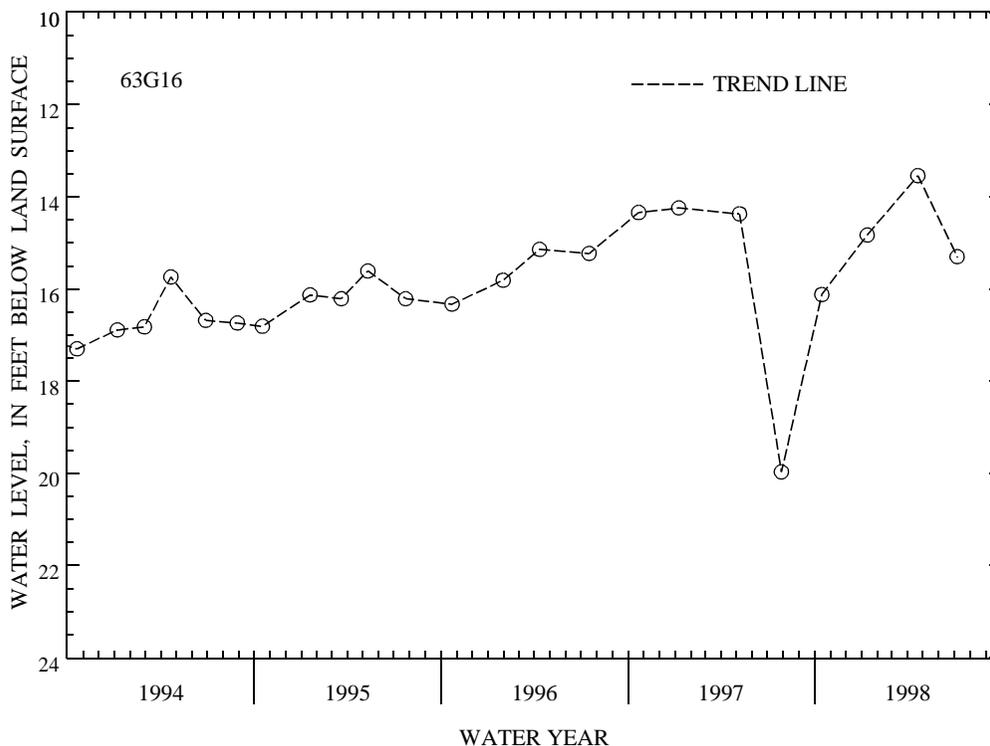
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by pumpage.

PERIOD OF RECORD.--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.54 ft below land-surface datum, Apr. 21, 1998; lowest measured, 23.47 ft below land-surface datum, Oct. 8, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	16.12	JAN 12	14.83	APR 21	13.54	JUL 07	15.30
WATER YEAR 1998 HIGHEST		13.54	APR 21, 1998				
LOWEST		16.12	OCT 15, 1997				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

371653075584801. Local number, 63G 22 SOW 111A.

LOCATION.--Lat 37°16'53", long 75°58'48", Hydrologic Unit 02080109, 50 ft west of U.S. Highway 13, 0.4 mi north of intersection of U.S. Highway 13 and State Highway 641, and 0.7 mi southwest of Cheriton. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 150 ft, screened 140 to 150 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, at land-surface datum prior to Apr. 27, 1987; 1.60 ft Apr. 27, 1987, to Feb. 29, 1988; 1.1 ft Mar. 1, 1988, to June 19, 1989; 0.80 ft thereafter.

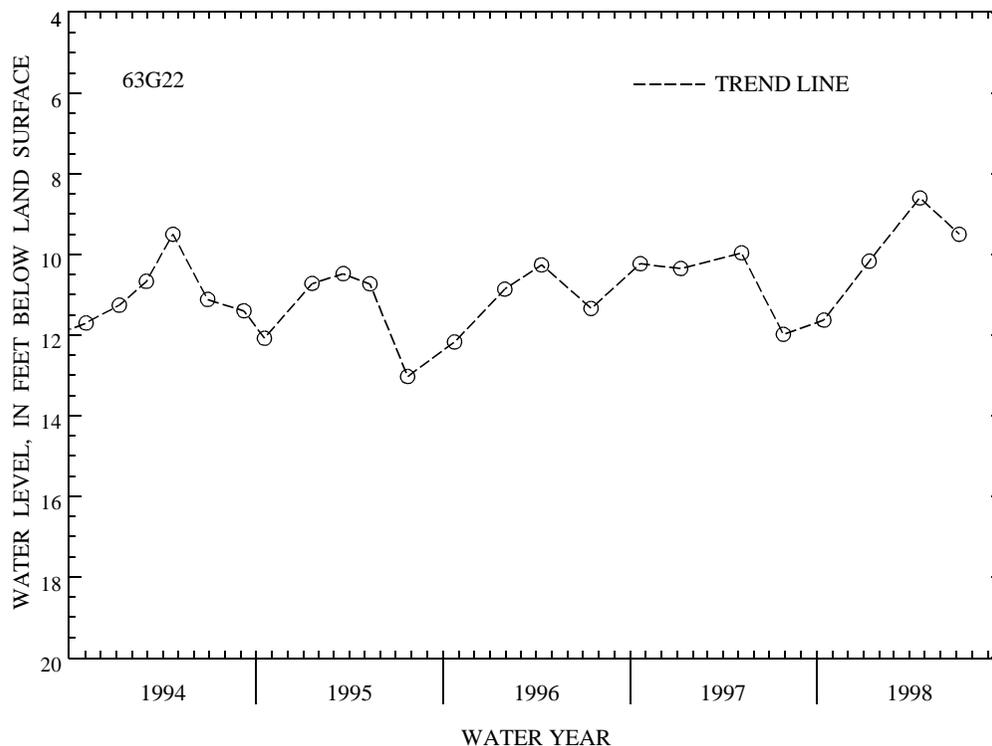
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by pumpage.

PERIOD OF RECORD.--July 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.60 ft below land-surface datum, Apr. 21, 1998; lowest measured, 14.51 ft below land-surface datum, Feb. 17, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	11.63	JAN 12	10.17	APR 21	8.60	JUL 07	9.50
WATER YEAR 1998		HIGHEST	8.60	APR 21, 1998			
		LOWEST	11.63	OCT 15, 1997			



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

371653075584802. Local number, 63G 23 SOW 111B.

LOCATION.--Lat 37°16'53", long 75°58'48", Hydrologic Unit 02080109, 50 ft west of U.S. Highway 13, 0.4 mi north of intersection of U.S. Highway 13 and State Highway 641, and 0.7 mi southwest of Cheriton. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 280 ft, screened 270 to 280 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. July 20, 1985 to Oct 24, 1995, continuous strip chart recorder. Prior to July 20, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 1.42 ft above land-surface datum prior to July 20, 1987; 1.56 ft thereafter.

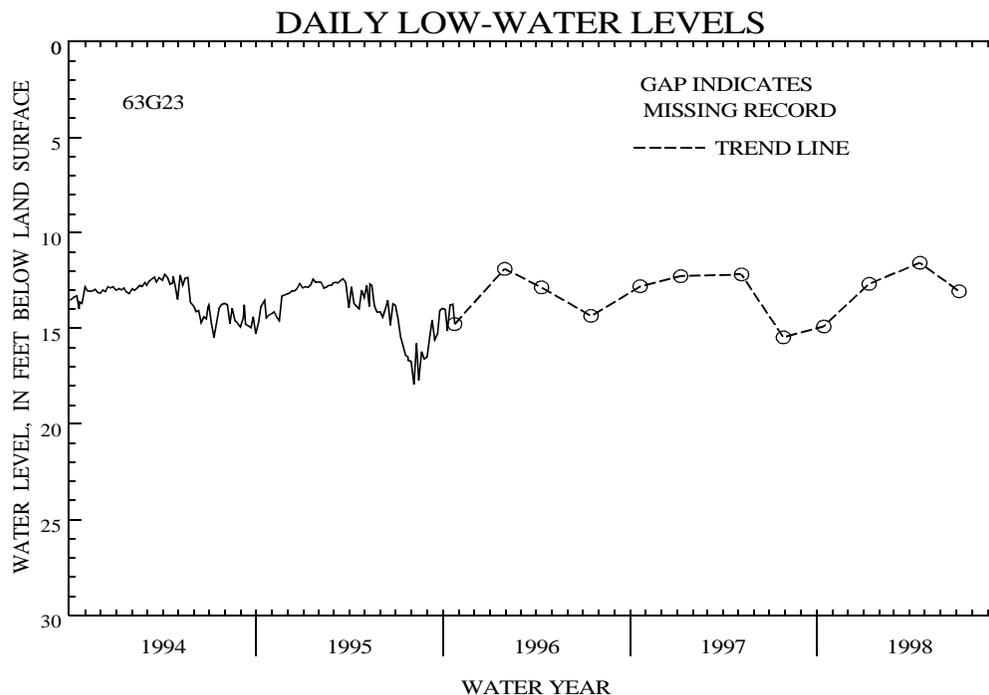
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by pumpage.

PERIOD OF RECORD.--July 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.01 ft below land-surface datum, Dec. 30, 1982; lowest measured, 22.47 ft below land-surface datum, Sept. 15, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	14.89	JAN 12	12.66	APR 21	11.56	JUL 07	13.05
WATER YEAR 1998 HIGHEST		11.56	APR 21, 1998				
LOWEST		14.89	OCT 15, 1997				



GROUND-WATER LEVELS
NORTHAMPTON COUNTY

371653075584804. Local number, 63G 25 SOW 111S.

LOCATION.--Lat 37°16'53", long 75°58'48", Hydrologic Unit 02080109, 50 ft west of U.S. Highway 13, 0.4 mi north of intersection of U.S. Highway 13 and State Highway 641, and 0.7 mi southwest of Cheriton. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 1.25 in., depth 70 ft, screened 60 to 70 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 0.64 ft above land-surface datum prior to Oct. 10, 1996; 0.60 ft thereafter.

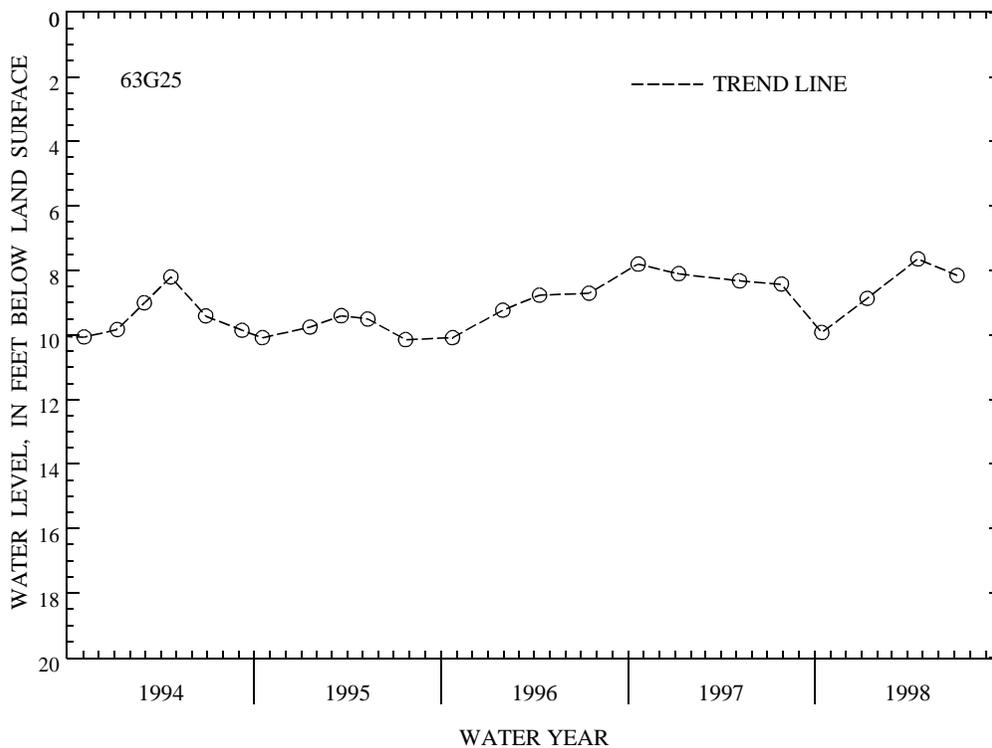
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--July 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.64 ft below land-surface datum, Apr. 21, 1998; lowest measured, 10.82 ft below land-surface datum, Nov. 11, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	9.92	JAN 12	8.86	APR 21	7.64	JUL 07	8.15
WATER YEAR 1998	HIGHEST	7.64	APR 21, 1998				
	LOWEST	9.92	OCT 15, 1997				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

372705075555901. Local number, 63H 4 SOW 103C.

LOCATION.--Lat 37°27'06", long 75°55'59", Hydrologic Unit 02080109, 0.2 mi north of State Highway 619, 0.5 mi northwest of intersection of State Highways 619 and 622, and 0.5 mi northwest of Bridgetown. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 235 ft, screened 225 to 235 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 17 ft above sea level, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum prior to Mar 1, 1988; 0.8 ft thereafter.

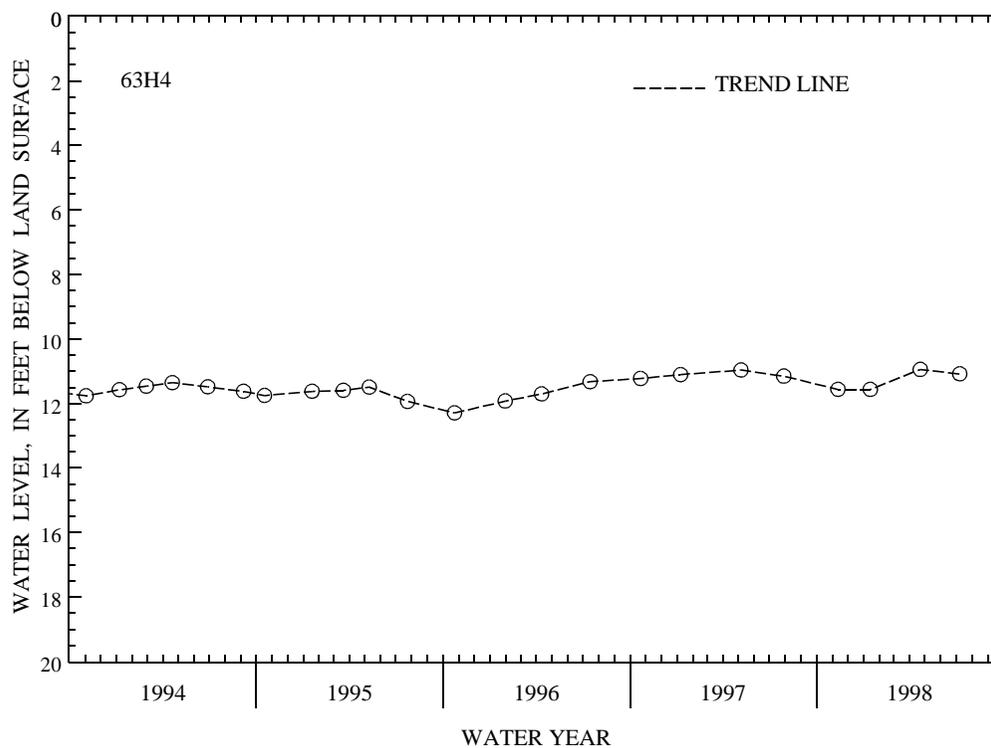
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--October 1977 to current year. Unpublished records available prior to October 1987 in file of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.15 ft below land-surface datum, May 1, 1979; lowest measured, 12.56 ft below land-surface datum, Nov. 11, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	11.56	JAN 14	11.56	APR 22	10.94	JUL 08	11.08
WATER YEAR 1998	HIGHEST	10.94	APR 22, 1998				
	LOWEST	11.56	NOV 12, 1997, JAN 14, 1998				



GROUND-WATER LEVELS
NORTHAMPTON COUNTY

372705075555902. Local number, 63H 5 SOW 103B.

LOCATION.--Lat 37°27'05", long 75°55'59", Hydrologic Unit 02080109, 0.2 mi north of State Highway 619, 0.5 mi northwest of intersection of State Highways 619 and 622, and 0.5 mi northwest of Bridgetown. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 132 ft, screened 122 to 132 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 17 ft above sea level, from topographic map. Measuring point: Top of casing, 0.55 ft above land-surface datum prior to Mar. 1, 1988; 1.25 ft thereafter.

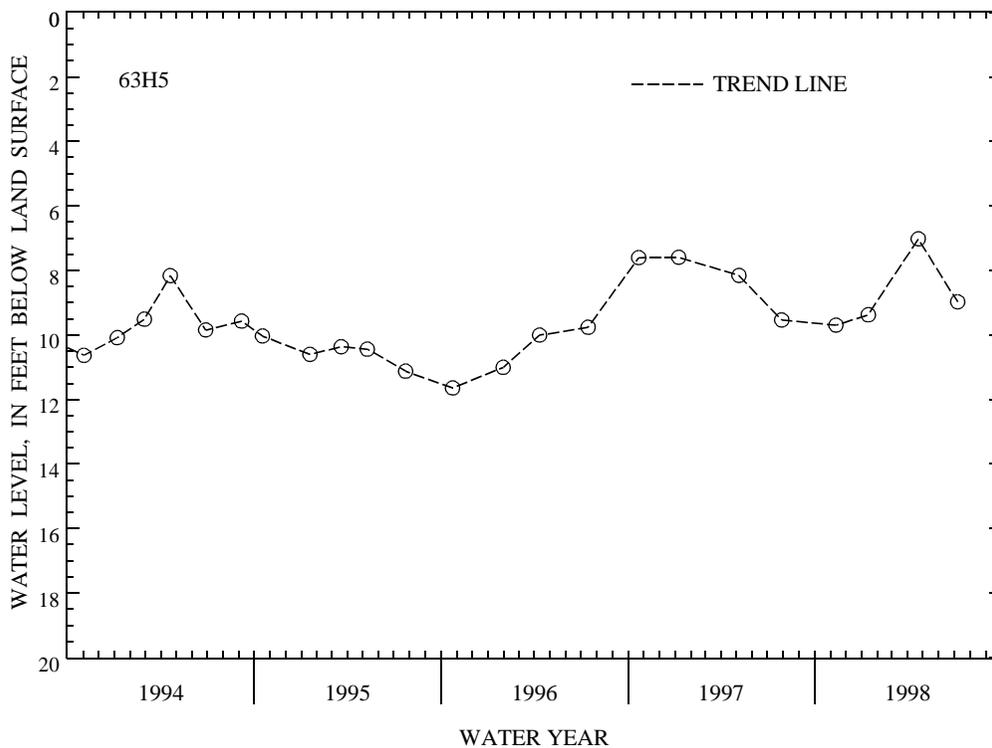
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.90 ft below land-surface datum, Feb. 1, 1979; lowest measured, 12.00 ft below land-surface datum, Jan. 9, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	9.69	JAN 14	9.37	APR 22	7.02	JUL 08	8.97
WATER YEAR 1998 HIGHEST		7.02	APR 22, 1998				
LOWEST		9.69	NOV 12, 1997				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

372705075555903. Local number, 63H 6 SOW 103A.

LOCATION.--Lat 37°27'05", long 75°55'59", Hydrologic Unit 02080109, 0.2 mi north of State Highway 619, 0.5 mi northwest of intersection of State Highways 619 and 622, and 0.5 mi northwest of Bridgetown. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 37 ft, screened 27 to 37 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 17 ft above sea level, from topographic map. Measuring point: Top of casing, 0.2 ft above land-surface datum.

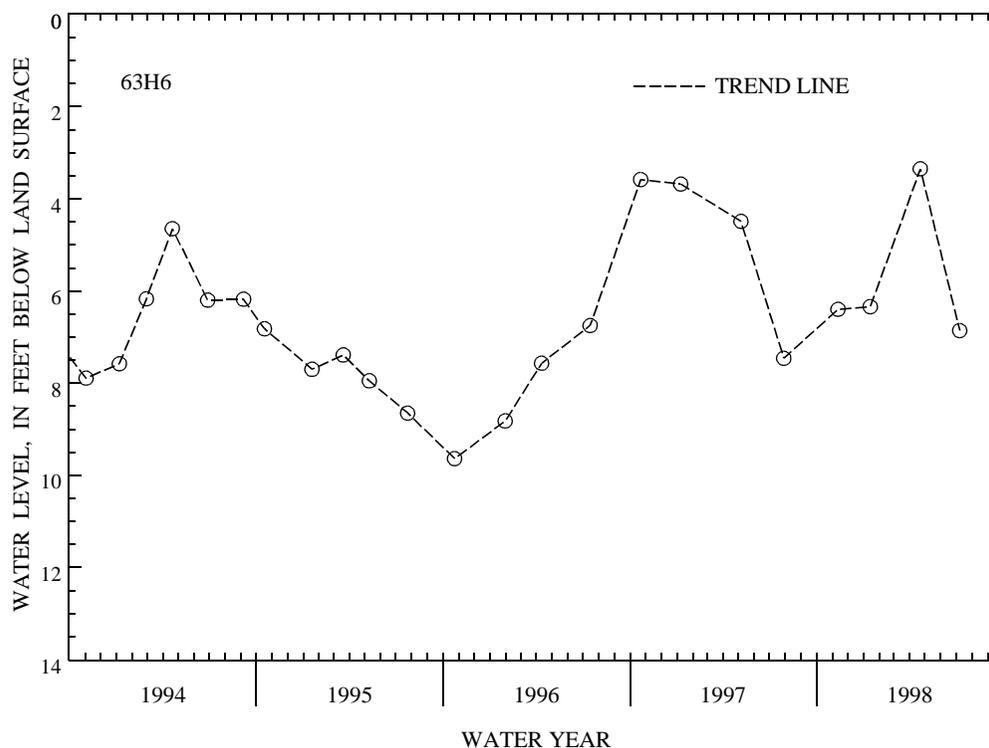
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.94 ft below land-surface datum, Aug. 2, 1979; lowest measured, 9.93 ft below land-surface datum, Jan. 9, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	6.40	JAN 14	6.34	APR 22	3.35	JUL 08	6.86
WATER YEAR 1998	HIGHEST	3.35	APR 22, 1998				
	LOWEST	6.86	JUL 08, 1998				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

373230075541001. Local number, 63J 1 SOW 113A.

LOCATION.--Lat 37°32'16", long 75°54'07", Hydrologic Unit 02080109, 0.15 mi north of State Highway 183, 0.4 mi east of intersection of State Highways 183 and 611, and 1.3 mi west of Wardtown. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 120 ft, screened 110 to 120 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 22 ft above sea level, from topographic map. Measuring point: Top of casing, 1.32 ft above land-surface datum prior to Oct. 6, 1988; 1.5 ft thereafter.

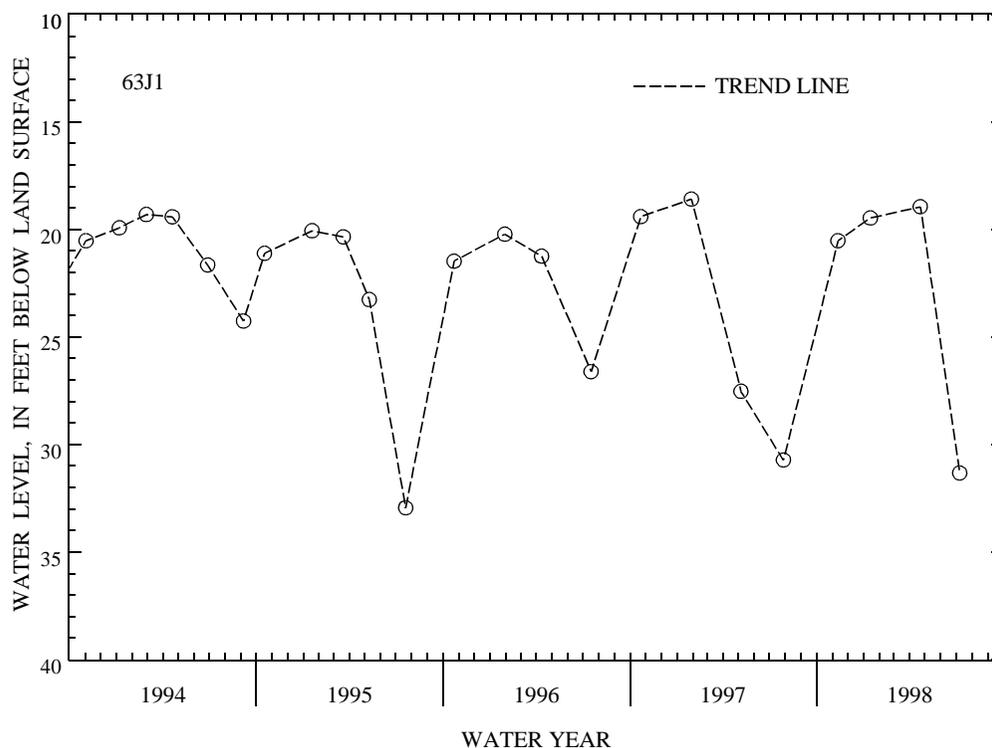
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--July 1981 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.79 ft below land-surface datum, Apr. 21, 1983; lowest measured, 32.94 ft below land-surface datum, July 20, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	20.52	JAN 14	19.46	APR 22	18.94	JUL 08	31.32
WATER YEAR 1998 HIGHEST		18.94	APR 22, 1998				
LOWEST		31.32	JUL 08, 1998				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

373230075541002. Local number, 63J 2 SOW 113B.

LOCATION.--Lat 37°32'16", long 75°54'07", Hydrologic Unit 02080109, 0.15 mi north of State Highway 183, 0.40 mi east of intersection of State Highways 183 and 611, and 1.3 mi west of Wardtown. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 225 ft, screened 215 to 225 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 22 ft above sea level, from topographic map. Measuring point: Top of casing, 0.52 ft above land-surface datum prior to Oct. 6, 1988; 1.3 ft thereafter.

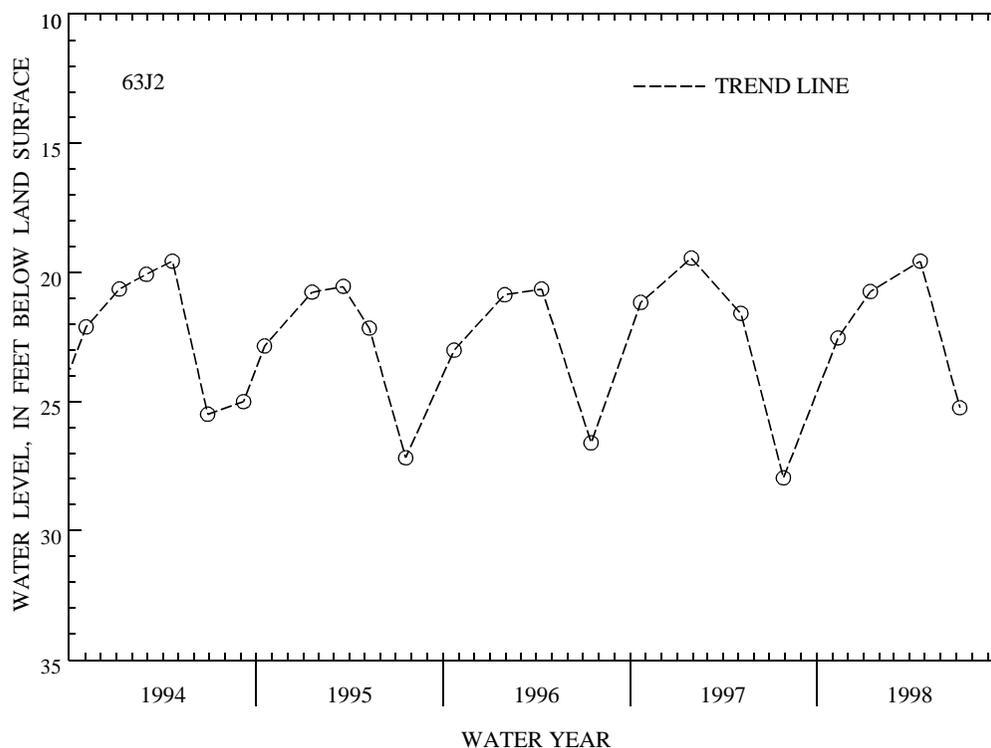
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--July 1981 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.20 ft below land-surface datum, Apr. 21, 1983; lowest measured, 27.96 ft below land-surface datum, July 28, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	22.54	JAN 14	20.74	APR 22	19.56	JUL 08	25.24
WATER YEAR 1998 HIGHEST		19.56	APR 22, 1998				
LOWEST		25.24	JUL 08, 1998				



GROUND-WATER LEVELS
NORTHAMPTON COUNTY

373230075541003. Local number, 63J 3 SOW 113C.

LOCATION.--Lat 37°32'16", long 75°54'07", Hydrologic Unit 02080109, 0.15 mi north of State Highway 183, 0.4 mi east of intersection of State Highways 183 and 611, and 1.3 mi west of Wardtown. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 290 ft, screened 280 to 290 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 22 ft above sea level, from topographic map. Measuring point: Top of casing, 1.44 ft above land-surface datum.

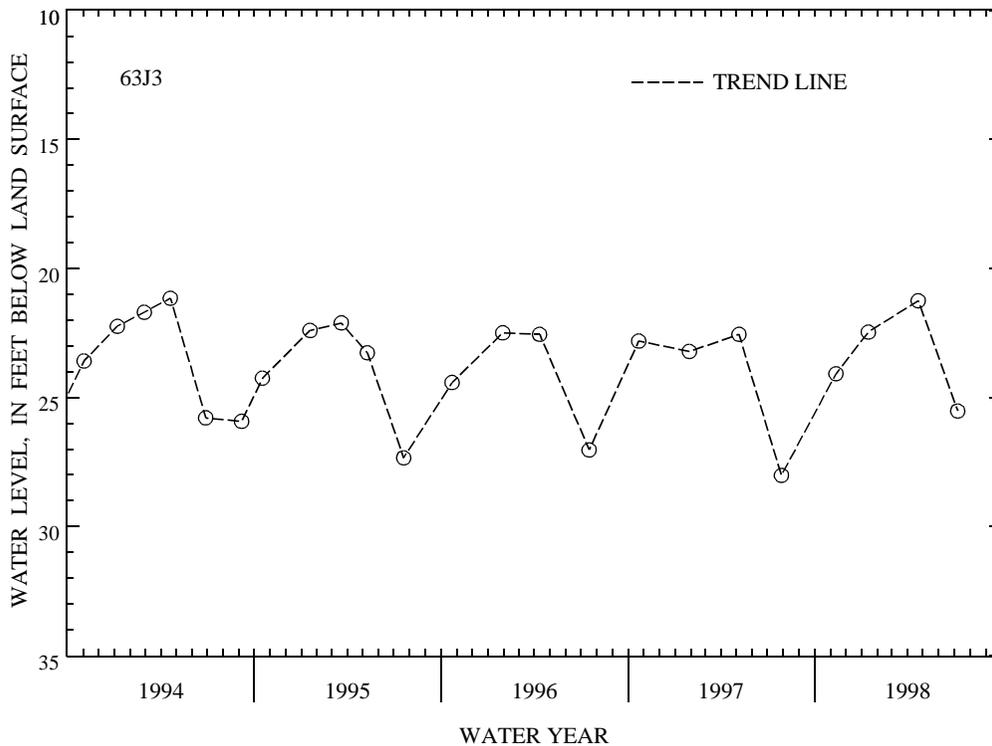
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--July 1981 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.26 ft below land-surface datum, Apr. 21, 1983; lowest measured, 28.02 ft below land-surface datum, July 28, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	24.08	JAN 14	22.46	APR 22	21.25	JUL 08	25.52
WATER YEAR 1998 HIGHEST		21.25	APR 22, 1998				
LOWEST		25.52	JUL 08, 1998				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

373059075484502. Local number, 64J 10 SOW 112B.

LOCATION.--Lat 37°30'59", long 75°48'45", Hydrologic Unit 02080109, 100 ft northeast of State Highway 660, 0.3 mi southeast of intersection of State Highways 600 and 660, and 0.3 mi west of Willis Wharf. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 210 ft, screened 200 to 210 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 5, 1985 to Oct. 23, 1995, continuous strip-chart recorder. Prior to Oct. 5, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 30 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 1.5 ft above land-surface datum prior to Aug. 12, 1987; 1.6 ft thereafter.

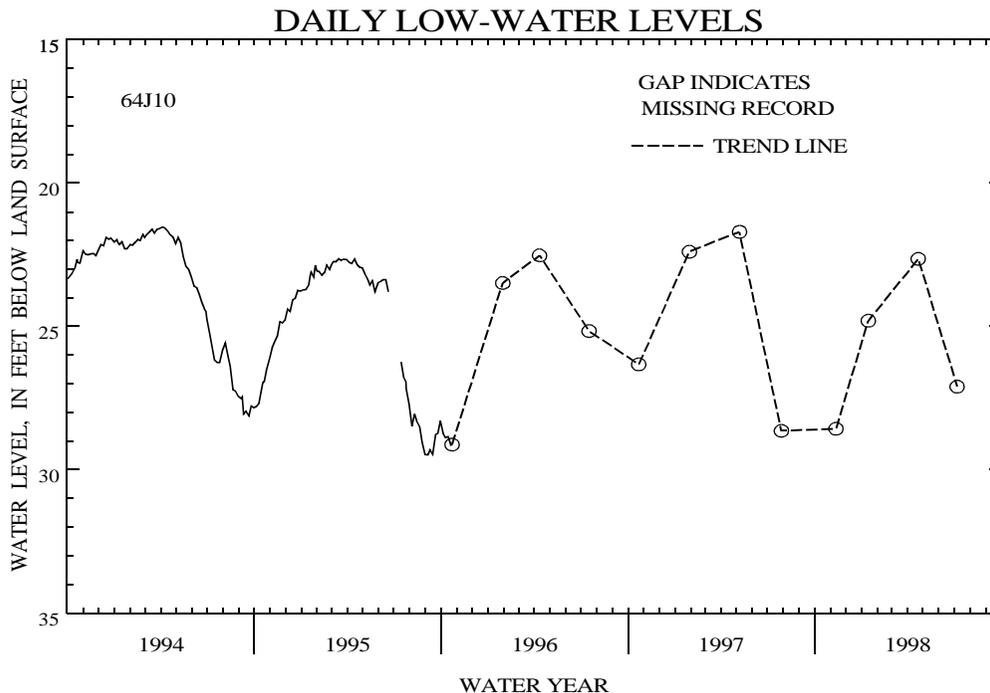
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level influenced by seasonal and tidal effects.

PERIOD OF RECORD.--July 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 20.42 ft below land-surface datum, Mar. 13, 1993; lowest measured, 31.29 ft below land-surface datum, Oct. 1, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	28.57	JAN 14	24.80	APR 22	22.64	JUL 07	27.10
WATER YEAR 1998 HIGHEST		22.64	APR 22, 1998				
LOWEST		28.57	NOV 12, 1997				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

373059075484503. Local number, 64J 11 SOW 112C.

LOCATION.--Lat 37°30'59", long 75°48'45", Hydrologic Unit 02080109, 100 ft northeast of State Highway 660, 0.3 mi southeast of intersection of State Highways 600 and 660, and 0.3 mi west of Willis Wharf. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 313 ft, screened 303 to 313 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 30 ft above sea level, from topographic map. Measuring point: Top of casing, 0.4 ft above land-surface datum prior to Apr. 27, 1987; 0.65 ft thereafter.

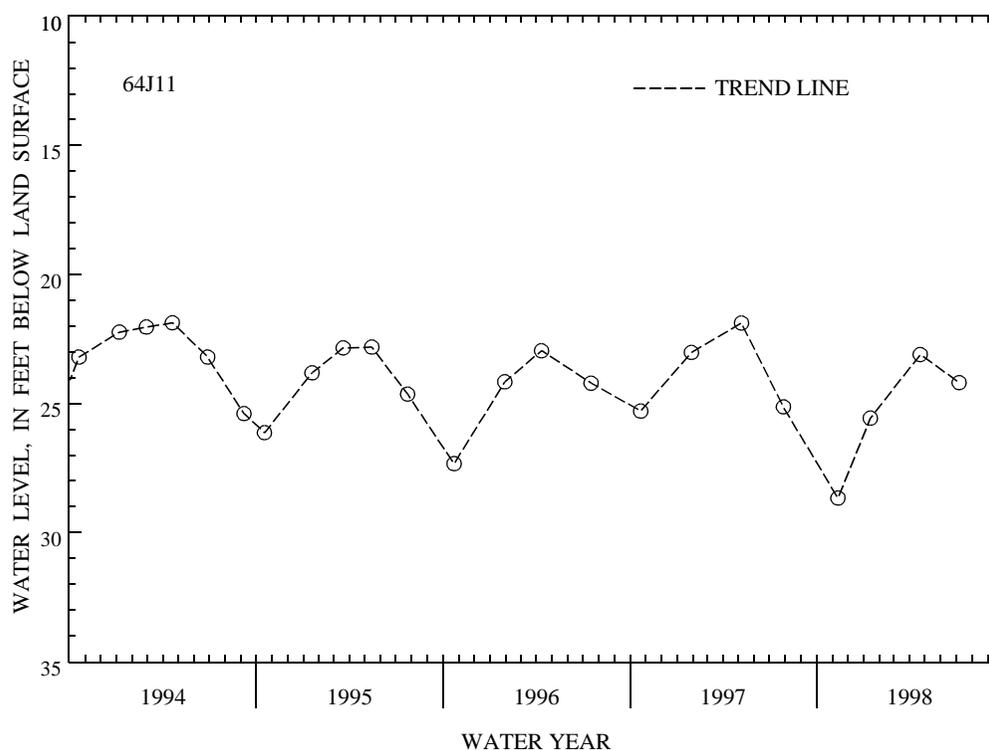
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--July 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.78 ft below land-surface datum, Mar. 29, 1984; lowest measured, 35.70 ft below land-surface datum, Dec. 5, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	28.66	JAN 14	25.57	APR 22	23.10	JUL 07	24.19
WATER YEAR 1998	HIGHEST	23.10	APR 22, 1998				
	LOWEST	28.66	NOV 12, 1997				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

373059075484501. Local number, 64J 9 SOW 112A.

LOCATION.--Lat 37°30'59", long 75°48'45", Hydrologic Unit 02080109, 100 ft northeast of State Highway 660, 0.3 mi southeast of intersection of State Highways 660 and 600, and 0.3 mi west of Willis Wharf. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 135 ft, screened 125 to 135 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 30 ft above sea level, from topographic map. Measuring point: Top of casing, at land-surface datum prior to Feb. 29, 1988; 0.7 ft thereafter.

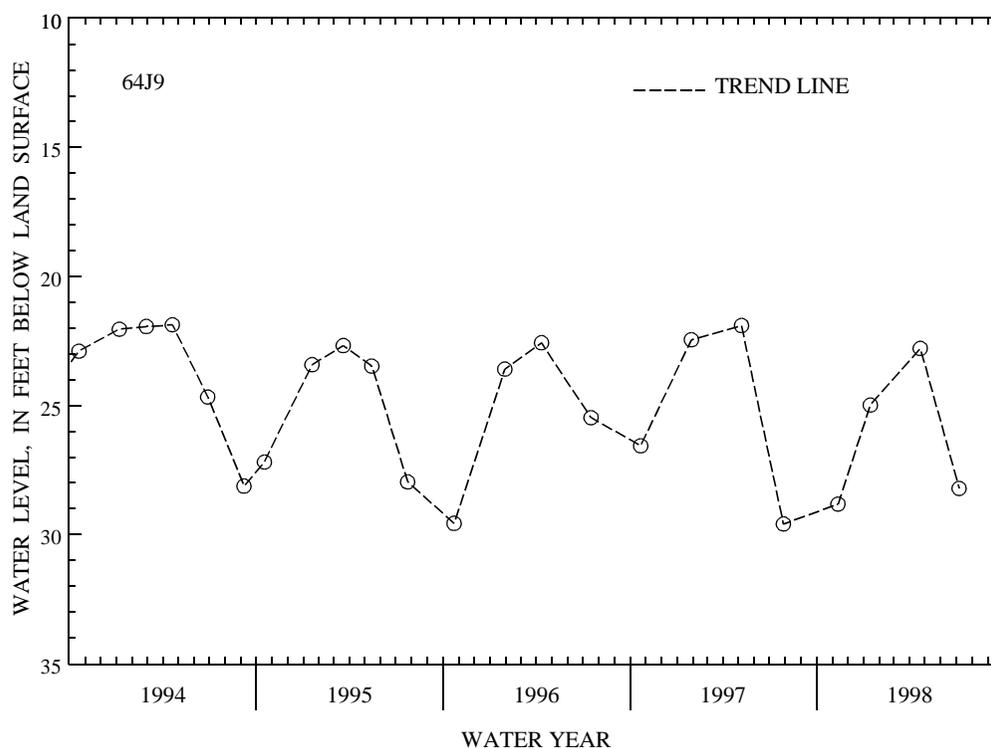
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--July 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.19 ft below land-surface datum, Feb. 22, 1993; lowest measured, 33.57 ft below land-surface datum, July 18, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	28.82	JAN 14	24.98	APR 22	22.79	JUL 07	28.21
WATER YEAR 1998	HIGHEST	22.79	APR 22, 1998				
	LOWEST	28.82	NOV 12, 1997				



GROUND-WATER LEVELS

ORANGE COUNTY

381002078094201. Local number, 45P 1 SOW 030.

LOCATION.--Lat 38°10'02", long 78°09'42", Hydrologic Unit 02080106, off U.S. Highway 15, 2.3 mi north of Gordonsville. Owner: M. L. Johnson.

AQUIFER.--Phyllite of Evington Group of Cambrian or Precambrian age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in., depth 98 ft, length of casing unknown.

INSTRUMENTATION.--Occasional measurement with chalked taped by Virginia Department of Environmental Quality - Water Division personnel. Prior to Oct 31, 1995, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 480 ft above sea level, from topographic map. Measuring point: Top of casing, 0.40 ft above land-surface datum prior to June 27, 1996; 1.90 ft thereafter.

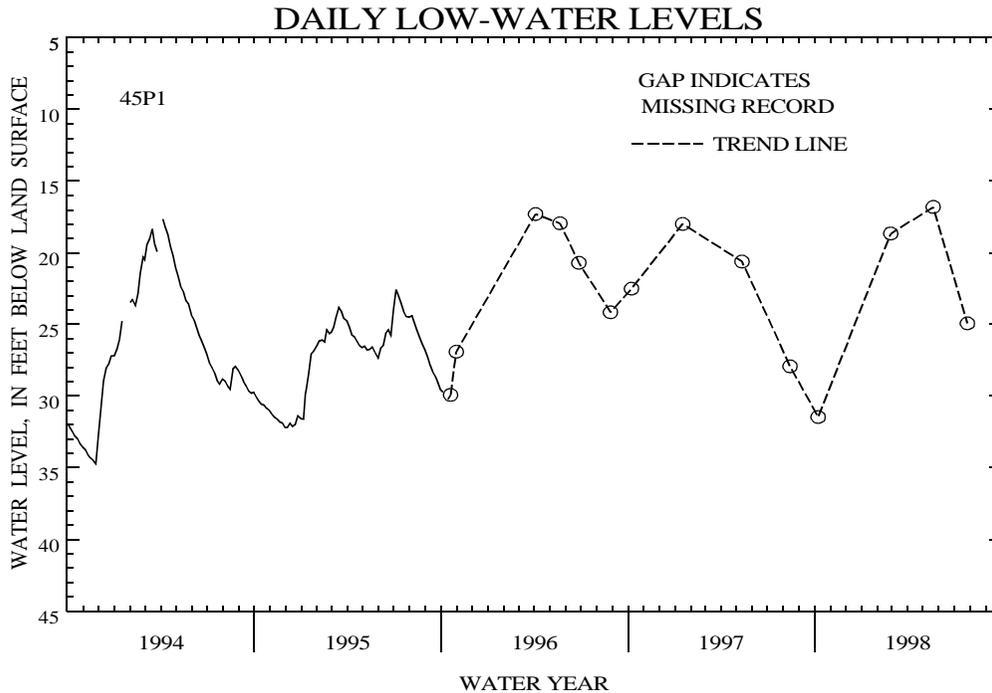
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 11.83 ft below land-surface datum, Apr. 10, 1973; lowest recorded, 35.90 ft below land-surface datum, Jan. 31, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08	31.45	FEB 27	18.65	MAY 21	16.80	JUL 27	24.92
WATER YEAR 1998	HIGHEST	16.80	MAY 21, 1998				
	LOWEST	31.45	OCT 08, 1997				



GROUND-WATER LEVELS

PATRICK COUNTY

364732080070301. Local number, 30C 1 SOW 010.

LOCATION.--Lat 36°47'32", long 80°07'03", Hydrologic Unit 03010103, 300 ft west of State Highway 623, 1.0 mi north-east of intersection of State Highways 57 and 623, and 6.2 mi west of Philpott. Owner: Commonwealth of Virginia.

AQUIFER.--Lynchburg Group of Late Proterozoic age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6.25 in., depth 250 ft, cased to 9 ft, open hole 9 to 250 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Oct. 1, 1996, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 1,060 ft above sea level, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum.

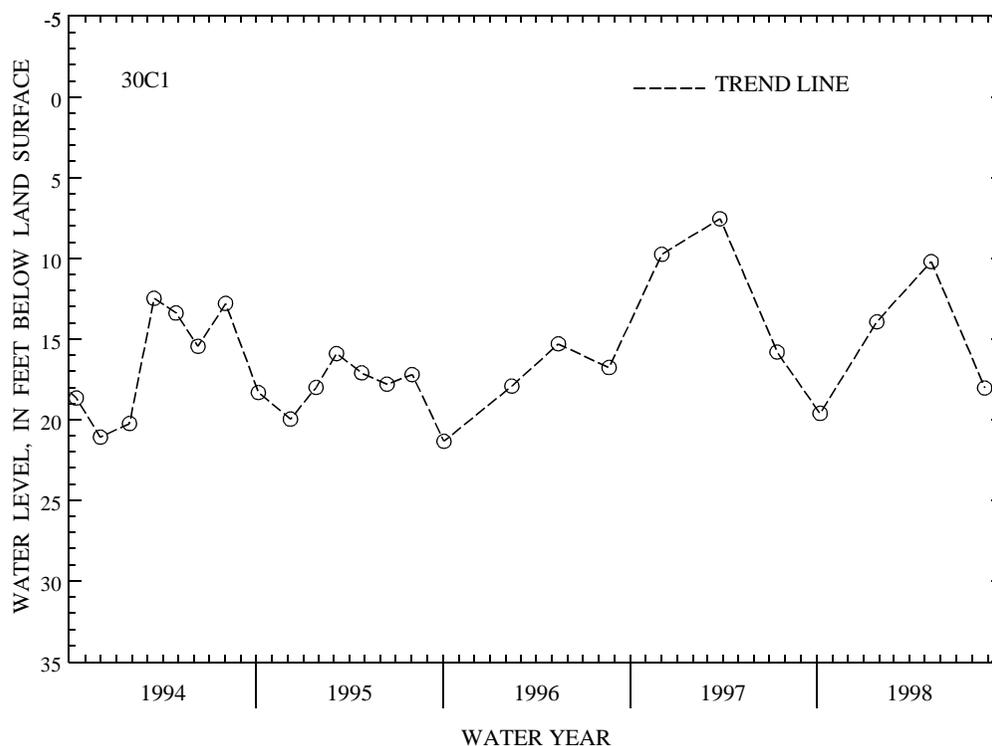
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--May 1966 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.98 ft below land-surface datum, Mar. 23, 1993; lowest measured, 23.15 ft below land-surface datum, Jan. 10, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08	19.61	JAN 27	13.93	MAR 13	10.20	AUG 26	18.03
WATER YEAR 1998 HIGHEST		10.20	MAR 13, 1998				
LOWEST		19.61	OCT 08, 1997				



GROUND-WATER LEVELS
PRINCE GEORGE COUNTY

371315077171901. Local number, 52F 1 SOW 038.

LOCATION.--Lat 37°13'15", long 77°17'19", Hydrologic Unit 03010202, 0.1 mi north of State Highway 106 in Prince George. Owner: Prince George County.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 4 in., depth 180 ft, cased to 170 ft, open hole 170 to 180 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 10, 1985, to July 10, 1995, bimonthly measurement with chalked tape. May 25, 1974, to Oct. 9, 1985, occasional measurement with chalked tape. Jan. 31, 1971, to May 25, 1974, continuous strip-chart recorder. Prior to Jan. 31, 1971, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 132 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 3.4 ft above land-surface datum.

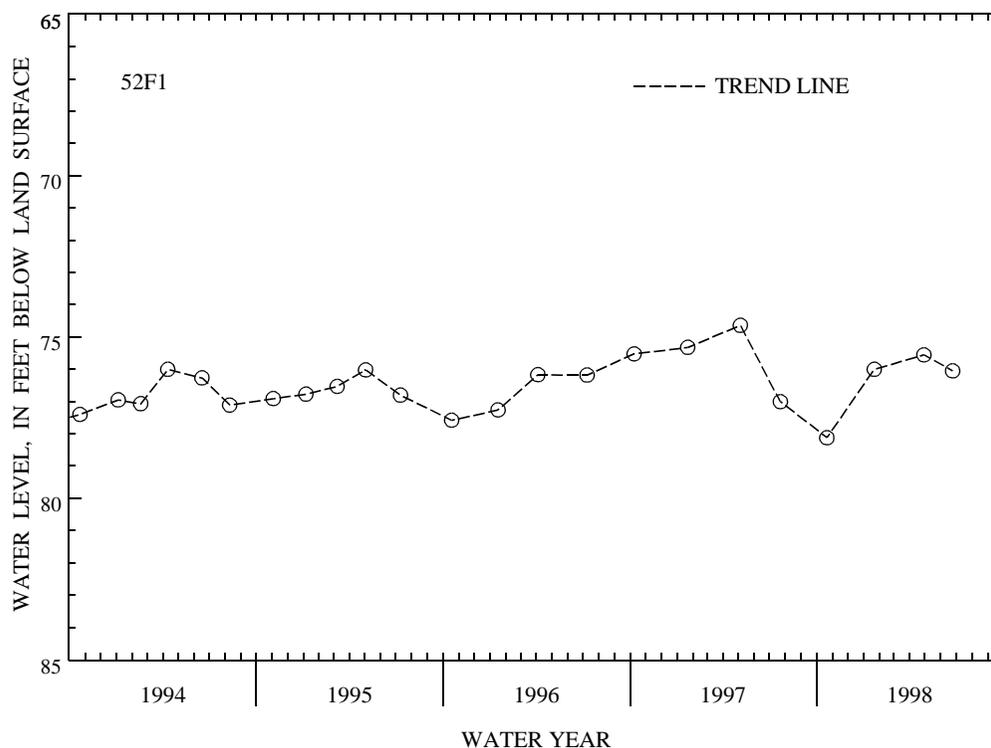
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--December 1970 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 69.32 ft below land-surface datum, Feb. 4, 1980; lowest measured, 78.12 ft below land-surface datum, Oct. 21, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	78.12	JAN 22	76.00	APR 29	75.55	JUN 24	76.05
WATER YEAR 1998	HIGHEST	75.55	APR 29, 1998				
	LOWEST	78.12	OCT 21, 1997				



GROUND-WATER LEVELS
PRINCE WILLIAM COUNTY

383830077135502. Local number, 53T 2 SOW 029.

LOCATION.--Lat 38°38'30", long 77°13'55", Hydrologic Unit 02070010, at U.S. Army Woodbridge Research Facility, 1.5 mi east of Woodbridge. Owner: U.S. Department of the Army.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 10 in., depth 162 ft, screened 130 to 156 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 25, 1985, to Oct. 1, 1996, bimonthly measurement with chalked tape. Prior to Sept. 25, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 5 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

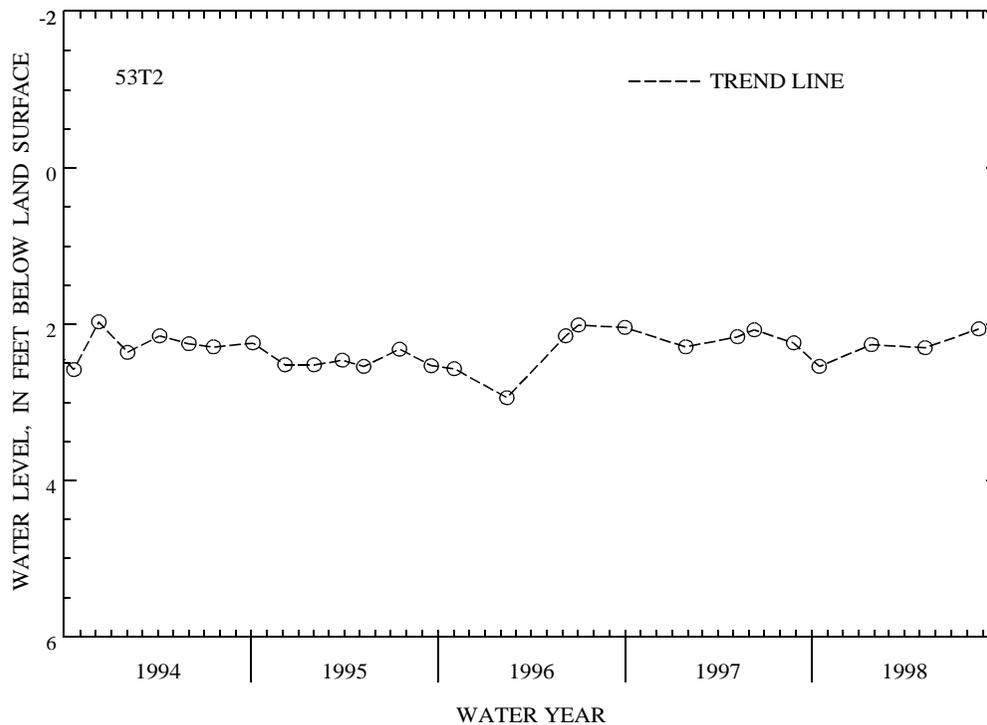
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--March 1970 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.60 ft below land-surface datum, Apr. 4, 1973; lowest measured, 10.35 ft below land-surface datum, Oct. 12, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	2.54	JAN 26	2.26	MAY 11	2.30	AUG 24	2.06
WATER YEAR 1998		HIGHEST	2.06	AUG 24, 1998			
		LOWEST	2.54	OCT 16, 1997			



GROUND-WATER LEVELS

PULASKI COUNTY

370254080374401. Local number, 25E 1 SOW 009.

LOCATION.--Lat 37°02'54", long 80°37'44", Hydrologic Unit 05050001, 300 ft east of State Highway 100, 0.3 mi south of intersection of State Highways 682 and 700, and 1.1 mi south of Dublin. Owner: Commonwealth of Virginia.

AQUIFER.--Elbrook Formation of Middle to Late Cambrian age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 318 ft, cased to 56 ft, open hole 56 to 318 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Oct. 1, 1996, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 1,880 ft above sea level, from topographic map. Measuring point: Top of casing, at land-surface datum.

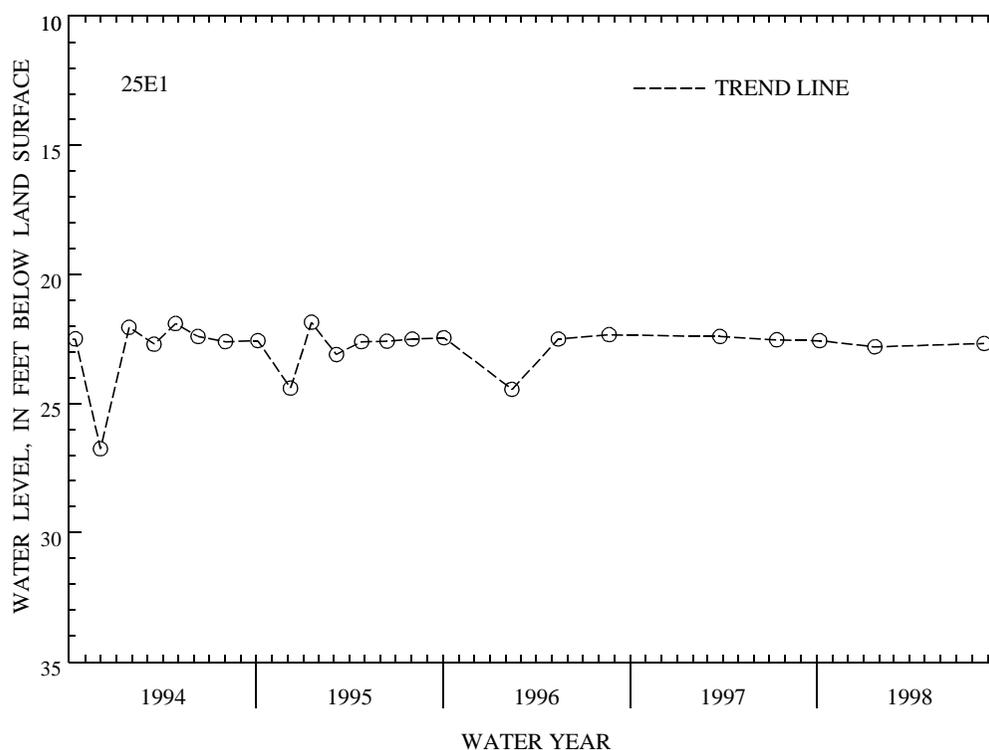
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--October 1969 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.15 ft below land-surface datum, Mar. 31, Apr. 30, 1975; lowest measured, 27.25 ft below land-surface datum, Dec. 13, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
	OCT 07	22.56	JAN 23	22.80	AUG 25	22.67
WATER YEAR 1998	HIGHEST	22.56	OCT 07, 1997			
	LOWEST	22.80	JAN 23, 1998			



GROUND-WATER LEVELS

PULASKI COUNTY

370516080411501. Local number, 25E 2 SOW 059.

LOCATION.--Lat 37°05'16", long 80°41'15", Hydrologic Unit 05050001, 400 ft east of State Highway 100, 0.5 mi south of Dublin. Owner: Town of Dublin.

AQUIFER.--Conococheague Formation of Late Cambrian age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 4 in., depth 370 ft, length of casing unknown.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Oct. 1, 1996, bimonthly measurement with chalked tape. July 20, 1974, to Oct. 1, 1985, occasional measurement with chalked tape. Prior to July 20, 1974, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 2,170 ft above sea level, from topographic map. Measuring point: Top of casing, at land-surface datum.

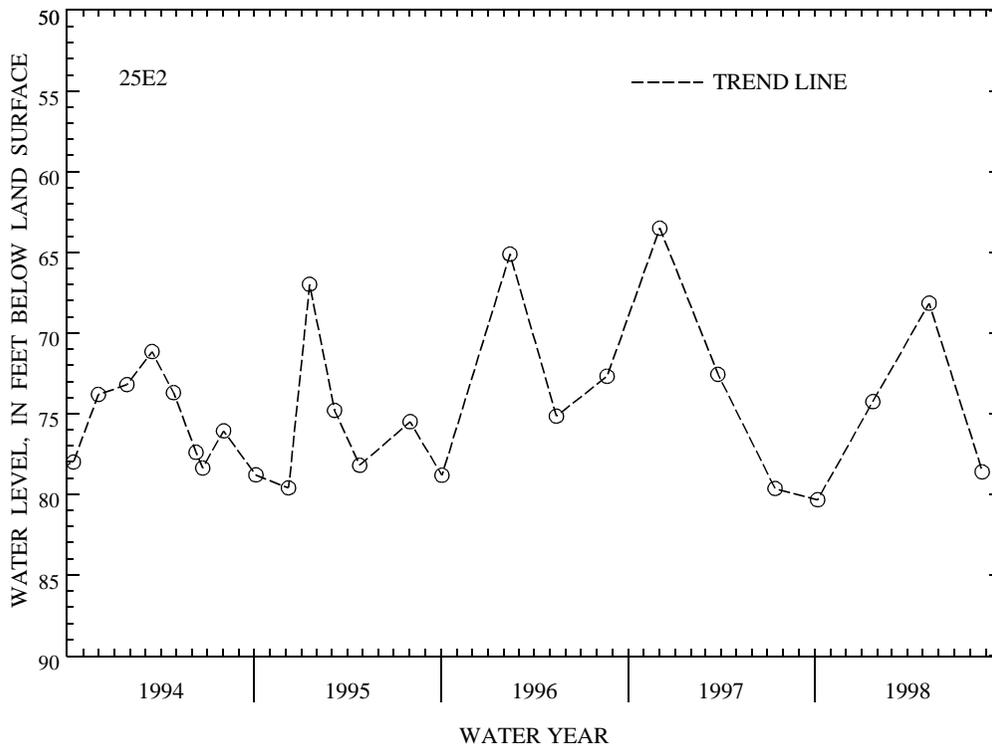
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 60.00 ft below land-surface datum, Mar. 18, 1973; lowest measured, 82.50 ft below land-surface datum, Oct. 5, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	80.34	JAN 23	74.25	MAY 13	68.15	AUG 25	78.60
WATER YEAR 1998 HIGHEST		68.15	MAY 13, 1998				
LOWEST		80.34	OCT 07, 1997				



GROUND-WATER LEVELS

CITY OF ROANOKE

371653079552101. Local number, 31G 1 SOW 008.

LOCATION.--Lat 37°16'53", long 79°55'21", Hydrologic Unit 03010101, 700 ft south of intersection of 10th Street and Orange Avenue in Roanoke. Owner: Nelson-Roanoke Corporation.

AQUIFER.--Rome Formation of Cambrian age. Prior to 1974, reported as Elbrook Formation.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 48 ft, length of casing unknown.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Oct. 1, 1996, bimonthly measurement with chalked tape. July 20, 1974, to Sept. 30, 1985, occasional measurement with chalked tape. Prior to July 20, 1974, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 930 ft above sea level, from topographic map. Measuring point: Top of casing, 0.94 ft above land-surface datum.

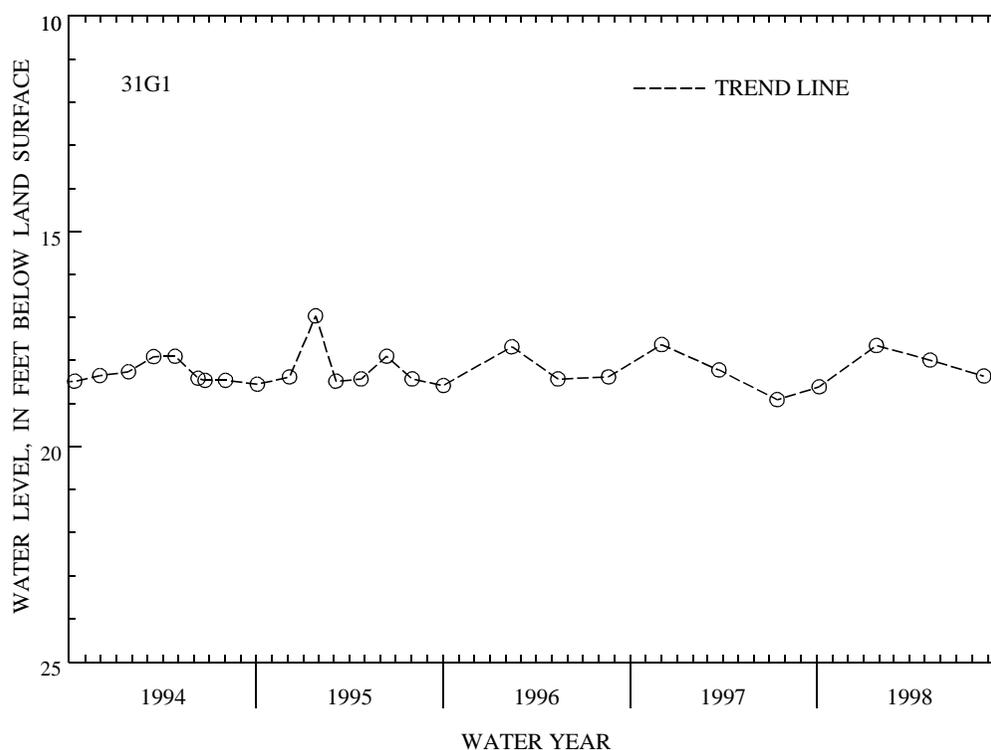
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--August 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.36 ft below land-surface datum, Feb. 18, 1986; lowest measured, 19.29 ft below land-surface datum, June 23, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	18.61	JAN 26	17.65	MAY 11	17.99	AUG 24	18.36
WATER YEAR 1998		HIGHEST	17.65	JAN 26, 1998			
		LOWEST	18.61	OCT 06, 1997			



GROUND-WATER LEVELS
ROCKBRIDGE COUNTY

373758079271601. Local number, 35K 1 SOW 063.

LOCATION.--Lat 37°37'58", long 79°27'16", Hydrologic Unit 02080202, 0.35 mi northwest of intersection of State Highways 130 and 684 in Glasgow. Owner: Town of Glasgow.

AQUIFER.--Rome Formation of Cambrian age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 695 ft, cased to 101 ft, open hole from 101 to 695 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel, prior to Oct. 1, 1995 continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 745 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

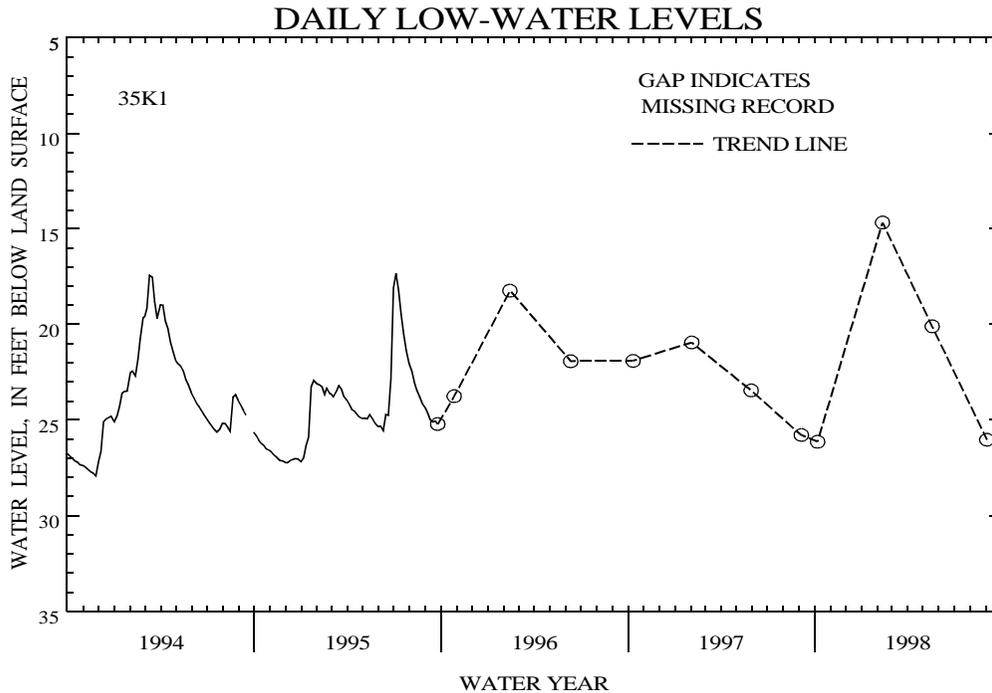
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 14.27 ft below land-surface datum, Apr. 29, 1987; lowest recorded, 29.13 ft below land-surface datum, Dec. 13, 14, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	26.13	FEB 01	14.67	MAY 19	20.10	SEP 03	26.03
WATER YEAR 1998		HIGHEST	14.67	MAY 19, 1998			
		LOWEST	26.13	OCT 07, 1997			



GROUND-WATER LEVELS

SOUTHAMPTON COUNTY

363632076580101. Local number, 55A 3 SOW 086.

LOCATION.--Lat 36°36'32", long 76°58'01", Hydrologic Unit 03010201, 0.1 mi southeast of intersection of State Highways 687 and 689, 4.0 mi southwest of Franklin. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 4 in., depth 745 ft, screened 714 to 724 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 16, 1992, to July 19, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 2, 1989, to Oct. 15, 1992, occasional measurement with chalked tape by USGS. Prior to Oct. 16, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 18 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Jan. 11, 1988; 1.3 ft thereafter.

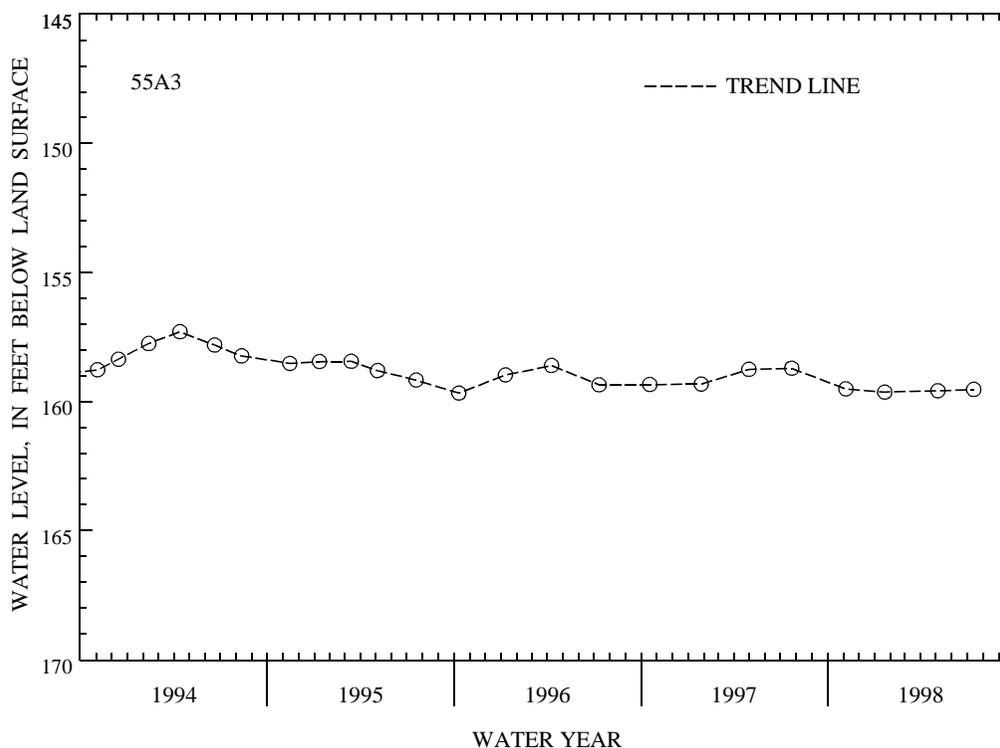
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 7, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

PERIOD OF RECORD.--March 1977, October 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 125.00 ft below land-surface datum, Mar. 18, 1977; lowest measured, 159.67 ft below land-surface datum, Oct 11, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 06	159.51	JAN 21	159.63	MAY 05	159.58	JUL 14	159.53
WATER YEAR 1998	HIGHEST	159.51	NOV 06, 1997	LOWEST	159.63	JAN 21, 1998	



GROUND-WATER LEVELS

CITY OF SUFFOLK

363345076470201. Local number, 56A 10 SOW 088A.

LOCATION.--Lat 36°33'45", long 76°47'02", Hydrologic Unit 03010203, 0.1 mi north of intersection of State Highways 668 and 669, 1.9 mi west of Somerton. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 1,060 ft, screened 1,050 to 1,060 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 16, 1992, to July 19, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 2, 1989, to Oct. 15, 1992, occasional measurement with chalked tape by USGS. Prior to Oct. 16, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 45 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Jan. 12, 1988; 1.3 ft thereafter.

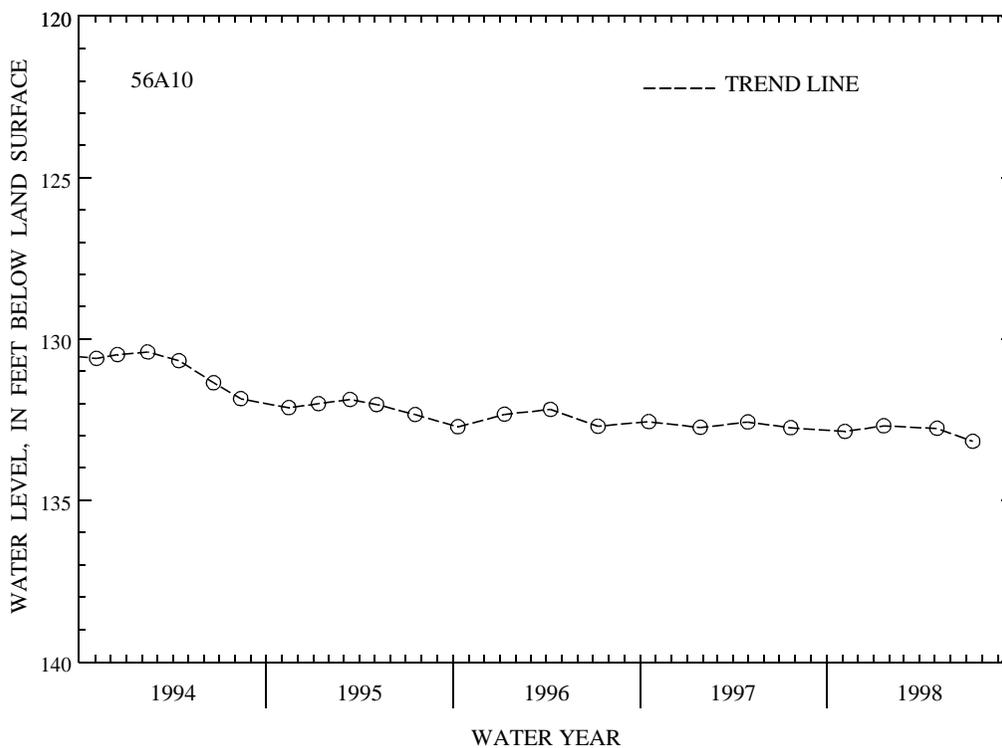
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 15, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

PERIOD OF RECORD.--June 1977 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 104.70 ft below land-surface datum, June 30, 1980; lowest measured, 133.17 ft below land-surface datum, July 14, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 06	132.86	JAN 21	132.69	MAY 05	132.77	JUL 14	133.17
WATER YEAR 1998	HIGHEST	132.69	JAN 21, 1998				
	LOWEST	133.17	JUL 14, 1998				



GROUND-WATER LEVELS

CITY OF SUFFOLK

363345076470202. Local number, 56A 12 SOW 088B.

LOCATION.--Lat 36°33'45", long 76°47'02", Hydrologic Unit 03010203, 0.1 mi north of intersection of State Highways 668 and 669, 1.9 mi west of Somerton. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 580 ft, screened 570 to 580 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 8, 1992, to July 19, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 2, 1989, to Oct. 7, 1992, occasional measurement with chalked tape by USGS. Prior to Oct. 8, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 45 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Jan. 12, 1988; 1.3 ft thereafter.

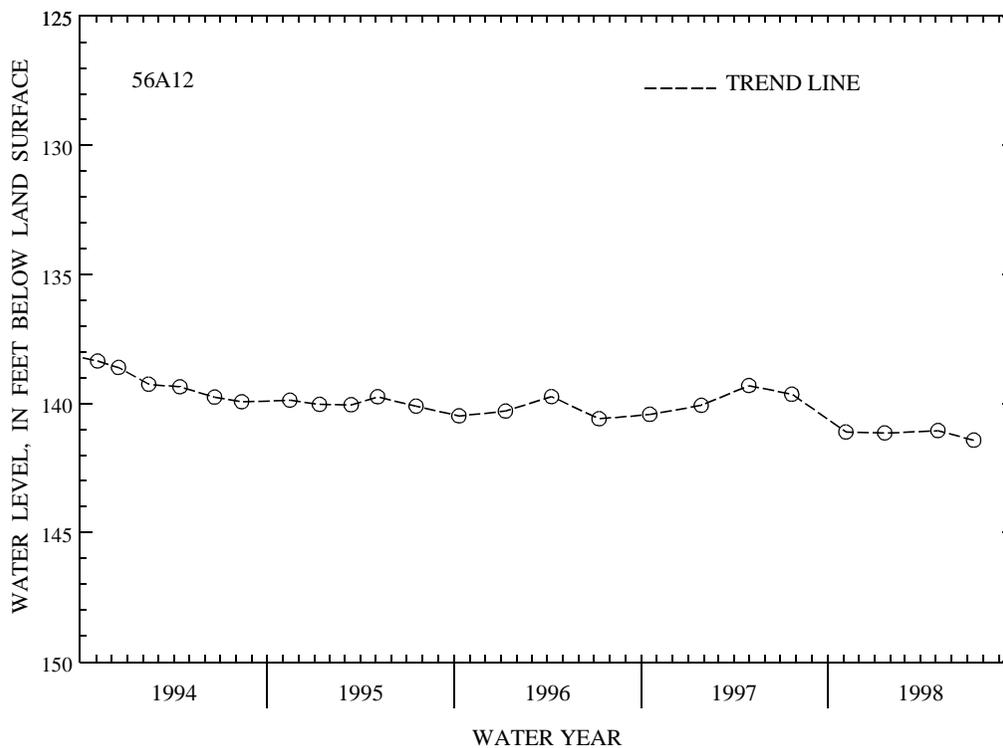
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 7, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

PERIOD OF RECORD.--June 1977 to November 1982, June 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 103.00 ft below land-surface datum, June 30, 1977; lowest measured, 141.42 ft below land-surface datum, July 14, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 06	141.10	JAN 21	141.14	MAY 05	141.05	JUL 14	141.42
WATER YEAR 1998	HIGHEST	141.05	MAY 05, 1998				
	LOWEST	141.42	JUL 14, 1998				



GROUND-WATER LEVELS

CITY OF SUFFOLK

363625076522602. Local number, 56A 13 SOW 076B.

LOCATION.--Lat 36°36'25", long 76°52'26", Hydrologic Unit 03010203, 700 ft west of State Highway 615, 0.5 mi southwest of Olive Branch Church, and 8.1 mi south of Holland. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 807 ft, screened 797 to 802 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 16, 1992, to July 19, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 2, 1989, to Oct. 15, 1992, occasional measurement with chalked tape by USGS. Prior to Oct. 16, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 75 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to Jan. 12, 1988; 0.8 ft thereafter.

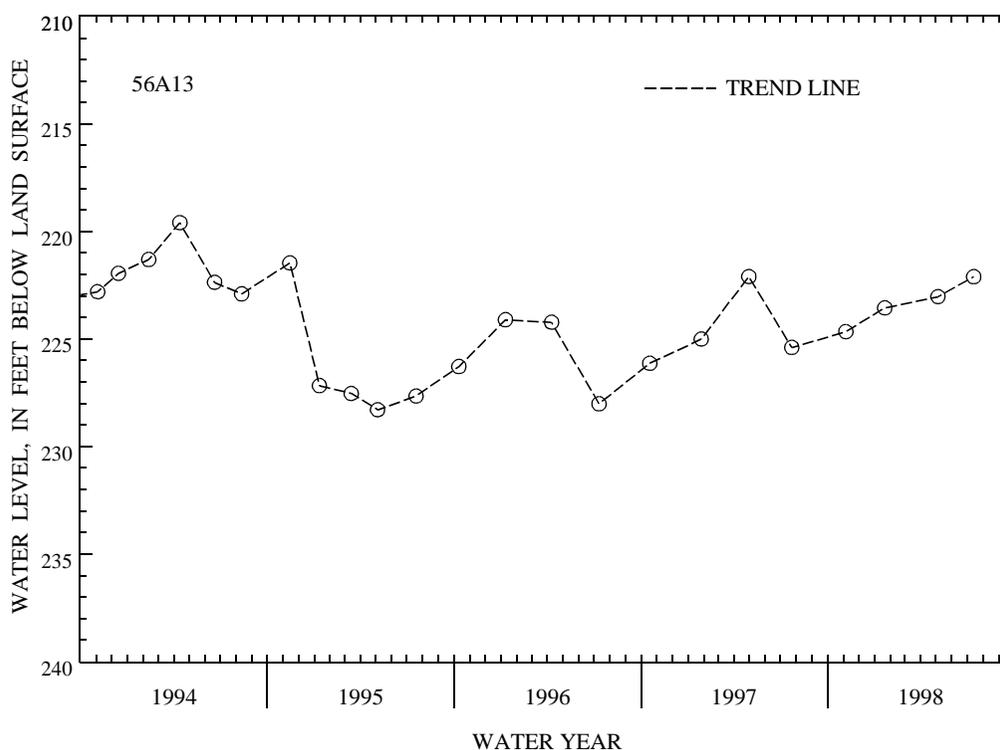
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 15, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by local pumpage and regional drawdown.

PERIOD OF RECORD.--May 1979 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 204.34 ft below land-surface datum, Oct. 26, 1982; lowest measured, 228.29 ft below land-surface datum, May 5, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 06	224.65	JAN 21	223.55	MAY 05	223.03	JUL 14	222.10
WATER YEAR 1998	HIGHEST	222.10	JUL 14, 1998				
	LOWEST	224.65	NOV 06, 1997				



GROUND-WATER LEVELS

CITY OF SUFFOLK

363625076522603. Local number, 56A 14 SOW 076C.

LOCATION.--Lat 36°36'25", long 76°52'26", Hydrologic Unit 03010203, 700 ft west of State Highway 615, 0.5 mi southwest of Olive Branch Church, and 8.1 mi south of Holland. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 735 ft, screened 730 to 735 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 16, 1992, to July 19, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 2, 1989, to Oct. 15, 1992, occasional measurement with chalked tape by USGS. Prior to Oct. 16, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 75 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Jan. 12, 1988; 1.2 ft thereafter.

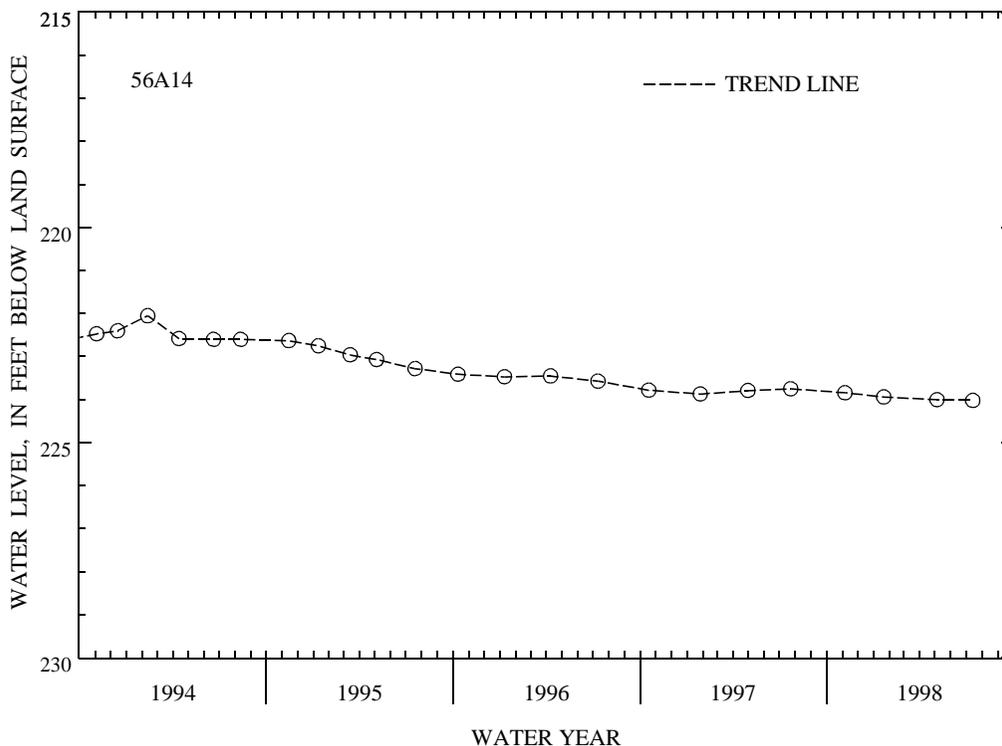
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 15, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

PERIOD OF RECORD.--March 1979 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 205.62 ft below land-surface datum, Mar. 7, 1979; lowest measured, 224.02 ft below land-surface datum, July 14, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 06	223.84	JAN 21	223.94	MAY 05	224.00	JUL 14	224.02
WATER YEAR 1998	HIGHEST	223.84	NOV 06, 1997				
	LOWEST	224.02	JUL 14, 1998				



GROUND-WATER LEVELS

CITY OF SUFFOLK

363303076330201. Local number, 58A 75 SOW 170.

LOCATION.--Lat 36°33'03", long 76°33'02", Hydrologic Unit 03010205, 100 ft north of North Carolina State line, 0.4 mi east of Desert Road, and 5.0 mi southeast of Cypress Chapel. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Virginia Beach aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 535 ft, screened 525 to 535 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 15, 1992, to July 19, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 2, 1989, to Oct. 14, 1992, occasional measurement with chalked tape by USGS. Prior to Oct. 15, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 40 ft above mean sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

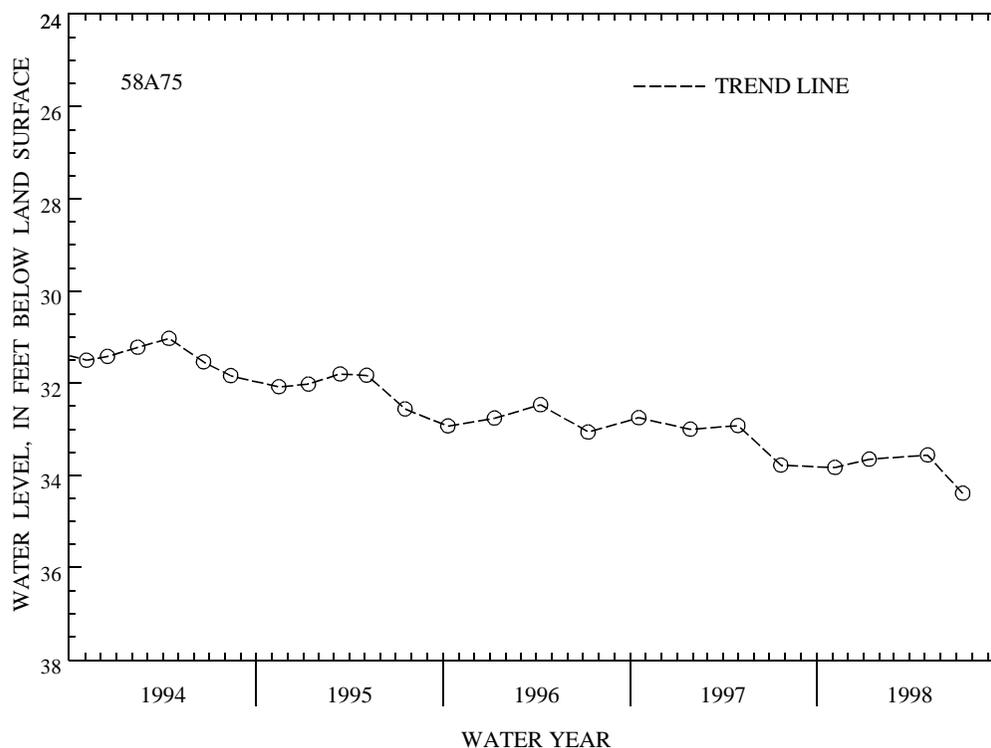
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 14, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

PERIOD OF RECORD.--July 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.52 ft below land-surface datum, July 11, 1985; lowest measured, 34.39 ft below land-surface datum, July 14, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 06	33.83	JAN 21	33.65	MAY 06	33.56	JUL 14	34.39
WATER YEAR 1998		HIGHEST	33.56	MAY 06, 1998		LOWEST	34.39
				JUL 14, 1998			



GROUND-WATER LEVELS

CITY OF SUFFOLK

364318076365501. Local number, 58B268 SOW 169A.

LOCATION.--Lat 36°43'18", long 76°36'55", Hydrologic Unit 02080208, 500 ft north of Norfolk and Western Railroad near Lake Kilby, 0.5 mi west of Suffolk. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quarternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 20 ft, screened 12 to 20 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 19, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 2.5 ft above land-surface datum.

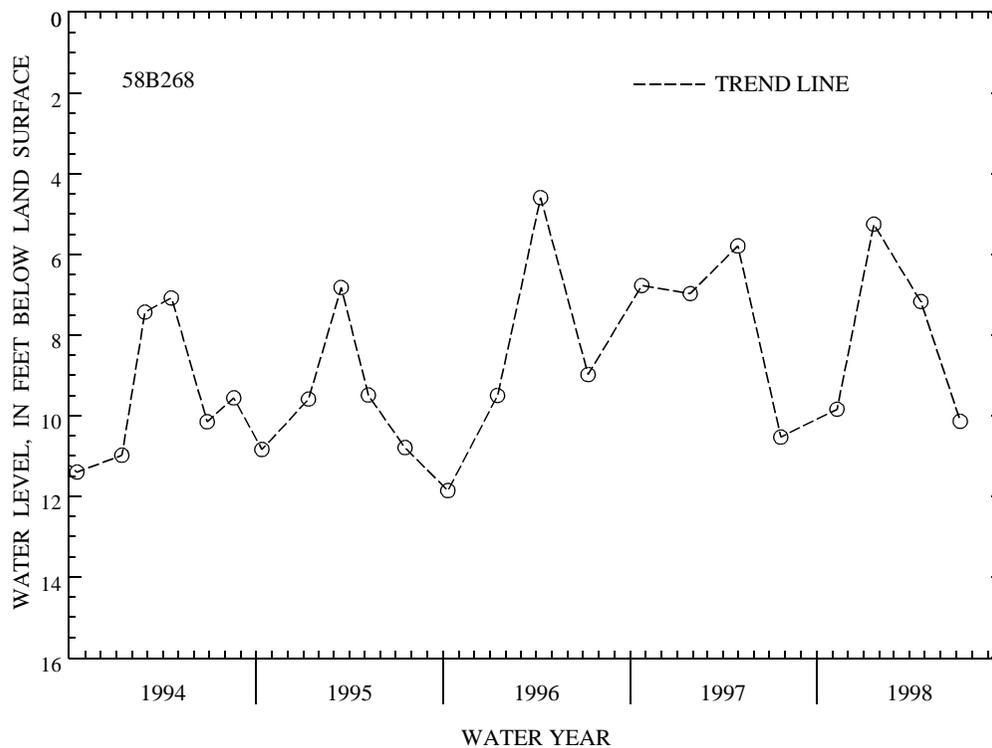
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.42 ft below land-surface datum, Jan. 12, 1993; lowest measured, 11.86 ft below land-surface datum, Oct. 11, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 10	9.84	JAN 21	5.25	APR 23	7.17	JUL 09	10.14
WATER YEAR 1998		HIGHEST	5.25	JAN 21, 1998			
		LOWEST	10.14	JUL 09, 1998			



GROUND-WATER LEVELS

CITY OF SUFFOLK

364318076365502. Local number, 58B269 SOW 169B.

LOCATION.--Lat 36°43'18", long 76°36'55", Hydrologic Unit 02080202, 500 ft north of Norfolk and Western Railroad near Lake Kilby, 0.5 mi west of Suffolk. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 360 ft, screened 350 to 360 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 19, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

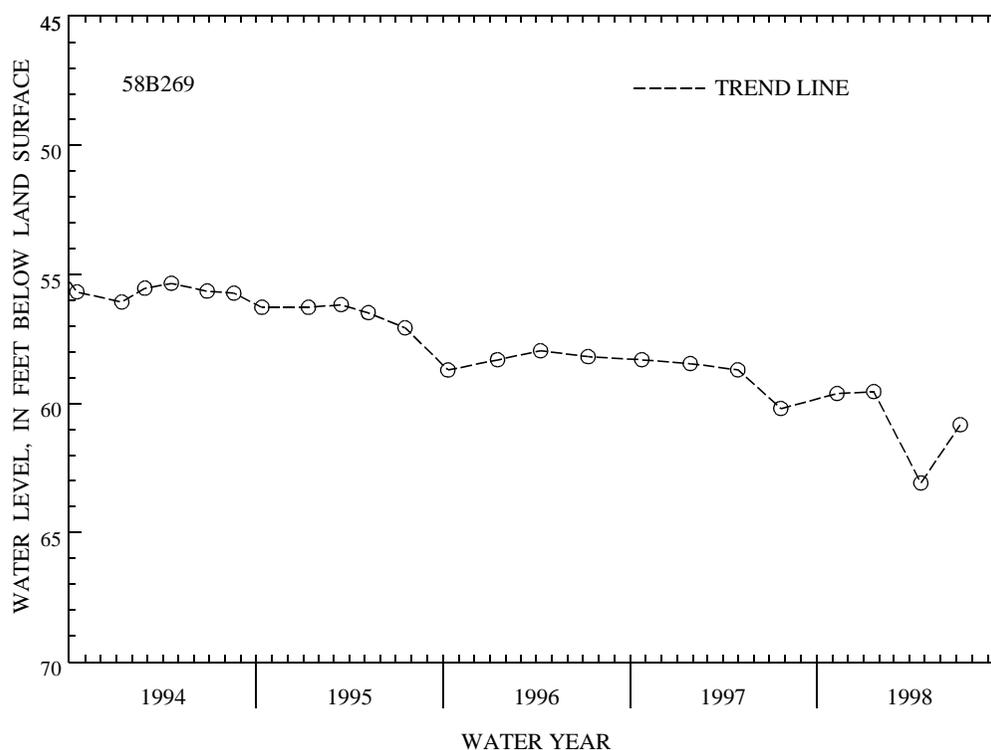
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--July 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 43.06 ft below land-surface datum, July 8, 1985; lowest measured, 63.08 ft below land-surface datum, Apr. 23, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 10	59.61	JAN 21	59.54	APR 23	63.08	JUL 09	60.82
WATER YEAR 1998		HIGHEST	59.54	JAN 21, 1998			
		LOWEST	63.08	APR 23, 1998			



GROUND-WATER LEVELS

CITY OF SUFFOLK

364318076365503. Local number, 58B270 SOW 169C.

LOCATION.--Lat 36°43'18", long 76°36'55", Hydrologic Unit 02080208, 500 ft north of Norfolk and Western Railroad near Lake Kilby, 0.5 mi west of Suffolk. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 500 ft, screened 490 to 500 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 19, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

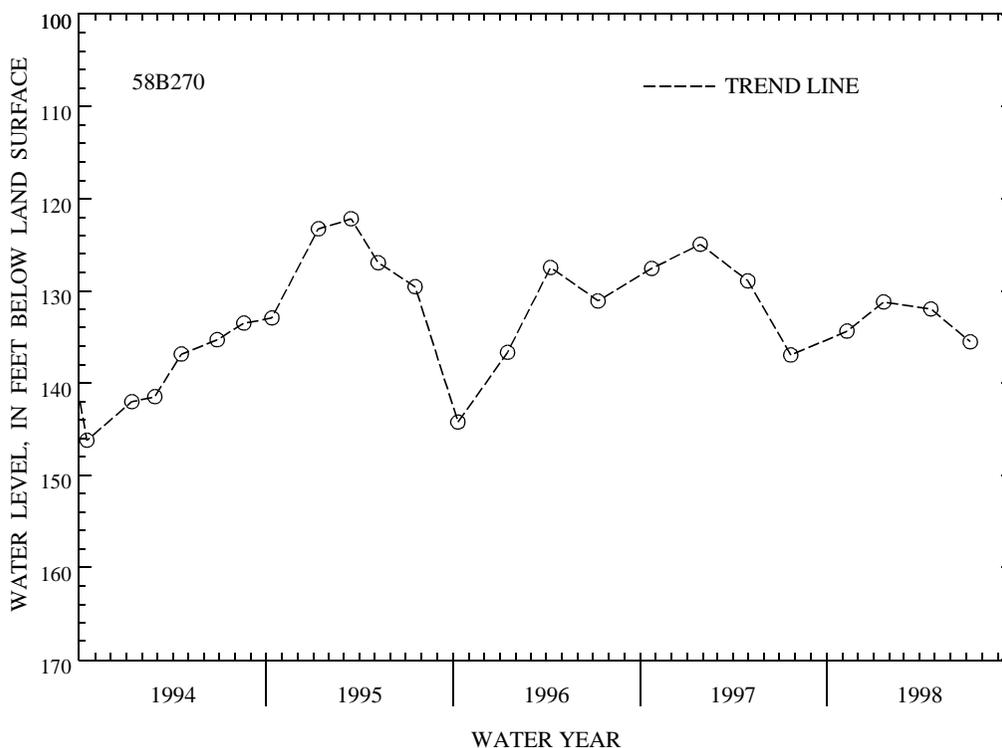
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

PERIOD OF RECORD.--July 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 112.59 ft below land-surface datum, Feb. 25, 1986; lowest measured, 159.00 ft below land-surface datum, July 9, 1991.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL		
NOV 10	134.36	JAN 21	131.19	APR 23	131.96	JUL 09	135.51		
WATER YEAR 1998		HIGHEST	131.19	JAN 21, 1998		LOWEST	135.51	JUL 09, 1998	



GROUND-WATER LEVELS

CITY OF SUFFOLK

364348076363201. Local number, 58B273 SOW 169F.

LOCATION.--Lat 36°43'48", long 76°36'32", Hydrologic Unit 02080208, 100 ft south of U.S. Highway 58 near Lake Kilby, 0.2 mi west of Suffolk. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 661 ft, screened 541 to 546 ft, 567 to 572 ft, 635 to 640 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 2, 1992, to July 19, 1995, bimonthly measurement with chalked tape. Nov. 5, 1986, to Oct. 1, 1992, continuous strip-chart recorder. Prior to Nov. 5, 1986, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 26 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

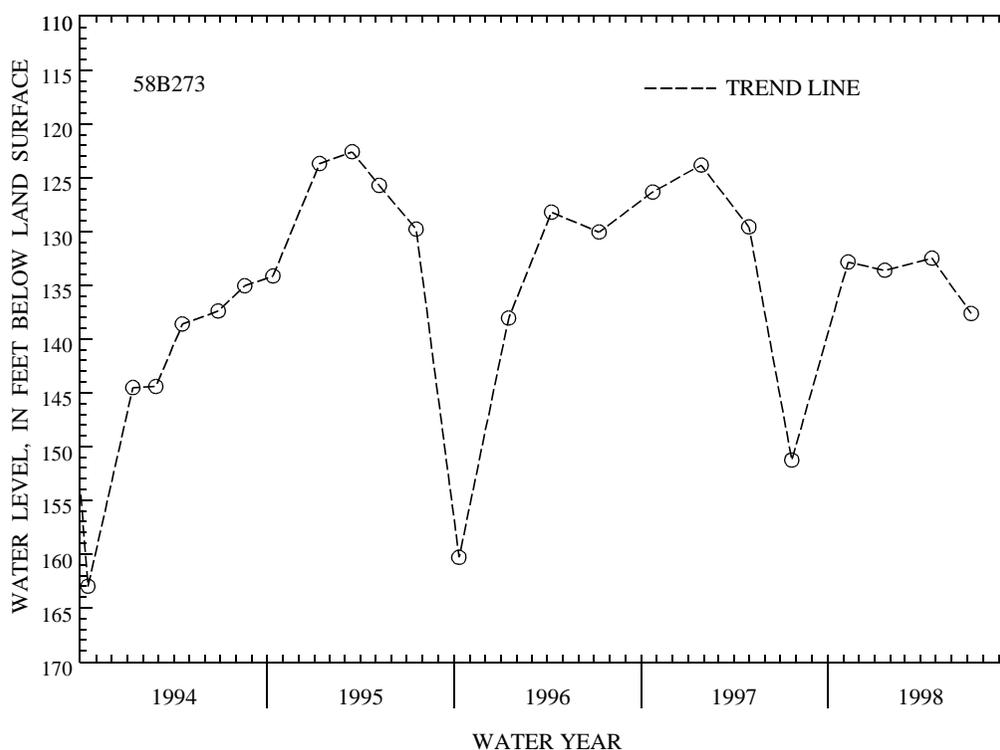
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--July 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 111.00 ft below land-surface datum, July 18, 1991; lowest recorded, 162.99 ft below land-surface datum, Oct. 15, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 10	132.84	JAN 21	133.60	APR 23	132.48	JUL 09	137.61
WATER YEAR 1998	HIGHEST	132.48	APR 23, 1998				
	LOWEST	137.61	JUL 09, 1998				



GROUND-WATER LEVELS

CITY OF SUFFOLK

365133076351201. Local number, 58C 57 SOW 141A.

LOCATION.--Lat 36°51'33", long 76°35'12", Hydrologic Unit 02080208, 500 ft west of old Chuckatuck High School in Chuckatuck. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 122 ft, screened 112 to 122 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 8, 1985, to July 19, 1995, bimonthly measurement with chalked tape. Prior to Oct. 8, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 52 ft above sea level, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum prior to Jan. 12, 1988; 1.0 ft Jan. 12, 1988, to Nov. 12, 1991; 2.4 ft Nov. 13, 1991 to July 9, 1998; 1.80 ft thereafter.

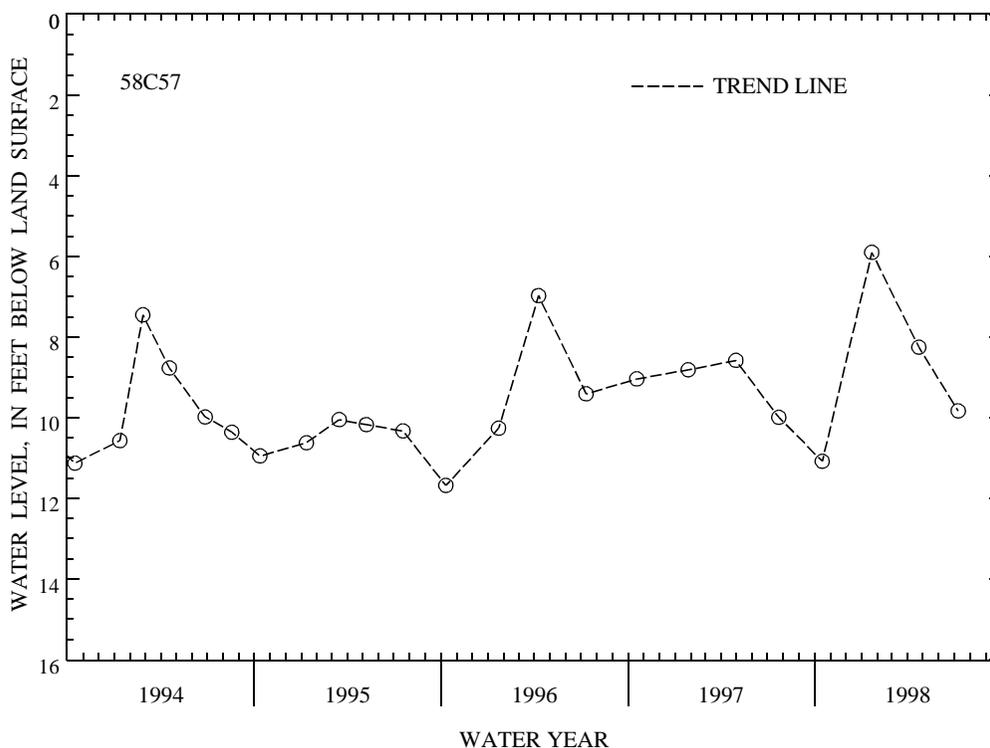
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--February 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.90 ft below land-surface datum, Jan. 21, 1998; lowest measured, 11.68 ft below land-surface datum, Oct. 11, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 16	11.08	JAN 21	5.90	APR 23	8.25	JUL 09	9.83
WATER YEAR 1998	HIGHEST	5.90	JAN 21, 1998				
	LOWEST	11.08	NOV 16, 1997				



GROUND-WATER LEVELS

CITY OF SUFFOLK

365133076351202. Local number, 58C 58 SOW 141B.

LOCATION.--Lat 36°51'33", long 76°35'12", Hydrologic Unit 02080208, 500 ft west of old Chuckatuck High School in Chuckatuck. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 605 ft, screened 595 to 605 ft.

INSTRUMENTATION.--Continuous strip-chart recorder. July 20, 1995 to Mar. 12, 1997, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 8, 1985, to July 19, 1995, bimonthly measurement with chalked tape. Prior to Oct. 8, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 52 ft above sea level, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum prior to Jan. 12, 1988; 1.5 ft Jan. 12, 1988, to Mar. 12, 1997; 2.38 ft thereafter.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

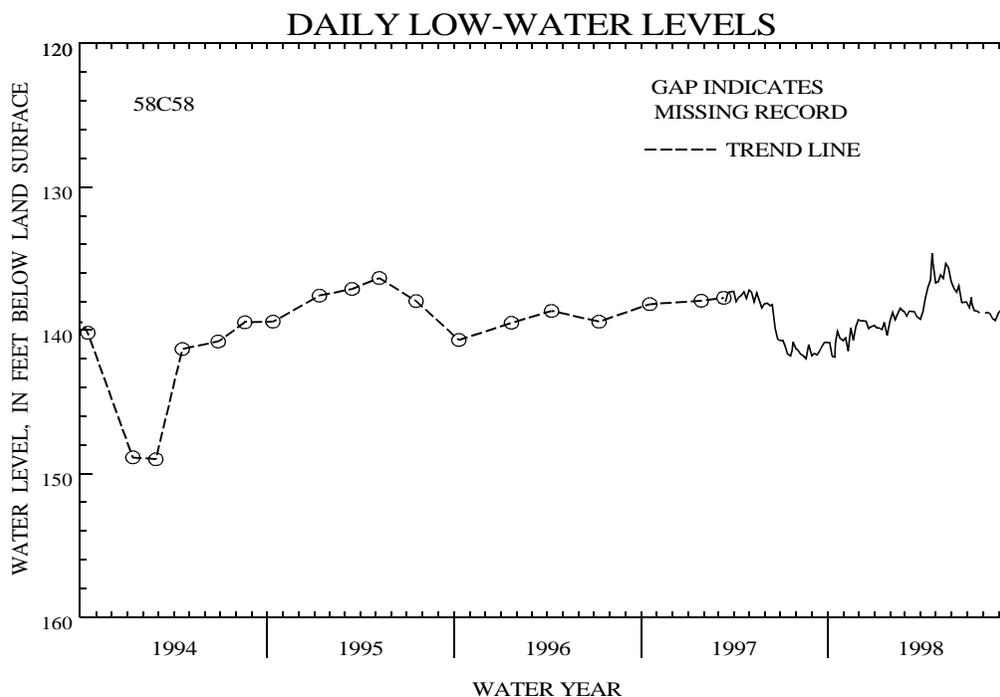
PERIOD OF RECORD.--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 108.60 ft below land-surface datum, Apr. 24, 1980; lowest measured, 148.99 ft below land-surface datum, Feb. 25, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	140.86	140.55	139.34	139.82	138.75	139.02	138.72	136.61	137.04	138.41	138.80	138.59
10	141.82	141.44	139.32	139.84	139.26	138.65	137.73	136.12	137.32	138.17	138.74	138.33
15	141.87	139.80	139.37	139.95	138.87	138.69	137.00	136.38	136.91	138.61	138.83	138.89
20	140.09	140.67	139.87	139.43	138.47	138.70	136.51	135.32	138.06	138.65	139.20	138.69
25	140.55	139.76	139.75	140.34	138.64	139.06	135.32	135.58	138.04	138.80	139.32	138.74
EOM	140.72	139.26	139.65	139.35	138.69	139.24	136.67	136.61	138.01	---	138.78	139.36

WATER YEAR 1998	HIGHEST INSTANTANEOUS	134.42	APR 23, 1998
	LOWEST INSTANTANEOUS	141.94	OCT 13, 1997



GROUND-WATER LEVELS

CITY OF SUFFOLK

365133076351204. Local number, 58C 60 SOW 141D.

LOCATION.--Lat 36°51'33", long 76°35'12", Hydrologic Unit 02080208, 500 ft west of old Chuckatuck High School in Chuckatuck. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 20 ft, screened 10 to 20 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 8, 1985, to July 19, 1995, bimonthly measurement with chalked tape. Prior to Oct. 8, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 50 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum prior to Jan. 12, 1988; 1.0 ft thereafter.

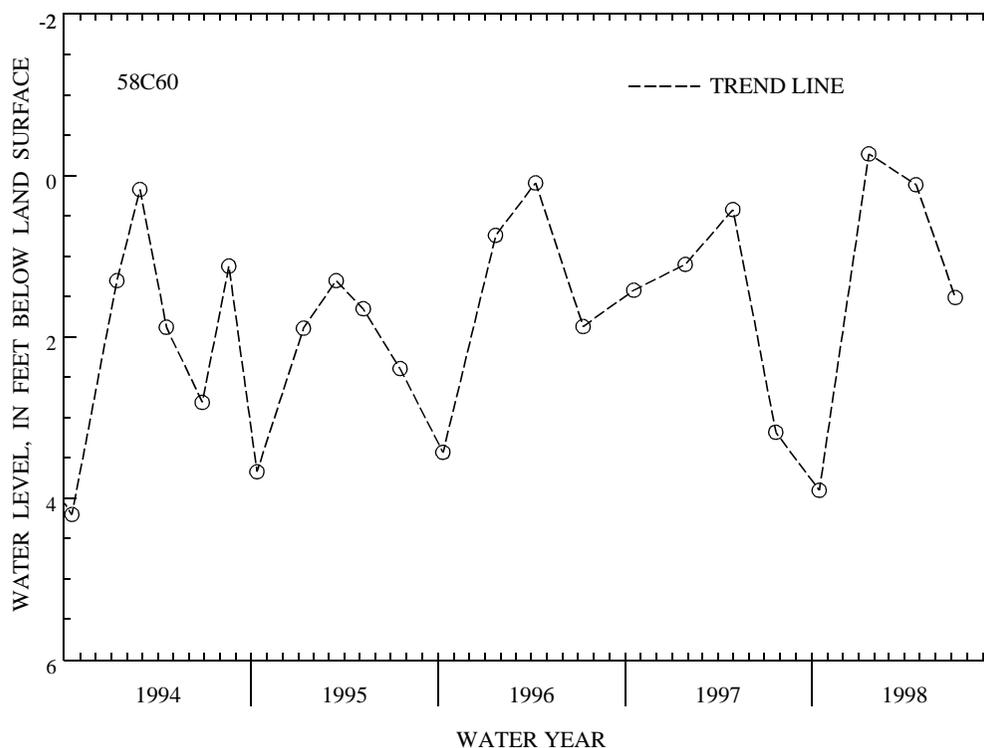
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--February 1980 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.27 ft above land-surface datum, Jan. 21, 1998; lowest measured, 4.20 ft below land-surface datum, Oct. 15, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	3.90	JAN 21	-0.27	APR 23	0.11	JUL 09	1.51
WATER YEAR 1998		HIGHEST	-0.27	JAN 21, 1998			
		LOWEST	3.90	OCT 16, 1997			



GROUND-WATER LEVELS

CITY OF SUFFOLK

364731076355501. Local number, 58C 61 SOW 159A.

LOCATION.--Lat 36°47'31", long 76°35'55", Hydrologic Unit 02080208, 0.5 mi northwest of intersection of State Highways 622 and 634, 2.3 mi northwest of Elephant Fork. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 25 ft, screened 20 to 25 ft, sounded to 17.50 ft on July 8, 1985, redrilled to 25 ft on May 15, 1990.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 26, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 40 ft above sea level, from topographic map. Measuring point: Top of casing, 0.85 ft above land-surface datum prior to June 25, 1990; 1.55 ft thereafter.

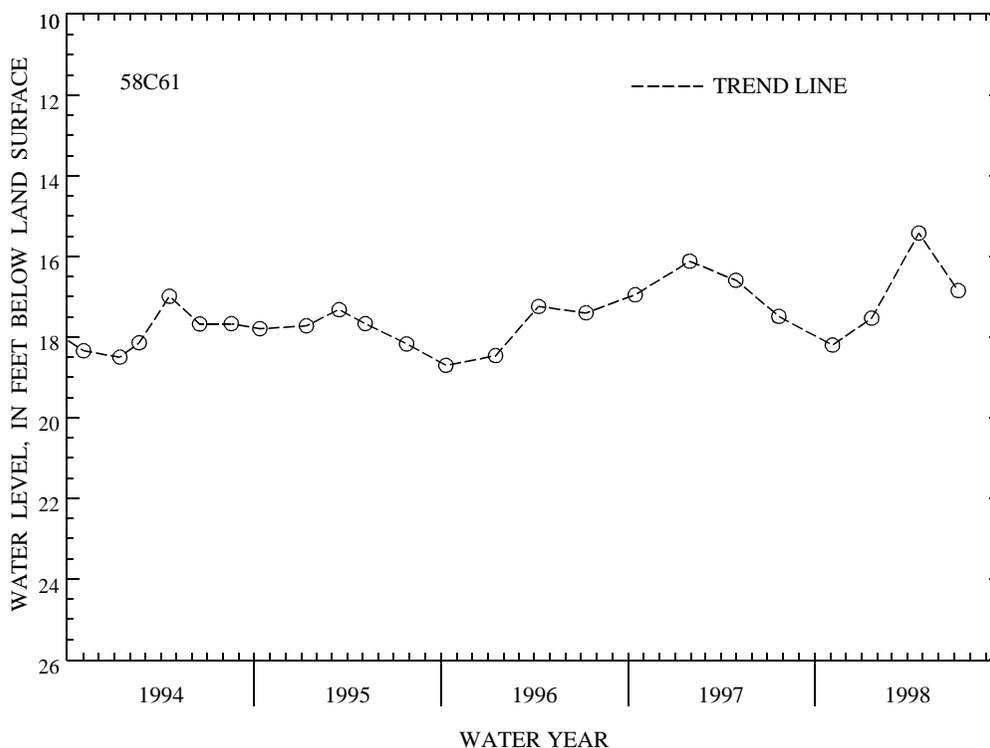
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Well reported dry several days in 1985-1990.

PERIOD OF RECORD.--June 1981 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.95 ft below land-surface datum, Apr. 19, 1984; lowest measured, 18.70 ft below land-surface datum, Oct. 11, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	18.20	JAN 21	17.53	APR 23	15.42	JUL 09	16.85
WATER YEAR 1998	HIGHEST	15.42	APR 23, 1998				
	LOWEST	18.20	NOV 05, 1997				



GROUND-WATER LEVELS

CITY OF SUFFOLK

364731076355502. Local number, 58C 62 SOW 159B.

LOCATION.--Lat 36°47'31", long 76°35'55", Hydrologic Unit 02080208, 0.5 mi northwest of intersection of State Highways 622 and 634, 2.3 mi northwest of Elephant Fork. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in., depth 575 ft, screened 555 to 575 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 26, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 40 ft above sea level, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.

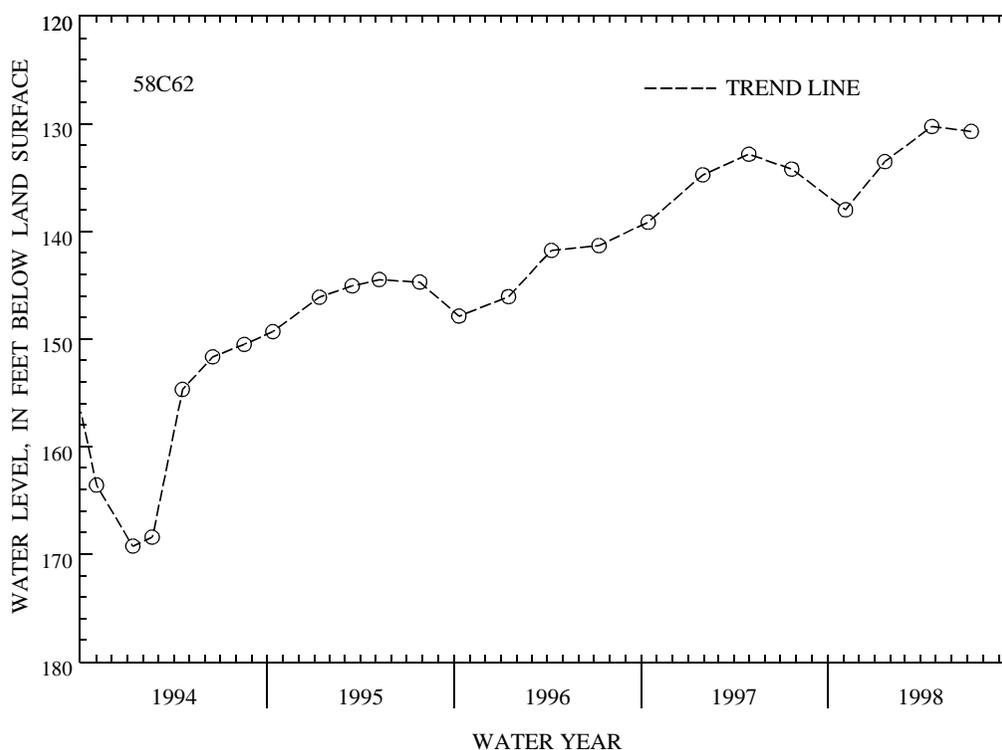
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

PERIOD OF RECORD.--June 1981 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 129.90 ft below land-surface datum, Aug. 28, 1984; lowest measured, 169.26 ft below land-surface datum, Jan. 11, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	137.98	JAN 21	133.50	APR 23	130.23	JUL 09	130.69
WATER YEAR 1998	HIGHEST	130.23	APR 23, 1998				
	LOWEST	137.98	NOV 05, 1997				



GROUND-WATER LEVELS

SURRY COUNTY

370800076500701. Local number, 56F 2 SOW 039.

LOCATION.--Lat 37°08'00", long 76°50'07", Hydrologic Unit 02080206, off State Highway 10, at Surry County Administration building in Surry. Owner: Town of Surry.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 367 ft, screened 350 to 362 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 8, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Jan. 10, 1976, to Oct. 7, 1985, occasional measurement with chalked tape. Mar. 15, 1971, to Jan. 10, 1976, continuous strip-chart recorder. Prior to Mar. 15, 1971, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 122 ft above sea level, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

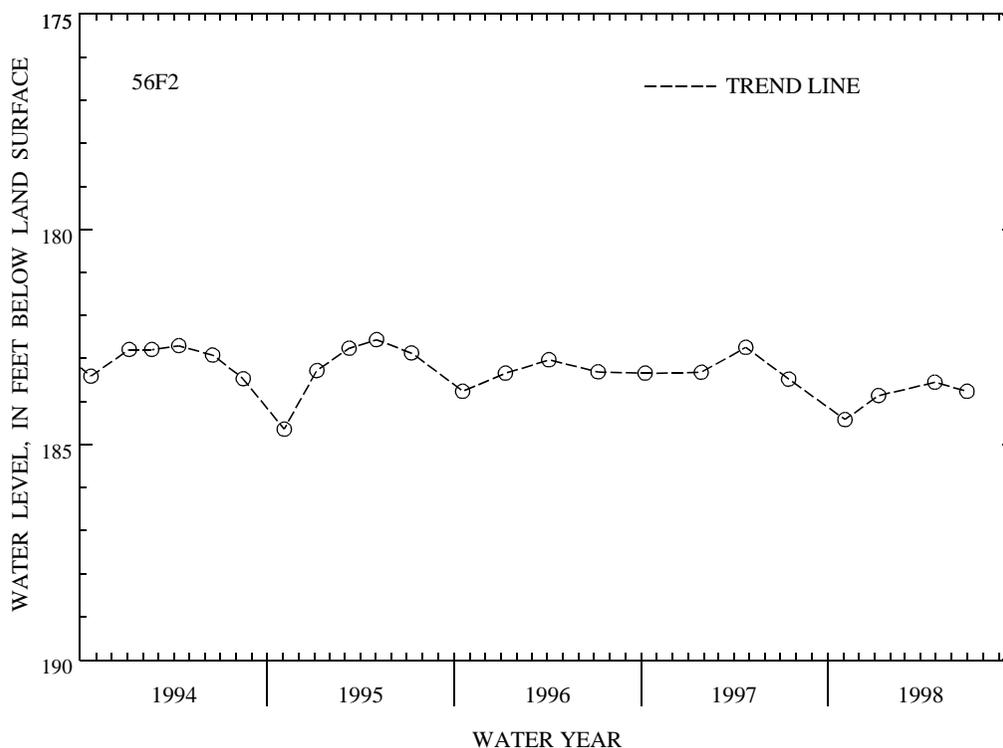
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--December 1970 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 146.43 ft below land-surface datum, Mar. 25, 1971; lowest measured, 184.64 ft below land-surface datum, Nov. 3, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	184.42	JAN 09	183.86	APR 29	183.55	JUL 01	183.76
WATER YEAR 1998	HIGHEST	183.55	APR 29, 1998				
	LOWEST	184.42	NOV 04, 1997				



GROUND-WATER LEVELS

SURRY COUNTY

370712076413201. Local number, 57E 11 SOW 094A.

LOCATION.--Lat 37°07'12", long 76°41'32", Hydrologic Unit 02080206, 0.5 mi east of State Highway 690, 2.5 mi northwest of Bacons Castle. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 605 ft, screened 595 to 605 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 45 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

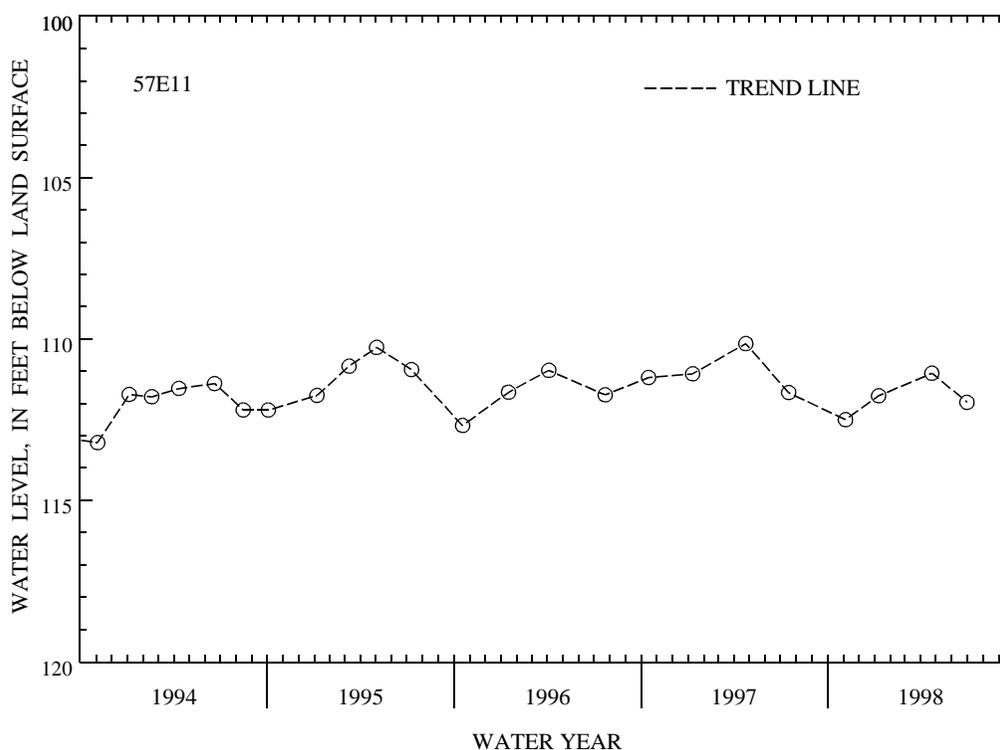
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

PERIOD OF RECORD.--July 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 92.19 ft below land-surface datum, July 24, 1980; lowest measured, 113.21 ft below land-surface datum, Nov. 3, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	112.50	JAN 09	111.76	APR 23	111.06	JUL 01	111.96
WATER YEAR 1998	HIGHEST	111.06	APR 23, 1998				
	LOWEST	112.50	NOV 05, 1997				



GROUND-WATER LEVELS

SURRY COUNTY

370712076413203. Local number, 57E 13 SOW 094C.

LOCATION.--Lat 37°07'12", long 76°41'32", Hydrologic Unit 02080206, 0.5 mi east of State Highway 690, 2.5 mi northwest of Bacons Castle. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 41 ft, diameter 3 in. from 41 to 46 ft, depth 46 ft, screened 41 to 46 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 45 ft above sea level, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.

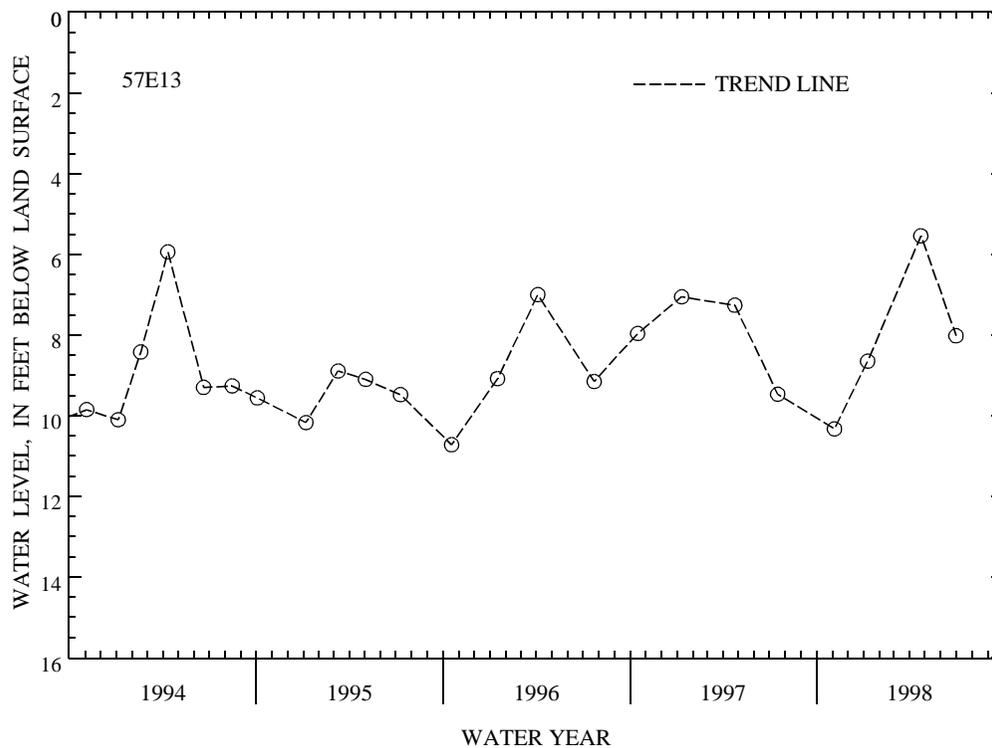
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--July 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.90 ft below land-surface datum, May 29, 1980; lowest measured, 11.17 ft below land-surface datum, Dec. 13, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	10.33	JAN 09	8.65	APR 23	5.54	JUL 01	8.02
WATER YEAR 1998	HIGHEST	5.54	APR 23, 1998				
	LOWEST	10.33	NOV 05, 1997				



GROUND-WATER LEVELS

SURRY COUNTY

371132076405501. Local number, 57F 16 SOW 087A.

LOCATION.--Lat 37°11'32", long 76°40'55", Hydrologic Unit 02080206, at the end of State Highway 650 in Homewood, 7.6 mi northeast of Bacons Castle. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 1,206 ft, screened 1,170 to 1,185 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 5 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

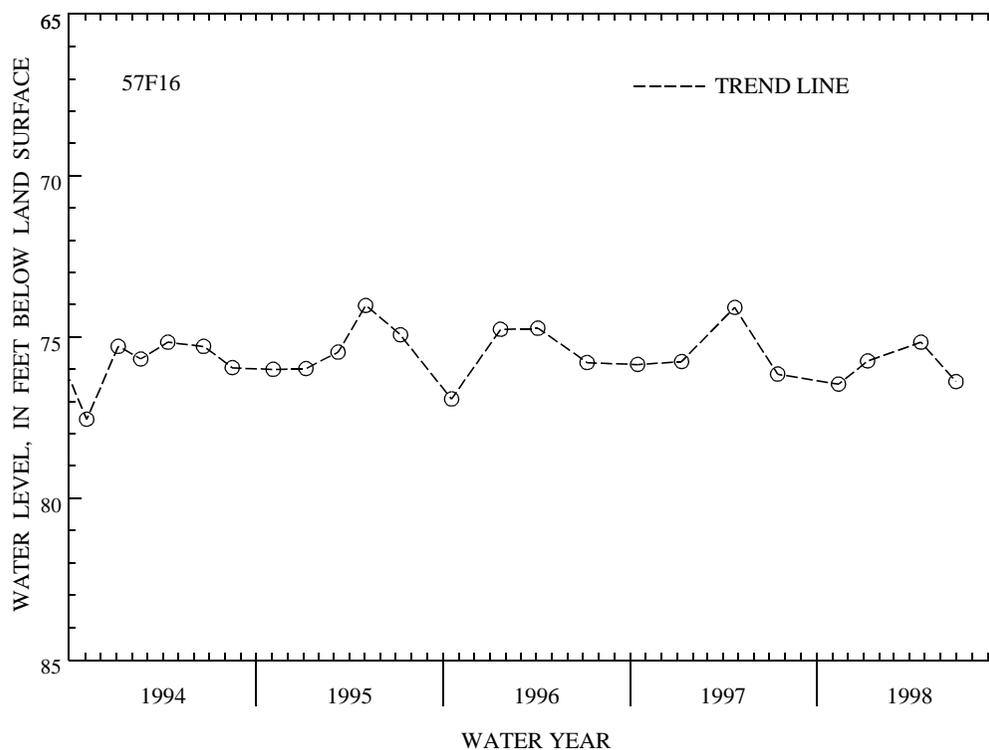
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--July 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 53.22 ft below land-surface datum, July 20, 1978; lowest measured, 77.55 ft below land-surface datum, Nov. 3, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 13	76.46	JAN 09	75.74	APR 23	75.16	JUL 01	76.38
WATER YEAR 1998 HIGHEST		75.16	APR 23, 1998				
LOWEST		76.46	NOV 13, 1997				



GROUND-WATER LEVELS

SURRY COUNTY

371132076405502. Local number, 57F 24 SOW 087B.

LOCATION.--Lat 37°11'32", long 76°40'55", Hydrologic Unit 02080206, at the end of State Highway 650 in Homewood, 7.6 mi northeast of Bacons Castle. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 520 ft, screened 510 to 520 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 5 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

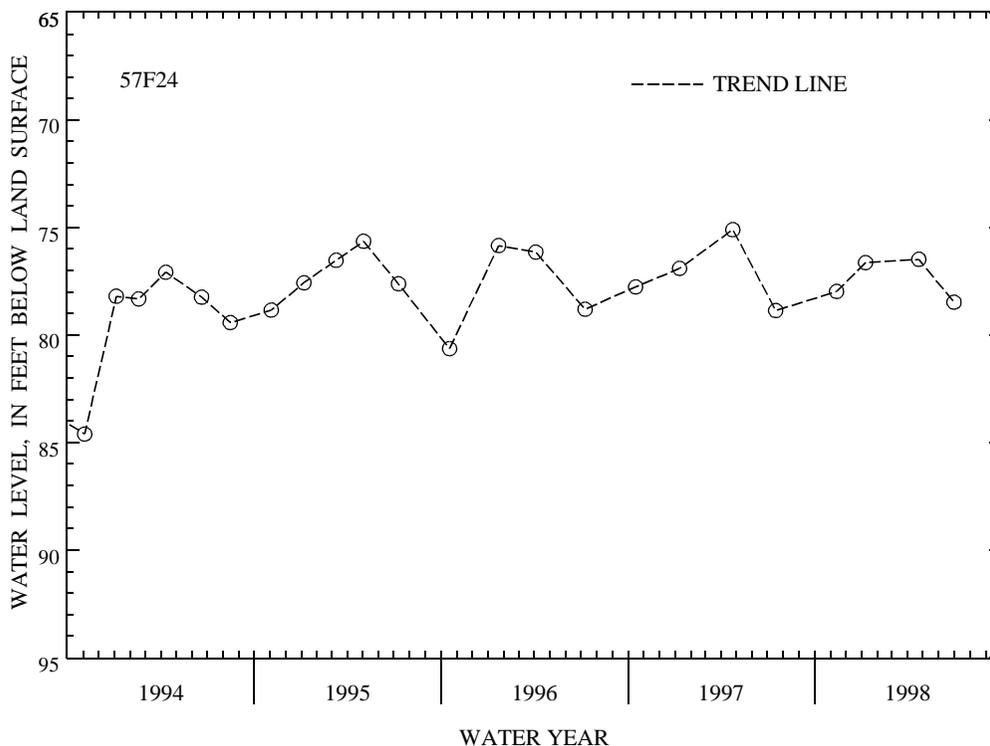
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

PERIOD OF RECORD.--July 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 62.17 ft below land-surface datum, Aug. 17, 1982; lowest measured, 84.60 ft below land-surface datum, Nov. 3, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 13	77.97	JAN 09	76.63	APR 23	76.48	JUL 01	78.47
WATER YEAR 1998	HIGHEST	76.48	APR 23, 1998				
	LOWEST	78.47	JUL 01, 1998				



GROUND-WATER LEVELS
CITY OF VIRGINIA BEACH

364850076120701. Local number, 61C 23 SOW 129.

LOCATION.--Lat 36°48'50", long 76°12'07", Hydrologic Unit 02080208, at Woodstock Elementary School in Virginia Beach. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 8 in. to 68 ft, diameter 6 in. from 68 to 78 ft, depth 78 ft, screened 68 to 73 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 0.1 ft above land-surface datum.

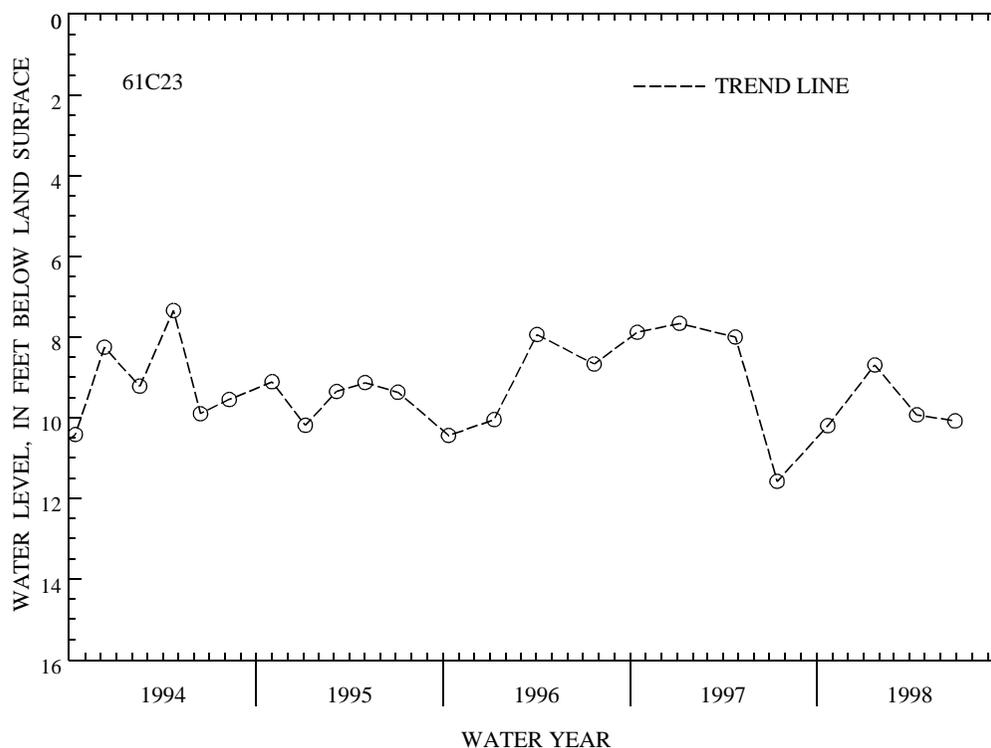
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--April 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.34 ft below land-surface datum, Apr. 22, 1994; lowest measured, 17.77 ft below land-surface datum, Aug. 26, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	10.20	JAN 23	8.69	APR 15	9.93	JUN 29	10.08
WATER YEAR 1998 HIGHEST		8.69	JAN 23, 1998				
LOWEST		10.20	OCT 23, 1997				



GROUND-WATER LEVELS
CITY OF VIRGINIA BEACH

364920076093201. Local number, 61C 27 SOW 174A.

LOCATION.--Lat 36°49'20", long 76°09'32", Hydrologic Unit 02080208, at Kempsville High School in Virginia Beach.
Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 175 ft, screened 160 to 170 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum.

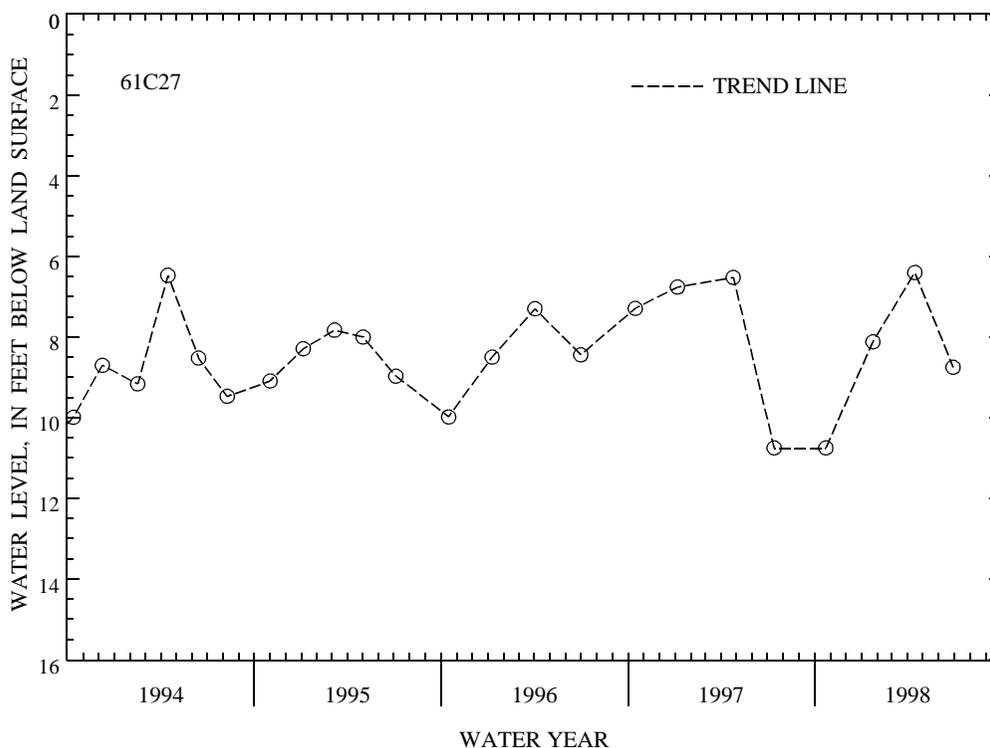
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--April 1984 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.09 ft below land-surface datum, Apr. 25, 1984; lowest measured, 11.73 ft below land-surface datum, Aug. 6, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	10.75	JAN 23	8.12	APR 15	6.40	JUN 29	8.75
WATER YEAR 1998		HIGHEST	6.40	APR 15, 1998			
		LOWEST	10.75	OCT 23, 1997			



GROUND-WATER LEVELS
CITY OF VIRGINIA BEACH

364920076093202. Local number, 61C 28 SOW 174B.

LOCATION.--Lat 36°49'20", long 76°09'32", Hydrologic Unit 02080208, at Kempsville High School in Virginia Beach.
Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 80 ft, screened 65 to 75 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985 to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

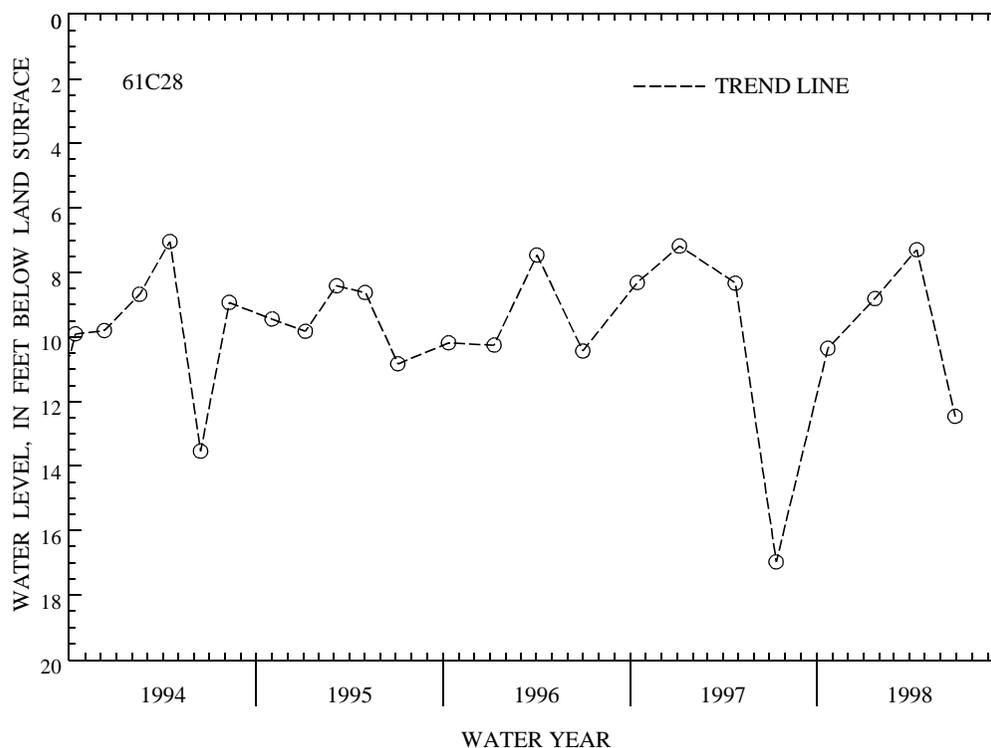
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--April 1984 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.51 ft below land-surface datum, Apr. 25, 1984; lowest measured, 17.99 ft below land-surface datum, July 18, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	10.35	JAN 23	8.81	APR 15	7.29	JUN 29	12.46
WATER YEAR 1998		HIGHEST	7.29	APR 15, 1998			
		LOWEST	12.46	JUN 29, 1998			



GROUND-WATER LEVELS
CITY OF VIRGINIA BEACH

365425076105001. Local number, 61D 5 SOW 155.

LOCATION.--Lat 36°54'25", long 76°10'50", Hydrologic Unit 02080108, 100 ft east of Ferry Road, 0.3 mi northwest of Diamond Springs Road in Virginia Beach. Owner: City of Virginia Beach.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 12 in. to 102 ft, diameter 6 in. from 102 to 150 ft, diameter 4 in. from 150 to 1,380 ft, depth 1,380 ft, screened 1,207 to 1,229 ft, 1,250 to 1,264 ft, 1,286 to 1,306 ft, 1,345 to 1,367 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 11 ft above sea level, from topographic map. Measuring point: Top of casing, 2.8 ft above land-surface datum.

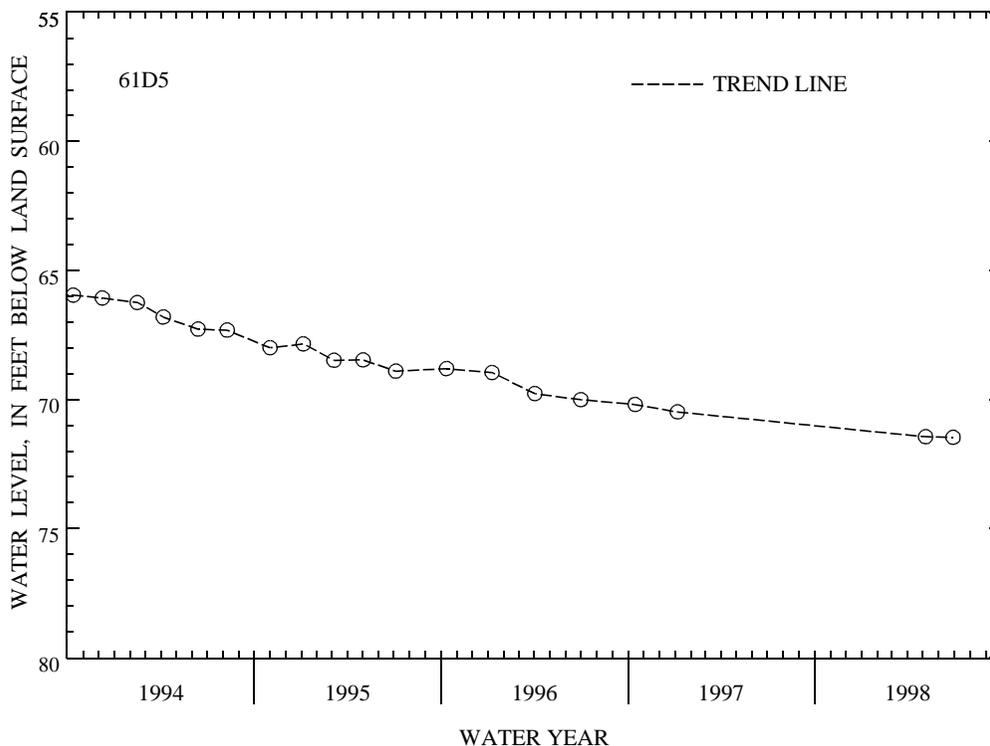
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--December 1980 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 49.75 ft below land-surface datum, Dec. 17, 1980; lowest measured, 71.46 ft below land-surface datum, June 29, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAY 06	71.44	JUN 29	71.46
WATER YEAR 1998	HIGHEST	71.44	MAY 06, 1998	
	LOWEST	71.46	JUN 29, 1998	



GROUND-WATER LEVELS
CITY OF VIRGINIA BEACH

363537076061001. Local number, 62A 2 SOW 097A.

LOCATION.--Lat 36°33'54", long 76°06'14", Hydrologic Unit 03010205, 0.2 mi south of Baum Road, 0.25 mi west of Crags Causeway in Virginia Beach. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 76 ft, screened 66 to 76 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum prior to Aug. 3, 1988; at land-surface datum Aug. 3, 1988, to Mar. 13, 1989; 0.65 ft Mar. 13, 1989, to Apr. 1, 1991; 1.65 ft thereafter.

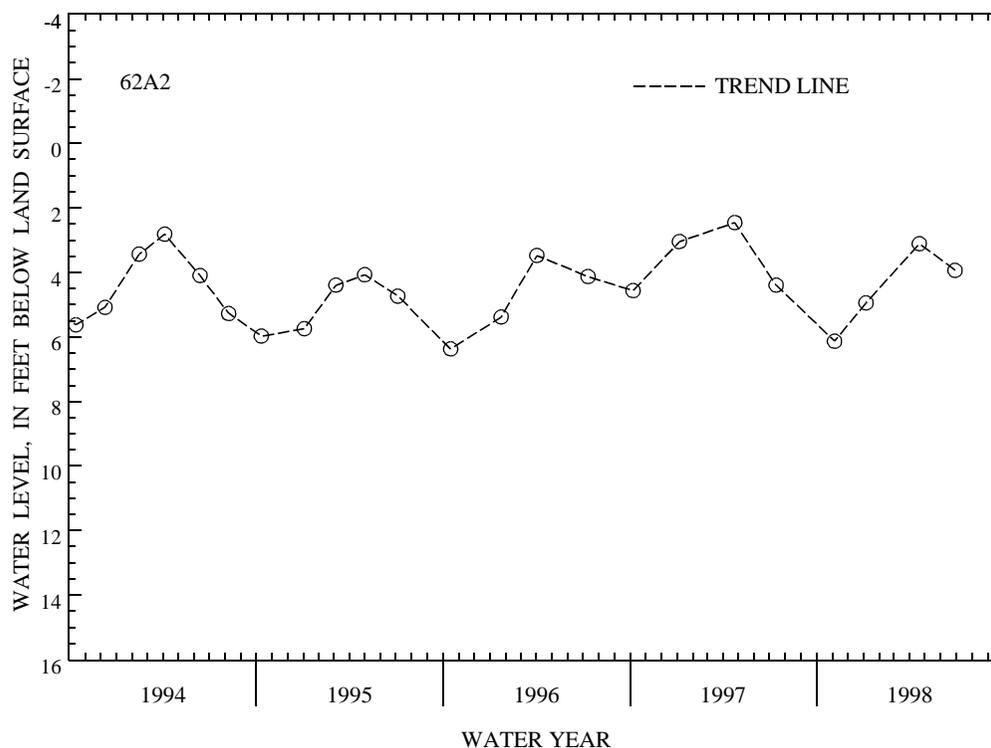
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--July 1979 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.18 ft below land-surface datum, Apr. 30, 1980; lowest measured, 6.68 ft below land-surface datum, Nov. 28, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	6.13	JAN 06	4.94	APR 20	3.11	JUN 29	3.93
WATER YEAR 1998	HIGHEST	3.11	APR 20, 1998				
	LOWEST	6.13	NOV 05, 1997				



GROUND-WATER LEVELS
CITY OF VIRGINIA BEACH

364126076003501. Local number, 62B 1 SOW 098A.

LOCATION.--Lat 36°41'26", long 76°00'35", Hydrologic Unit 03010205, on north side of Pleasant Ridge Road at the Virginia Beach Mosquito Control shop, 0.9 mi east of Pleasant Ridge in Virginia Beach. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 24 ft, screened 20 to 24 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum prior to Mar. 2, 1988; 1.05 ft thereafter.

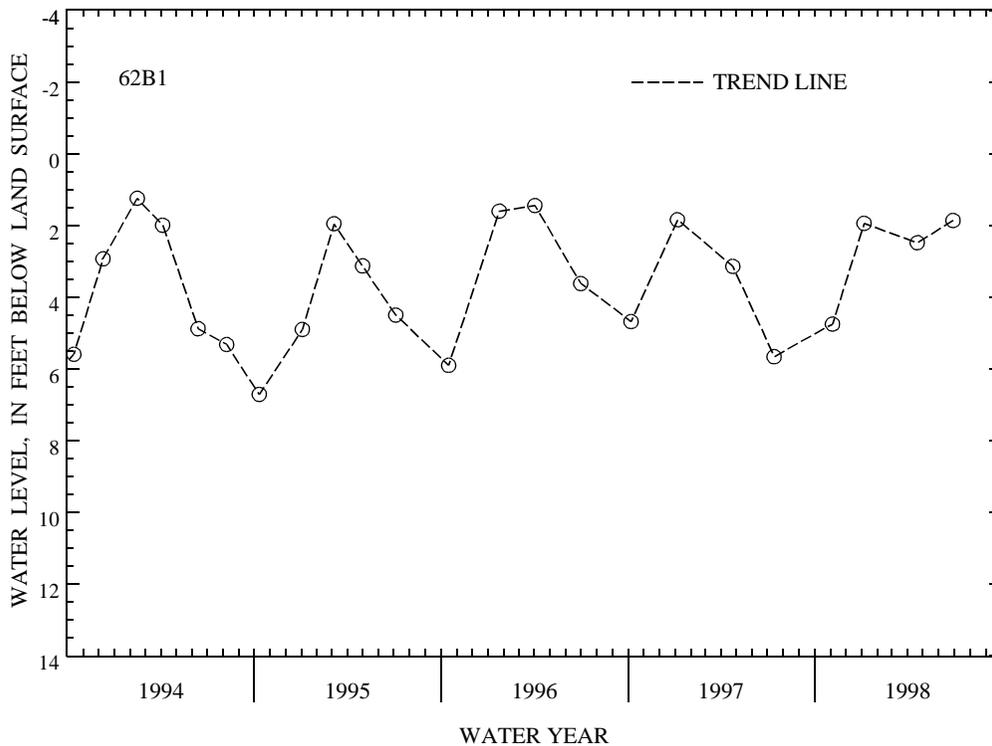
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--June 1979 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.02 ft below land-surface datum, Apr. 1, 1991; lowest measured, 11.95 ft below land-surface datum, Sept. 16, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	4.75	JAN 06	1.94	APR 20	2.48	JUN 29	1.86
WATER YEAR 1998	HIGHEST	1.86	JUN 29, 1998				
	LOWEST	4.75	NOV 05, 1997				



GROUND-WATER LEVELS
CITY OF VIRGINIA BEACH

364126076003502. Local number, 62B 2 SOW 098B.

LOCATION.--Lat 36°41'26", long 76°00'35", Hydrologic Unit 03010205, on north side of Pleasant Ridge Road at the Virginia Beach Mosquito Control shop, 0.9 mi east of Pleasant Ridge in Virginia Beach. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 98 ft, screened 88 to 98 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum prior to Mar. 2, 1988; 1.2 ft above land-surface datum Mar. 3, 1988, to Dec. 9, 1994; 0.8 ft thereafter.

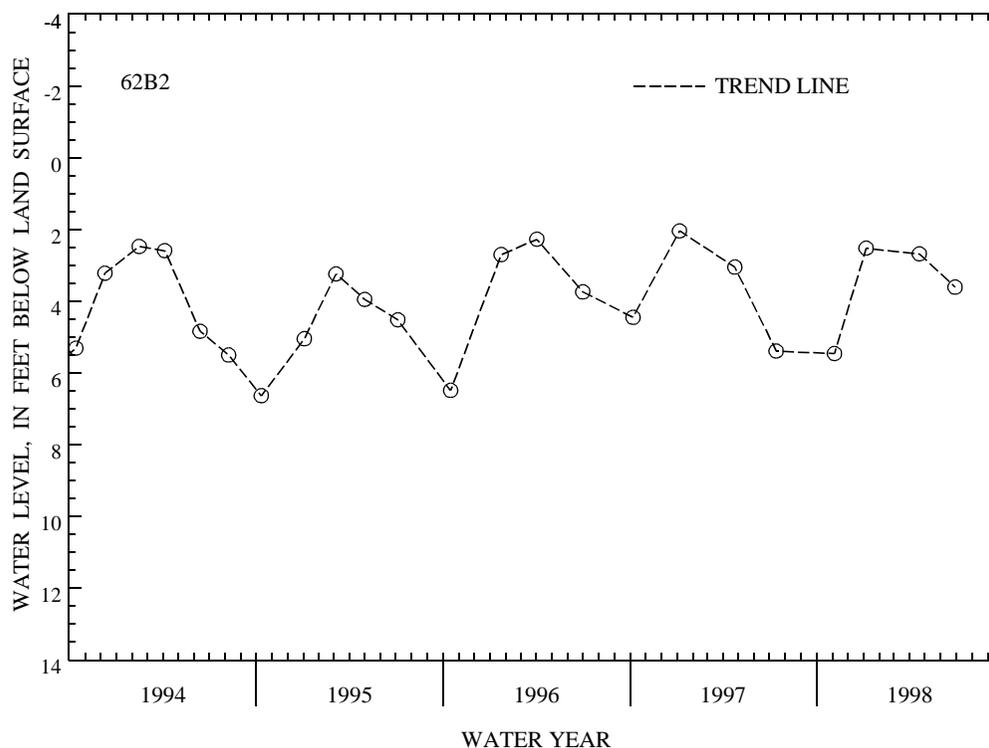
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--June 1979 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.70 ft below land-surface datum, Mar. 13, 1989, Jan. 10, 1990; lowest measured, 11.76 ft below land-surface datum, Sept. 16, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	5.46	JAN 06	2.52	APR 20	2.68	JUN 29	3.61
WATER YEAR 1998 HIGHEST		2.52	JAN 06, 1998				
LOWEST		5.46	NOV 05, 1997				



GROUND-WATER LEVELS
CITY OF VIRGINIA BEACH

364745076004302. Local number, 62C 10 SOW 172B.

LOCATION.--Lat 36°47'45", long 76°00'43", Hydrologic Unit 03010205, at the end of Phantom Boulevard, 0.25 mi south of Harpers Road and Oceana Naval Air Station in Virginia Beach. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 280 ft, screened 270 to 280 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 10, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 10, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 17 ft above sea level, from topographic map. Measuring point: Top of casing, 2.8 ft above land-surface datum.

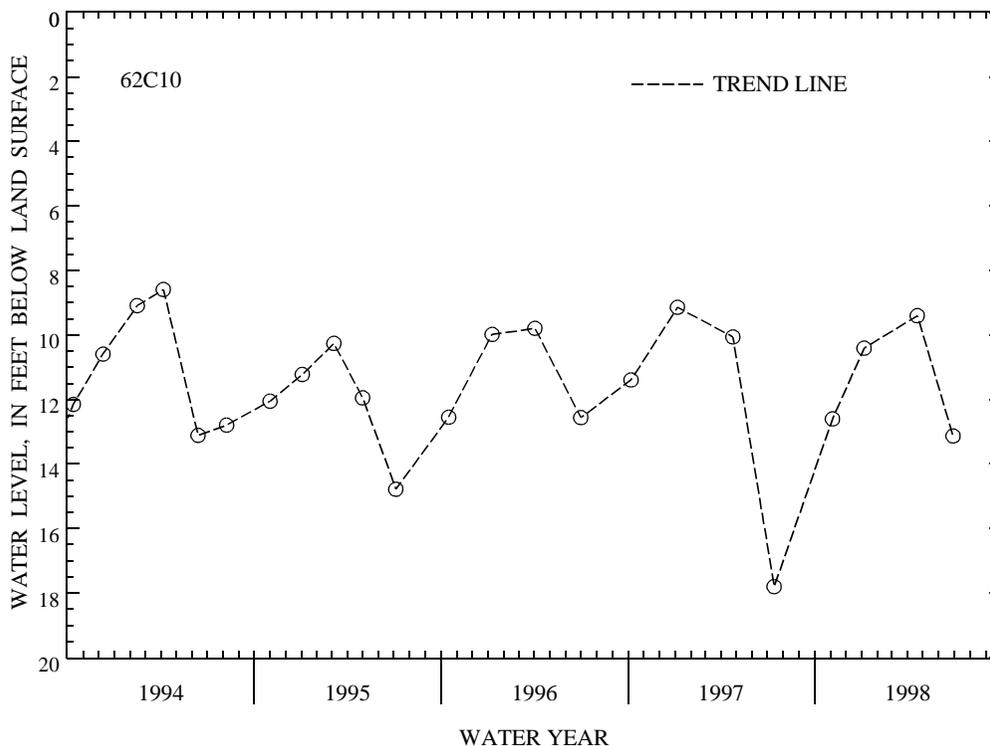
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--April 1984 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.10 ft below land-surface datum, Jan. 30, 1991; lowest measured, 17.80 ft below land-surface datum, July 14, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	12.60	JAN 06	10.41	APR 20	9.40	JUN 29	13.13
WATER YEAR 1998	HIGHEST	9.40	APR 20, 1998				
	LOWEST	13.13	JUN 29, 1998				



GROUND-WATER LEVELS
CITY OF VIRGINIA BEACH

364745076004303. Local number, 62C 11 SOW 172C.

LOCATION.--Lat 36°47'45", long 76°00'43", Hydrologic Unit 03010205, at the end of Phantom Boulevard, 0.25 mi south of Harpers Road and Oceana Naval Air Station in Virginia Beach. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 35 ft, screened 20 to 30 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 10, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 10, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 17 ft above sea level, from topographic map. Measuring point: Top of casing, 1.7 ft above land-surface datum.

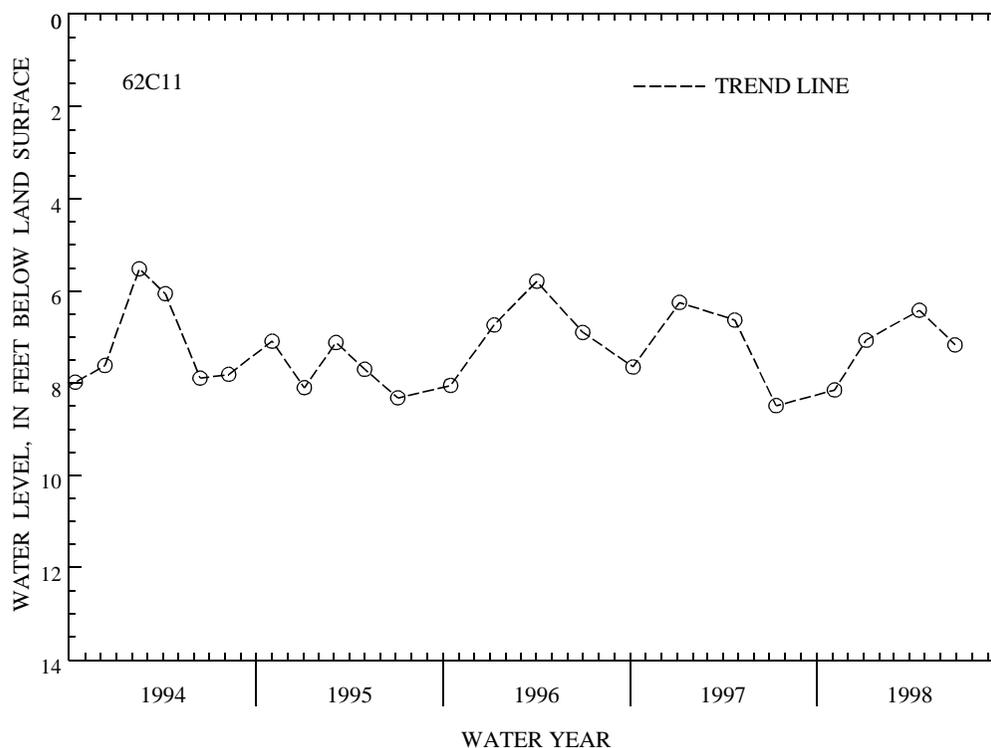
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--May 1984 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.89 ft below land-surface datum, Feb. 28, 1985; lowest measured, 8.49 ft below land-surface datum, July 14, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	8.15	JAN 06	7.07	APR 20	6.42	JUN 29	7.17
WATER YEAR 1998		HIGHEST	6.42	APR 20, 1998			
		LOWEST	8.15	NOV 05, 1997			



GROUND-WATER LEVELS
CITY OF VIRGINIA BEACH

364713076030701. Local number, 62C 2 SOW 092A.

LOCATION.--Lat 36°47'15", long 76°03'08", Hydrologic Unit 03010205, at entrance to Oceana Naval Air Station on London Bridge Road in Virginia Beach. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 102 ft, screened 97 to 102 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 10, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 10, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.08 ft above land-surface datum prior to Mar. 2, 1988; 0.7 ft thereafter.

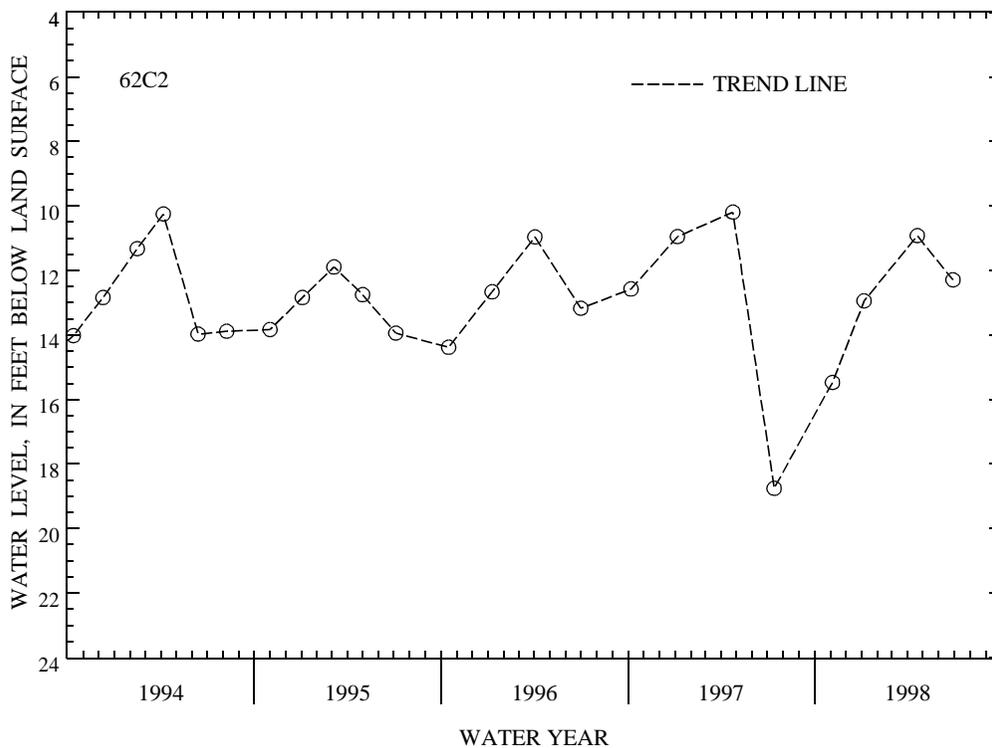
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--December 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.00 ft below land-surface datum, Dec. 1, 1977; lowest measured, 18.75 ft below land-surface datum, July 14, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	15.47	JAN 06	12.94	APR 20	10.92	JUN 29	12.29
WATER YEAR 1998 HIGHEST		10.92	APR 20, 1998				
LOWEST		15.47	NOV 05, 1997				



GROUND-WATER LEVELS
CITY OF VIRGINIA BEACH

364715076030801. Local number, 62C 3 SOW 092B.

LOCATION.--Lat 36°47'15", long 76°03'08", Hydrologic Unit 03010205, at entrance to Oceana Naval Air Station on London Bridge Road in Virginia Beach. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 58 ft, screened 53 to 58 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 10, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 10, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.05 ft above land-surface datum prior to Mar. 2, 1988; 0.9 ft thereafter.

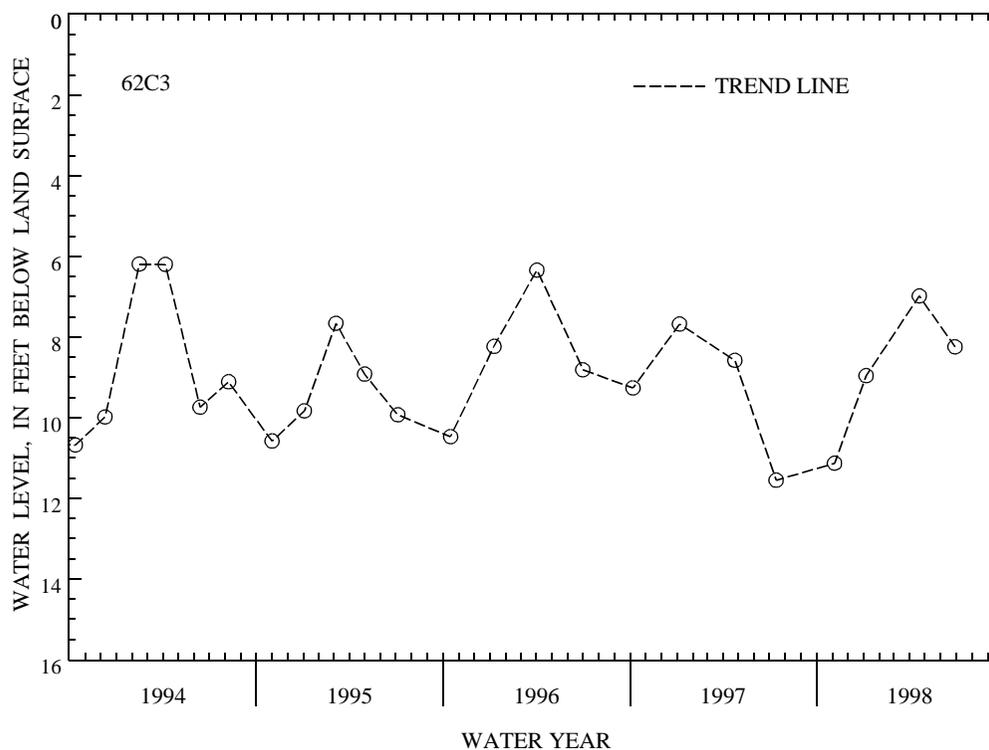
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--February 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.36 ft below land-surface datum, Feb. 16, 1983; lowest measured, 11.55 ft below land-surface datum, July 14, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	11.13	JAN 06	8.96	APR 20	6.98	JUN 29	8.24
WATER YEAR 1998		HIGHEST	6.98	APR 20, 1998			
		LOWEST	11.13	NOV 05, 1997			



GROUND-WATER LEVELS
CITY OF VIRGINIA BEACH

364722075591801. Local number, 63C 4 SOW 173A.

LOCATION.--Lat 36°47'22", long 75°59'18", Hydrologic Unit 02080108, at Redwing Park, 0.7 mi northeast of intersection of Oceana Boulevard and Dam Neck Road in Virginia Beach. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 291 ft, screened 281 to 291 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 10, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 10, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 8 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum.

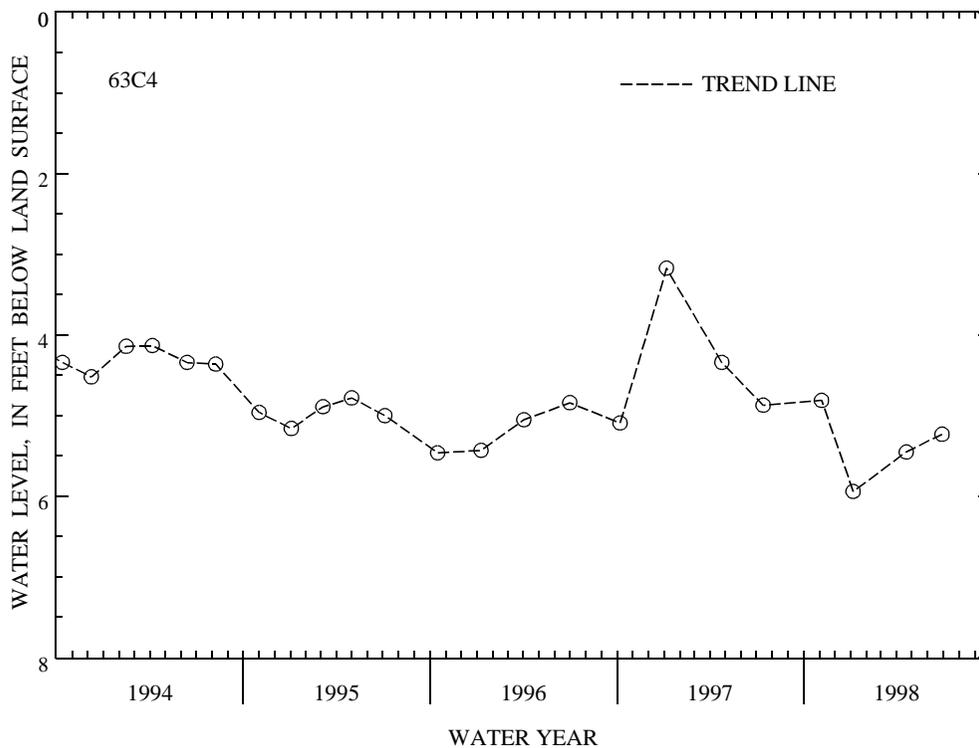
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--April 1984 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.10 ft below land-surface datum, June 21, 1989; lowest measured, 5.94 ft below land-surface datum, Jan. 6, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	4.81	JAN 06	5.94	APR 20	5.45	JUN 29	5.23
WATER YEAR 1998	HIGHEST	4.81	NOV 05, 1997				
	LOWEST	5.94	JAN 06, 1998				



GROUND-WATER LEVELS

YORK COUNTY

371654076401601. Local number, 57G 17 SOW 068.

LOCATION.--Lat 37°16'54", long 76°40'16", Hydrologic Unit 02080107, 250 ft east of State Highway 716 at Parkway Estates, 0.5 mi east of Williamsburg. Owner: Sydnor Hydrodynamics.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age and Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 8 in., depth 452.3 ft, screened 411 to 426 ft, 442.2 to 452.3 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 7, 1995, bimonthly measurement with chalked tape. Apr. 30, 1978, to Sept. 30, 1985, occasional measurement with chalked tape. Jan. 15, 1974, to Apr. 30, 1978, continuous strip-chart recorder. Prior to Jan. 15, 1974, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 60 ft above sea level, from topographic map. Measuring point: Top of casing, 0.85 ft above land-surface datum.

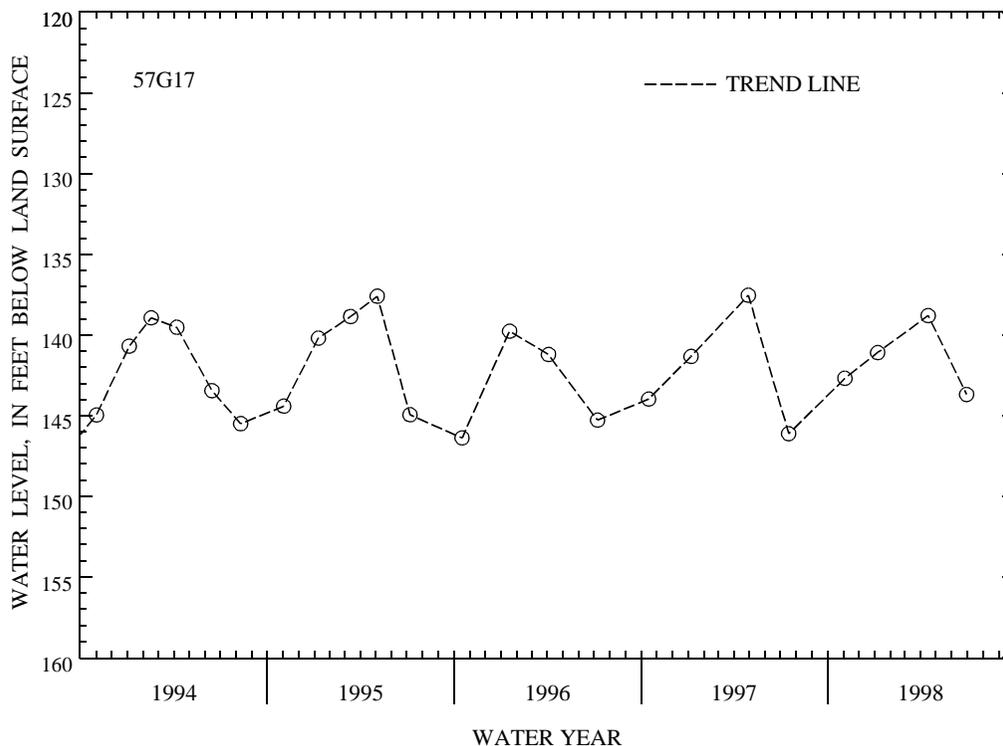
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--November 1972 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 106.09 ft below land-surface datum, Nov. 22, 1972; lowest measured, 148.26 ft below land-surface datum, Aug. 11, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	142.68	JAN 07	141.09	APR 16	138.79	JUN 30	143.68
WATER YEAR 1998	HIGHEST	138.79	APR 16, 1998				
	LOWEST	143.68	JUN 30, 1998				



GROUND-WATER LEVELS

YORK COUNTY

371735076391501. Local number, 57G 19 SOW 069.

LOCATION.--Lat 37°17'35", long 76°39'15", Hydrologic Unit 02080107, 250 ft east of State Highway 716 at Queens Lake Subdivision, 1.6 mi east of Williamsburg. Owner: Sydnor Hydrodynamics.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age and Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 515 ft, screened 420 to 430 ft, 445 to 460 ft, 505 to 515 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 7, 1995, bimonthly measurement with chalked tape. Apr. 30, 1979, to Sept. 30, 1985, occasional measurement with chalked tape. July 31, 1974, to Apr. 30, 1979, continuous strip-chart recorder. Prior to July 31, 1974, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 64 ft above sea level, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum prior to Aug. 14, 1990; 2.05 ft thereafter.

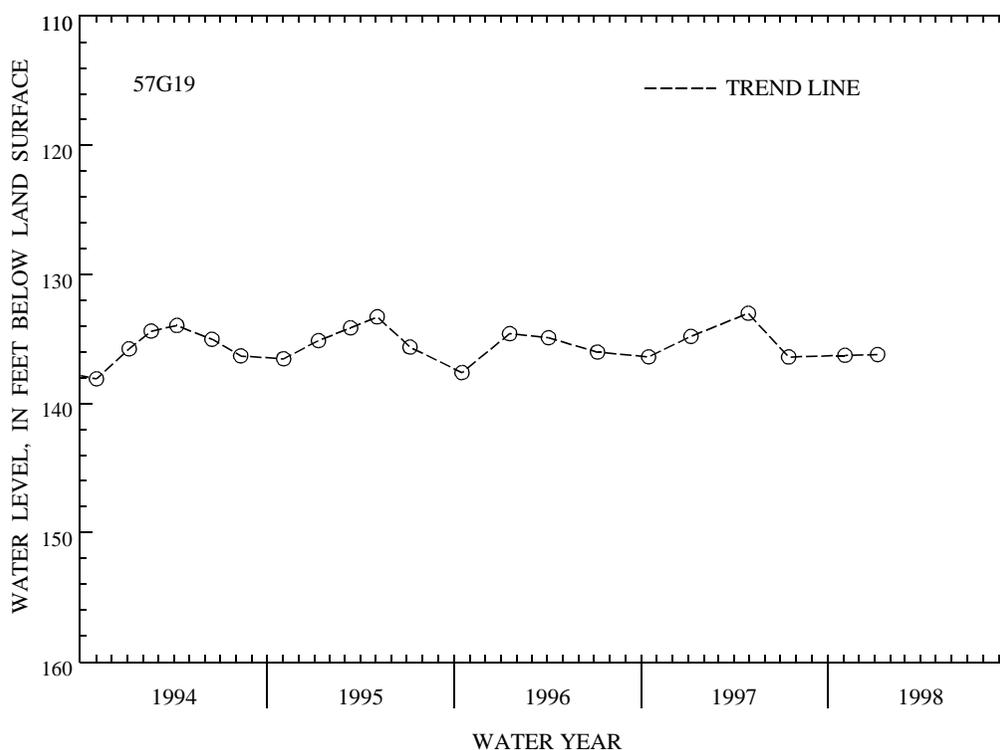
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--November 1972 to current year. Well discontinued as of Jan. 7, 1998. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 109.95 ft below land-surface datum, Nov. 29, 1972; lowest measured, 138.08 ft below land-surface datum, Nov. 1, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	DATE	WATER LEVEL	DATE	WATER LEVEL
	NOV 04	136.26	JAN 07	136.20
WATER YEAR 1998	HIGHEST	136.20	JAN 07, 1998	
	LOWEST	136.26	NOV 04, 1997	



GROUND-WATER LEVELS

YORK COUNTY

371045076310702. Local number, 58F 62 SOW 187A.

LOCATION.--Lat 37°10'45", long 76°31'07", Hydrologic Unit 02080206, 300 ft north of State Highway 105, 1.8 mi east of intersection of State Highways 105 and 143, and 3.1 mi southeast of Lee Hall. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Eastover-Calvert confining unit of Miocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 140 ft, screened 120 to 140 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 4, 1991, to July 10, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sept. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

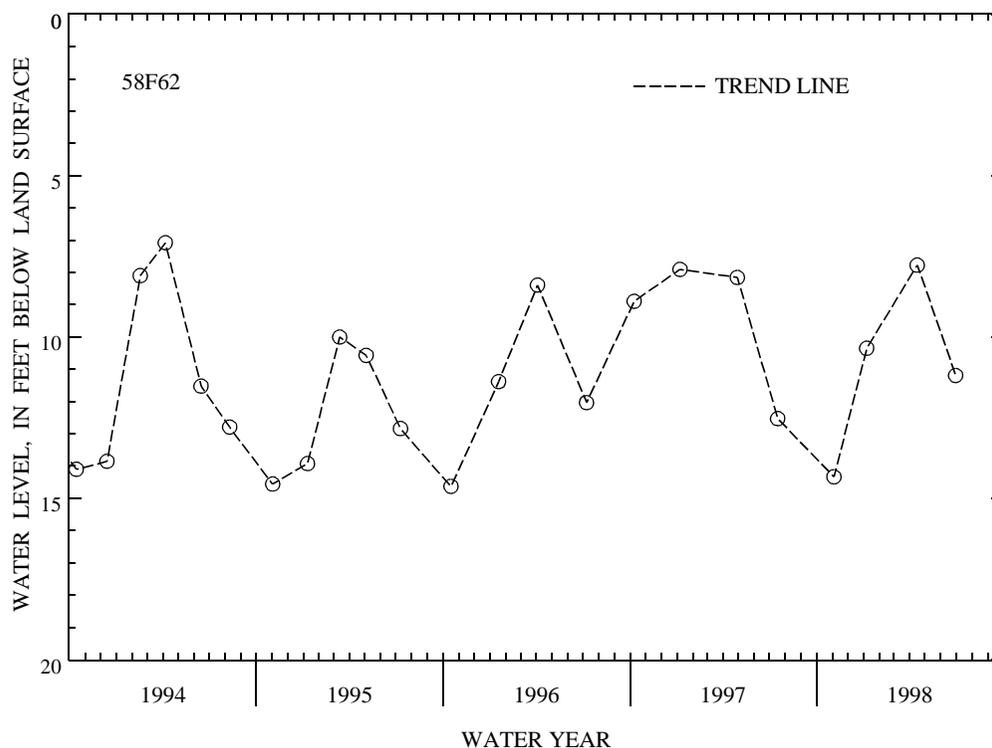
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.08 ft below land-surface datum, Apr. 6, 1994; lowest measured, 14.83 ft below land-surface datum, Nov. 6, 1991.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	14.33	JAN 07	10.35	APR 16	7.77	JUN 30	11.19
WATER YEAR 1998 HIGHEST		7.77	APR 16, 1998				
LOWEST		14.33	NOV 04, 1997				



GROUND-WATER LEVELS

YORK COUNTY

371045076310703. Local number, 58F 63 SOW 187B.

LOCATION.--Lat 37°10'45", long 76°31'07", Hydrologic Unit 02080206, 300 ft north of State Highway 105, 1.8 mi east of intersection of State Highways 105 and 143, and 3.1 mi southeast of Lee Hall. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Cornwallis Cave aquifer of Pliocene-Holocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 28 ft, screened 18 to 28 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 4, 1991, to July 10, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sept. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

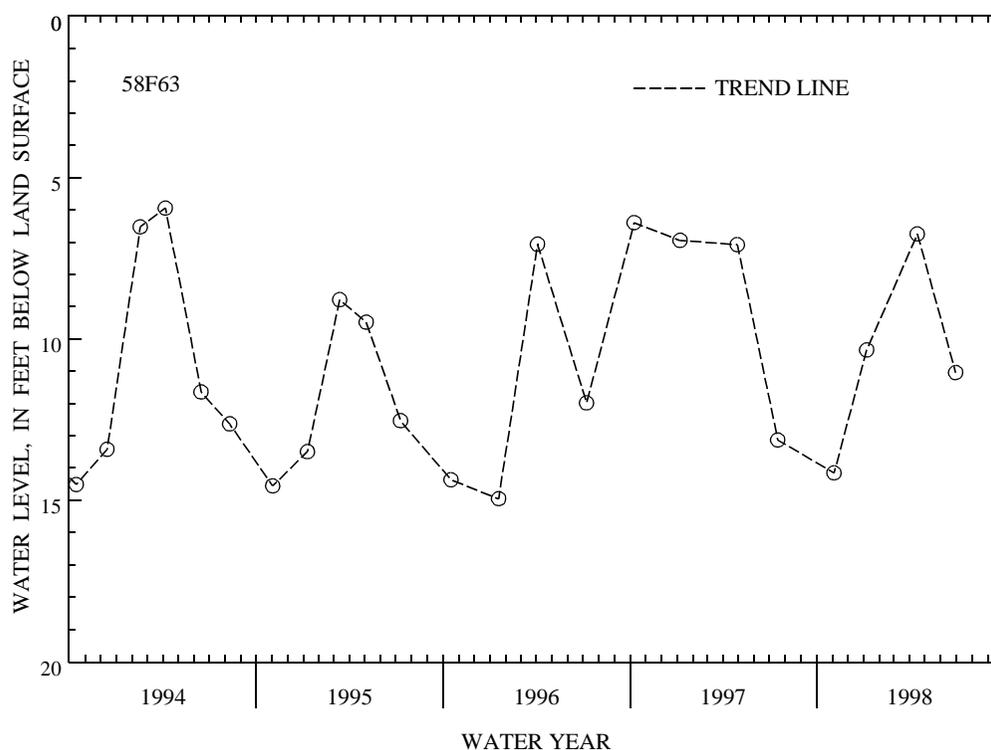
PERIOD OF RECORD.--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.94 ft below land-surface datum, Apr. 6, 1994; lowest measured, 14.95 ft below land-surface datum, Jan. 18, 1996.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL						
NOV 04	14.15	JAN 07	10.34	APR 16	6.74	JUN 30	11.04

WATER YEAR 1998	HIGHEST	6.74	APR 16, 1998
	LOWEST	14.15	NOV 04, 1997



GROUND-WATER LEVELS

YORK COUNTY

371250076300502. Local number, 58F 65 SOW 191A.

LOCATION.--Lat 37°12'05", long 76°30'05", Hydrologic Unit 02080107, 300 ft east of State Highway 704, 1.2 mi north of intersection of State Highway 704 and U.S. Highway 17, and 1.5 mi south of Yorktown. Owner: Virginia Department of Environmental Quality.

AQUIFER.--York County shallow aquifer system (undivided) of Miocene-Holocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 110 ft, screened 90 to 110 ft.

INSTRUMENTATION.--Occasional measurement with chalked taped by Virginia Department of Environmental Quality - Water Division personnel. May 7, 1991 to Oct. 17, 1995, continuous strip-chart recorder since May 7, 1991. Occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 1.8 ft above land-surface datum prior to May 7, 1991; 1.70 ft thereafter.

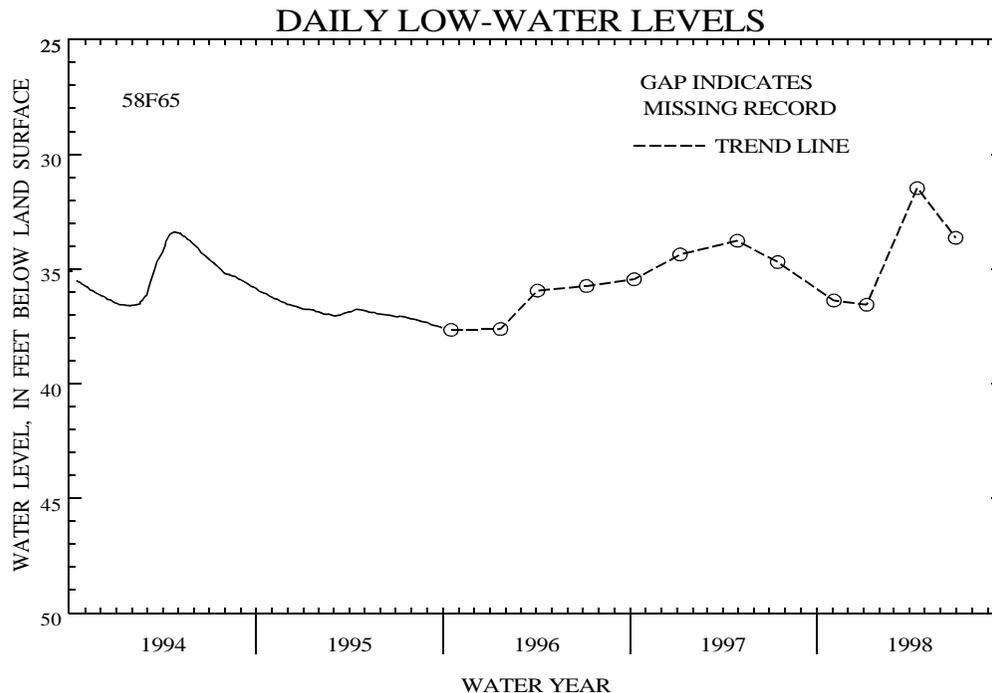
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction.

PERIOD OF RECORD.--November 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.47 ft below land-surface datum, Apr. 16, 1998; lowest recorded, 38.38 ft below land-surface datum, Mar. 13, 1992.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	36.37	JAN 07	36.55	APR 16	31.47	JUN 30	33.63
WATER YEAR 1998		HIGHEST	31.47	APR 16, 1998			
		LOWEST	36.55	JAN 07, 1998			



GROUND-WATER LEVELS

YORK COUNTY

371535076373501. Local number, 59F 1 SOW 027.

LOCATION.--Lat 37°13'04", long 76°29'19", Hydrologic Unit 02080107, at U.S. Naval Supply Center, 1.6 mi southeast of Yorktown. Owner: U.S. Naval Supply Center.

AQUIFER.--Chickahominy-Piney Point aquifer of Eocene-Oligocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 10 in., depth 446 ft, screened 421 to 446 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 11, 1985, to July 7, 1995, bimonthly measurement with chalked tape. Sept. 10, 1971, to Oct. 10, 1985, occasional measurement with chalked tape. Apr. 10, 1970, to Sept. 10, 1971, continuous strip-chart recorder. Prior to Apr. 10, 1970, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 50 ft above sea level, from topographic map. Measuring point: Top of casing, 2.8 ft above land-surface datum.

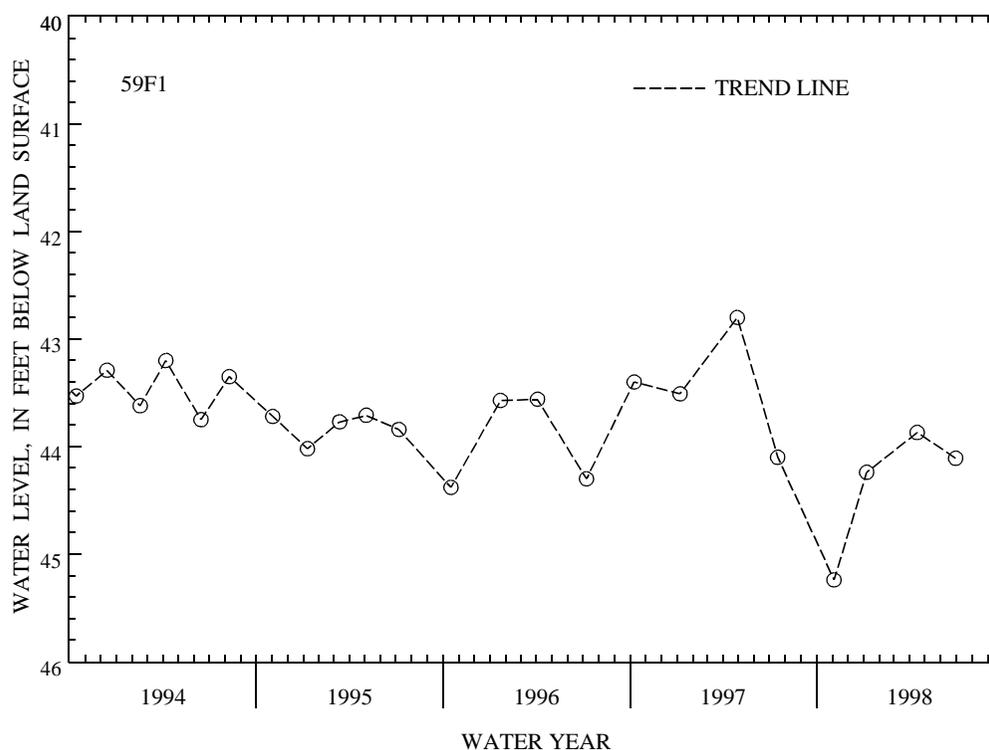
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--October 1969 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.00 ft below land-surface datum, Oct. 27, 1969; lowest measured, 45.24 ft below land-surface datum, Nov. 4, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	45.24	JAN 07	44.24	APR 16	43.87	JUN 30	44.11
WATER YEAR 1998 HIGHEST		43.87	APR 16, 1998				
LOWEST		45.24	NOV 04, 1997				



GROUND-WATER LEVELS

YORK COUNTY

370841076275203. Local number, 59F 73 SOW 184B.

LOCATION.--Lat 37°08'41", long 76°27'52", Hydrologic Unit 02080108, 800 ft south of State Highway 620, 0.4 mi southwest of intersection of State Highway 620 and U.S. Highway 17, and 2.2 mi southwest of Dare. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Cornwallis Cave aquifer of Pliocene-Holocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 39 ft, diameter 2.0 in. from 39 to 60 ft, depth 60 ft, screened 50 to 60 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 4, 1991, to July 7, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sept. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 42 ft above sea level, from topographic map. Measuring point: Top of casing, 1.7 ft above land-surface datum.

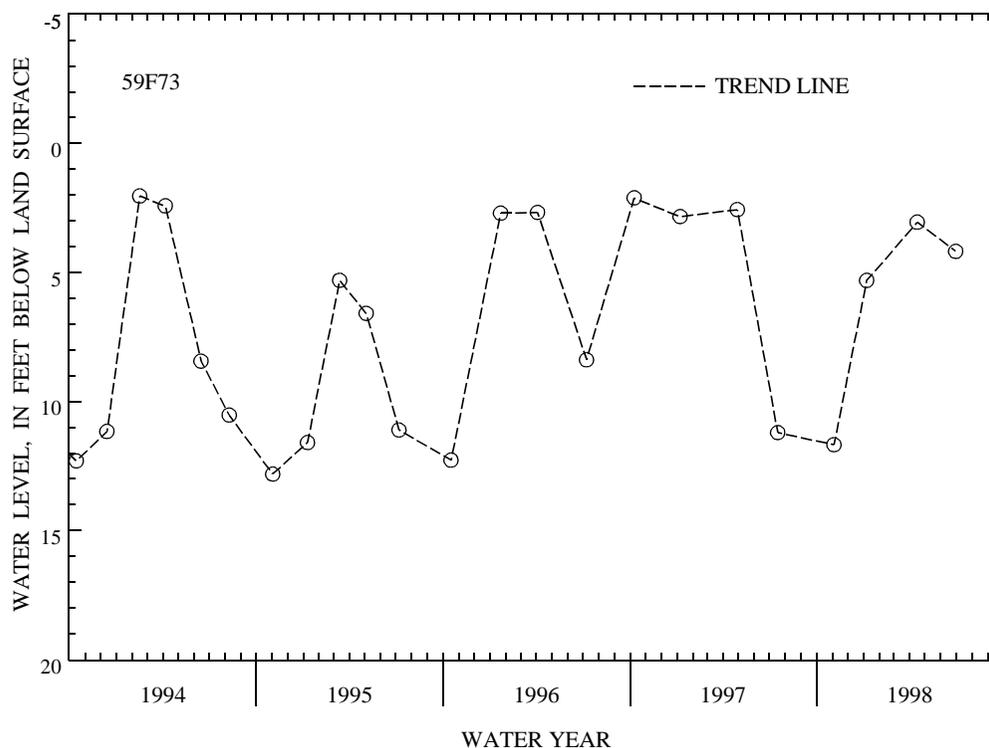
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--July 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.03 ft below land-surface datum, Feb. 15, 1994; lowest measured, 12.81 ft below land-surface datum, Nov. 2, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	11.67	JAN 07	5.31	APR 16	3.05	JUN 30	4.18
WATER YEAR 1998	HIGHEST	3.05	APR 16, 1998				
	LOWEST	11.67	NOV 04, 1997				



GROUND-WATER LEVELS

YORK COUNTY

370841076275204. Local number, 59F 74 SOW 184C.

LOCATION.--Lat 37°08'41", long 76°27'52", Hydrologic Unit 02080108, 800 ft south of State Highway 620, 0.4 mi southwest of intersection of State Highway 620 and U.S. Highway 17, and 2.2 mi southwest of Dare. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 20 ft, screened 10 to 20 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 12, 1991, to July 7, 1995, bimonthly measurement with chalked tape. Prior to Sept. 12, 1991, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 42 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 2.8 ft above land-surface datum prior to Nov. 6, 1991; top of casing, 1.80 ft thereafter.

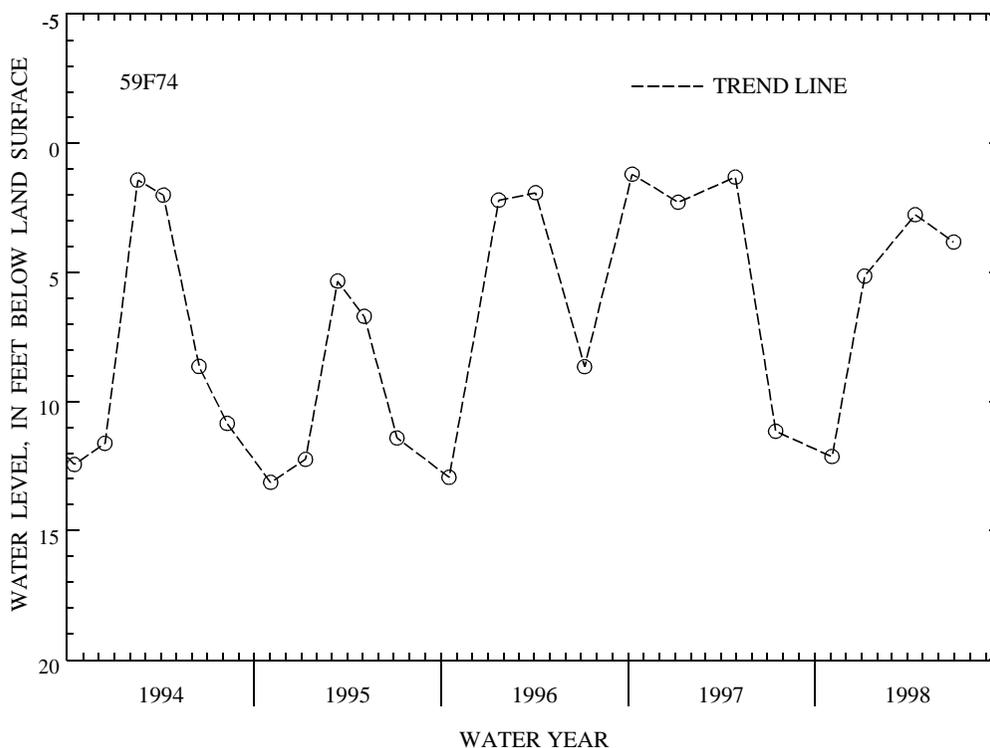
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--July 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.19 ft below land-surface datum, Oct. 9, 1996; lowest recorded, 13.20 ft below land-surface datum, Dec. 14, 15, 20, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	12.13	JAN 07	5.14	APR 16	2.76	JUN 30	3.82
WATER YEAR 1998 HIGHEST		2.76	APR 16, 1998				
LOWEST		12.13	NOV 04, 1997				



GROUND-WATER LEVELS

YORK COUNTY

370934076251402. Local number, 59F 76 SOW 185A.

LOCATION.--Lat 37°09'34", long 76°25'14", Hydrologic Unit 02080108, 300 ft west of Kings Grant Road, 0.2 mi south of intersection of Kings Grant Road and State Highway 621, and 1.2 mi southeast of Dare. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 120 ft, screened 100 to 120 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 3, 1991, to July 7, 1995, bimonthly measurement with chalked tape. Prior to Sept. 3, 1991, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 9.79 ft above sea level. Measuring point: Top of recorder shelf, 3.0 ft above land-surface datum prior to Nov. 6, 1991; top of casing, 1.80 ft thereafter. Readings from July 1990 to August 1991 should be 3.0 ft lower than previously published.

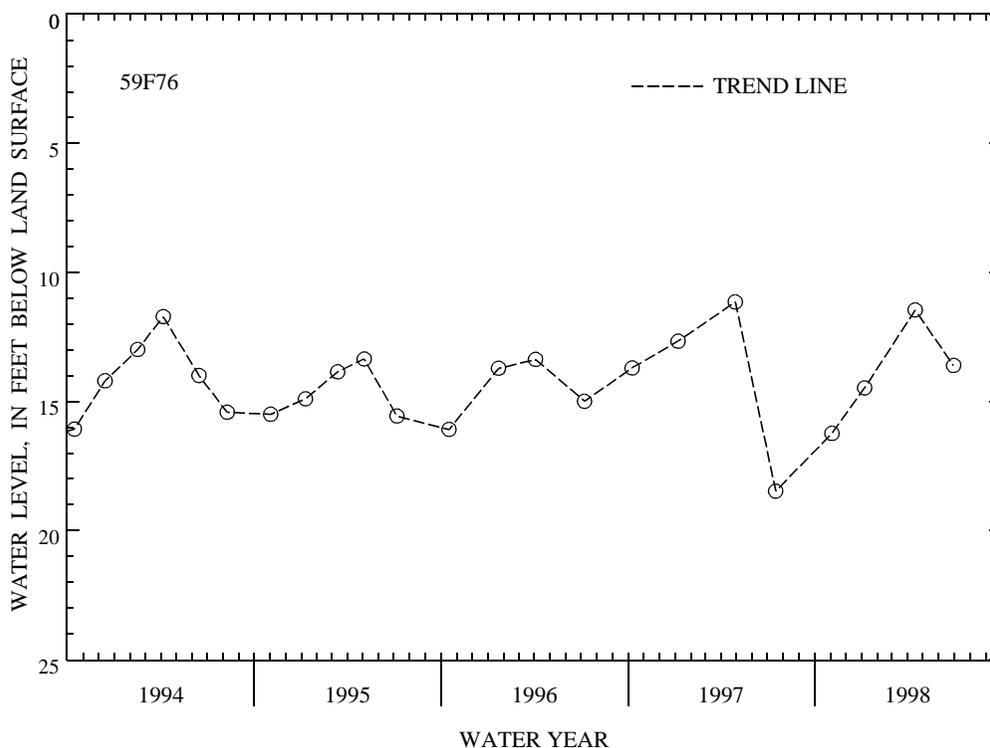
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--July 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.45 ft below land-surface datum, Apr. 29, 1997; lowest recorded, 22.45 ft below land-surface datum, July 12, 1991.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	16.23	JAN 07	14.47	APR 16	11.45	JUN 30	13.60
WATER YEAR 1998		HIGHEST	11.45	APR 16, 1998			
		LOWEST	16.23	NOV 04, 1997			



GROUND-WATER LEVELS

YORK COUNTY

370934076251403. Local number, 59F 77 SOW 185B.

LOCATION.--Lat 37°09'34", long 76°25'14", Hydrologic Unit 02080108, 300 ft west of Kings Grant Road, 0.2 mi south of intersection of Kings Grant Road and State Highway 621, and 1.2 mi southeast of Dare. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2.0 in., depth 120 ft, screened 110 to 120 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 4, 1991, to July 7, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sept. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 10.05 ft above sea level. Measuring point: Top of casing, 1.3 ft above land-surface datum.

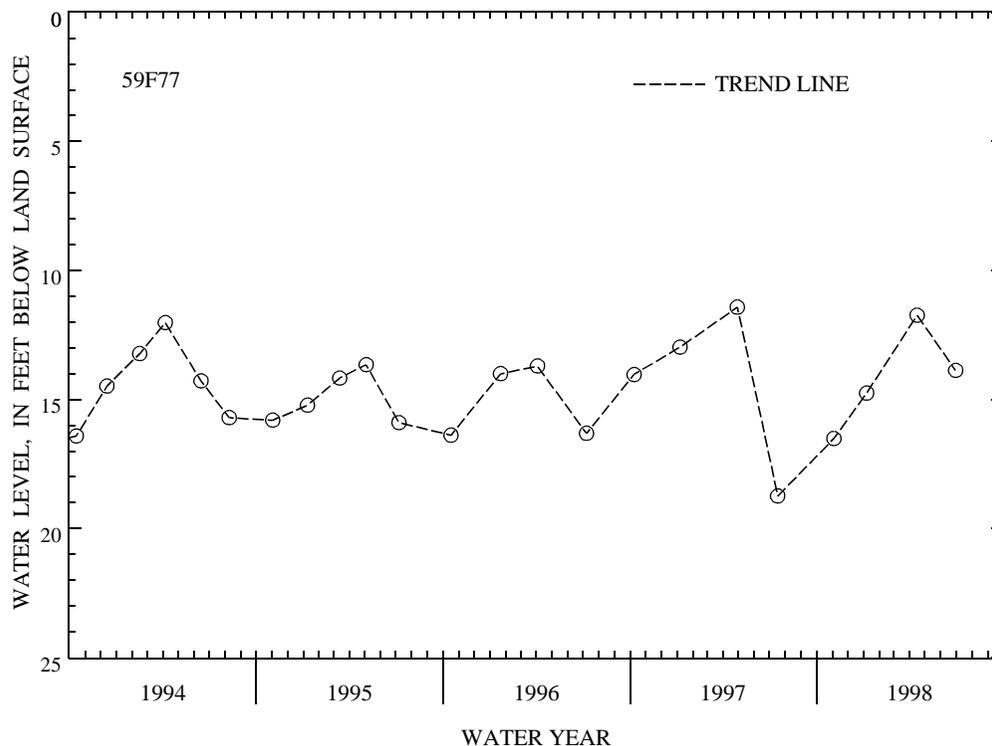
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--January 1991 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.42 ft below land-surface datum, Apr. 29, 1997; lowest measured, 19.31 ft below land-surface datum, July 3, 1991.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	16.51	JAN 07	14.75	APR 16	11.73	JUN 30	13.87
WATER YEAR 1998 HIGHEST		11.73	APR 16, 1998				
LOWEST		16.51	NOV 04, 1997				



GROUND-WATER LEVELS

YORK COUNTY

370934076251404. Local number, 59F 78 SOW 185C.

LOCATION.--Lat 37°09'34", 76°25'14", Hydrologic Unit 02080108, 300 ft west of Kings Grant Road, 0.2 mi south of intersection of Kings Grant Road and State Highway 621, and 1.2 mi southeast of Dare. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Cornwallis Cave aquifer of Pliocene-Holocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 50 ft, screened 40 to 50 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 4, 1991, to July 7, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sept. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 9.88 ft above sea level. Measuring point: Top of casing, 1.8 ft above land-surface datum.

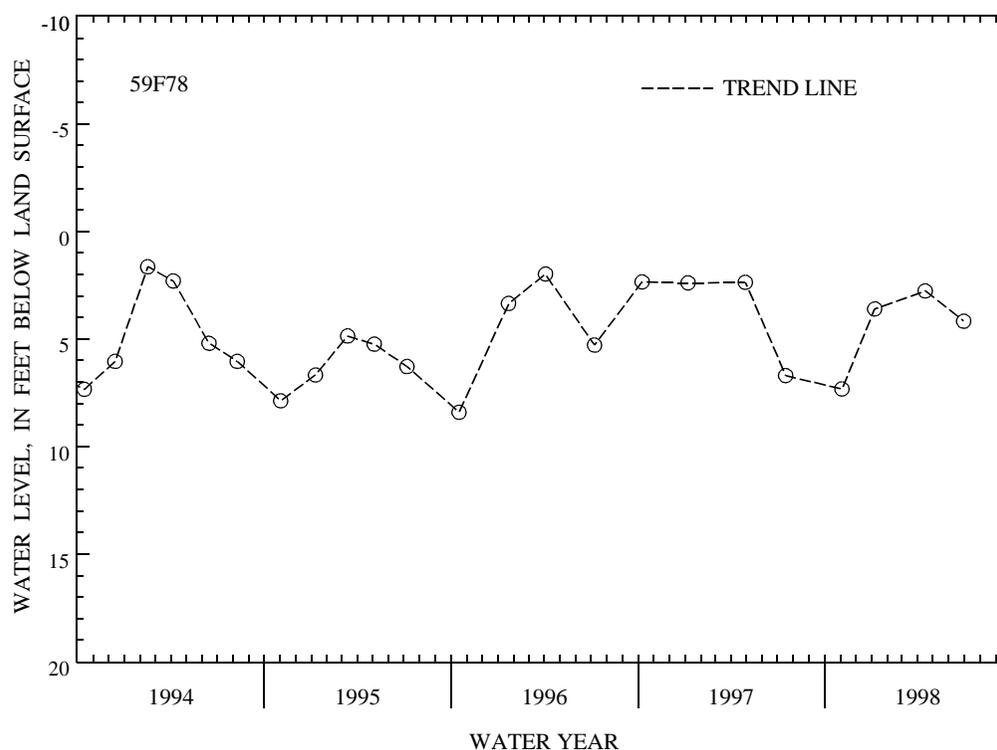
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.64 ft below land-surface datum, Feb. 15, 1994; lowest measured, 8.40 ft below land-surface datum, Oct. 17, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	7.32	JAN 07	3.60	APR 16	2.76	JUN 30	4.17
WATER YEAR 1998 HIGHEST		2.76	APR 16, 1998				
LOWEST		7.32	NOV 04, 1997				



GROUND-WATER LEVELS

YORK COUNTY

370934076251405. Local number, 59F 79 SOW 185D.

LOCATION.--Lat 37°09'34", long 76°25'14", Hydrologic Unit 02080108, 300 ft west of Kings Grant Road, 0.2 mi south of intersection of Kings Grant Road and State Highway 621, and 1.2 mi southeast of Dare. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 15 ft, screened 5 to 15 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 3, 1991, to July 7, 1995, bimonthly measurement with chalked tape. Prior to Sept. 3, 1991, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 9.70 ft above sea level. Measuring point: Top of recorder shelf, 3.2 ft above land-surface datum prior to Nov. 6, 1991; top of casing, 1.80 ft thereafter. Readings from July 1990 to August 1991 should be 3.2 ft lower than previously published.

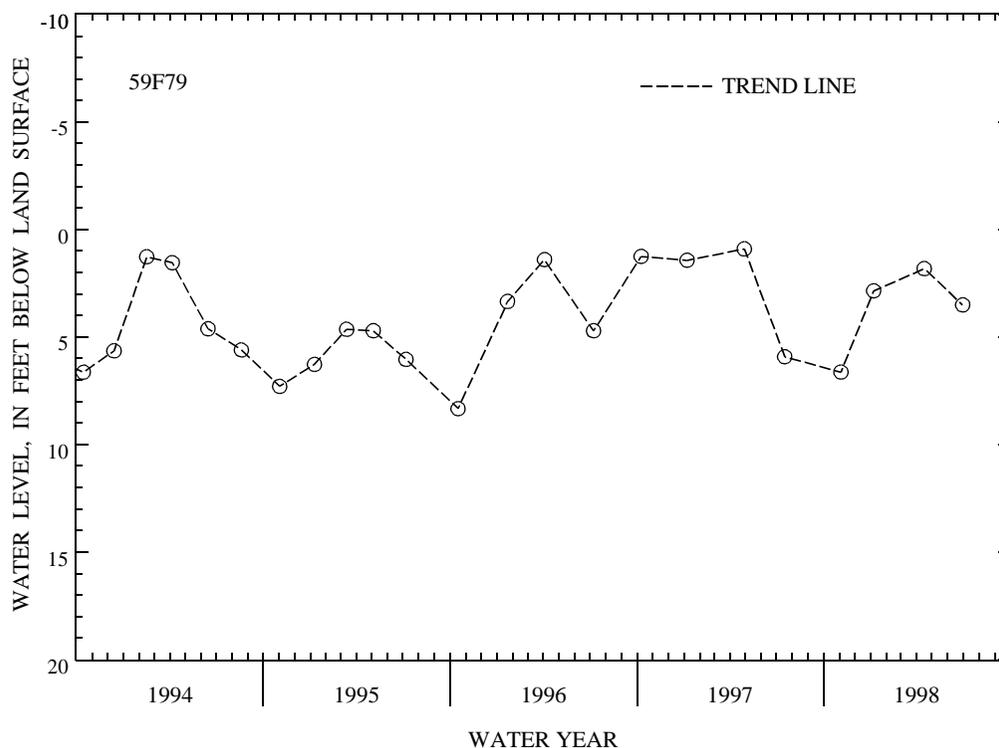
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--July 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.90 ft below land-surface datum, Apr. 29, 1997; lowest recorded, 9.94 ft below land-surface datum, Dec. 6-8, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	6.63	JAN 07	2.85	APR 16	1.82	JUN 30	3.51
WATER YEAR 1998	HIGHEST	1.82	APR 16, 1998				
	LOWEST	6.63	NOV 04, 1997				



GROUND-WATER LEVELS

YORK COUNTY

370958076291502. Local number, 59F 81 SOW 186A.

LOCATION.--Lat 37°09'58", long 76°29'15", Hydrologic Unit 02080108, 100 ft south of State Highway 173, 0.8 mi southwest of intersection of U.S. Highway 17 and State Highway 173, and 2.8 mi west of Dare. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 132 ft, screened 112 to 132 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 4, 1991, to July 7, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sept. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 50.77 ft above sea level. Measuring point: Top of casing, 1.6 ft above land-surface datum.

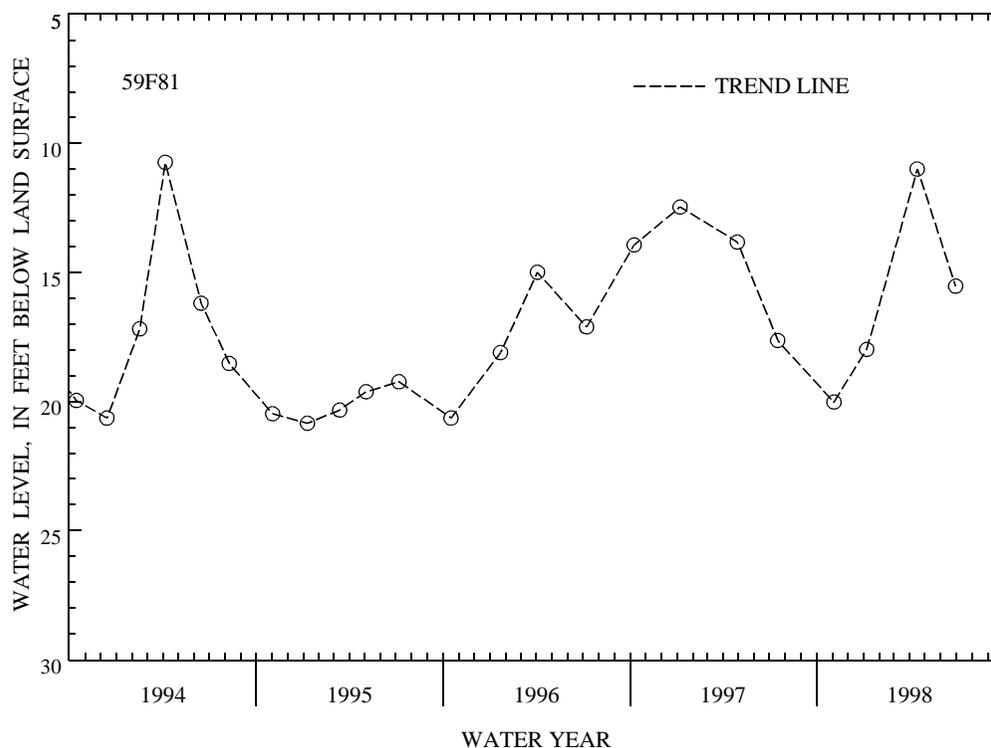
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.73 ft below land-surface datum, Apr. 6, 1994; lowest measured, 21.55 ft below land-surface datum, Jan. 8, 1992.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	20.02	JAN 07	17.98	APR 16	10.99	JUN 30	15.53
WATER YEAR 1998 HIGHEST		10.99	APR 16, 1998				
LOWEST		20.02	NOV 04, 1997				



GROUND-WATER LEVELS

YORK COUNTY

371207076265502. Local number, 59F 86 SOW 188A.

LOCATION.--Lat 37°12'07", long 76°26'55", Hydrologic Unit 02080107, 200 ft north of State Highway 718, 0.3 mi east of intersection of State Highways 173 and 718, and 2.3 mi northwest of Dare. Owner: Virginia Department of Environmental Quality.

AQUIFER.--York County shallow aquifer system (undivided) of Miocene-Holocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 99 ft, screened 79 to 99 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 4, 1991, to July 7, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sept. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 7 ft above sea level, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.

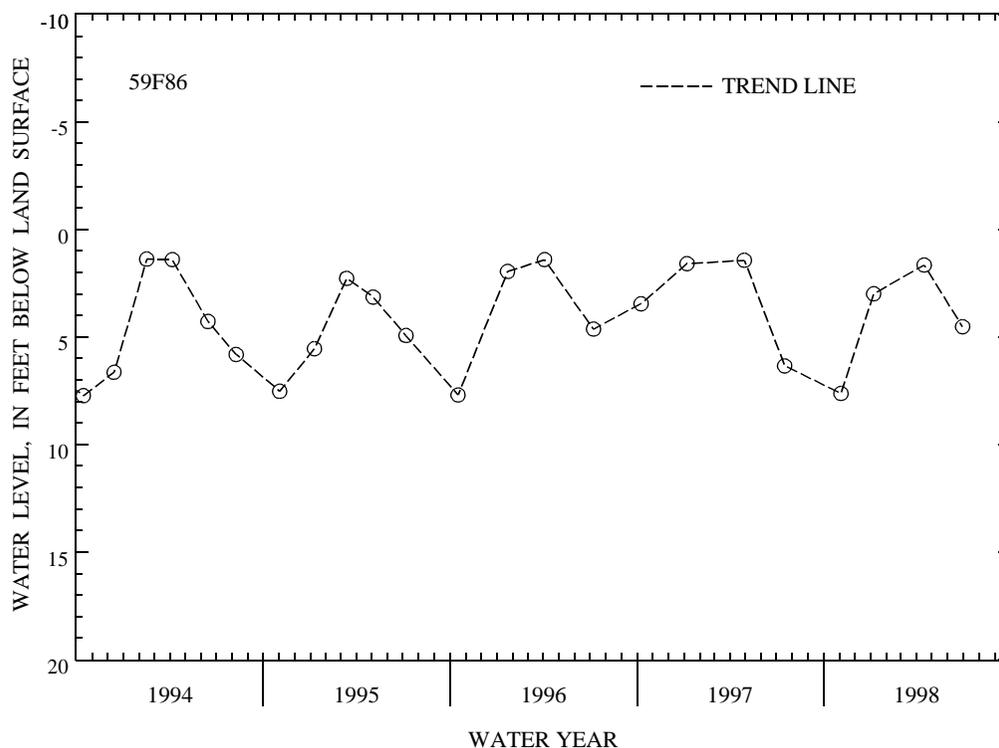
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.37 ft below land-surface datum, Feb. 15, 1994; lowest measured, 7.73 ft below land-surface datum, Oct. 14, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	7.62	JAN 07	2.99	APR 16	1.65	JUN 30	4.52
WATER YEAR 1998		HIGHEST	1.65	APR 16, 1998			
		LOWEST	7.62	NOV 04, 1997			



GROUND-WATER LEVELS

YORK COUNTY

371053076252202. Local number, 59F 89 SOW 189A.

LOCATION.--Lat 37°10'53", long 76°25'22", Hydrologic Unit 02080108, 500 ft north of State Highway 617, 0.6 mi northeast of intersection of State Highways 620 and 617, and 1.3 mi northeast of Dare. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 97 ft, screened 77 to 97 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 4, 1991, to July 7, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sept. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 4.63 ft above sea level. Measuring point: Top of casing, 1.5 ft above land-surface datum.

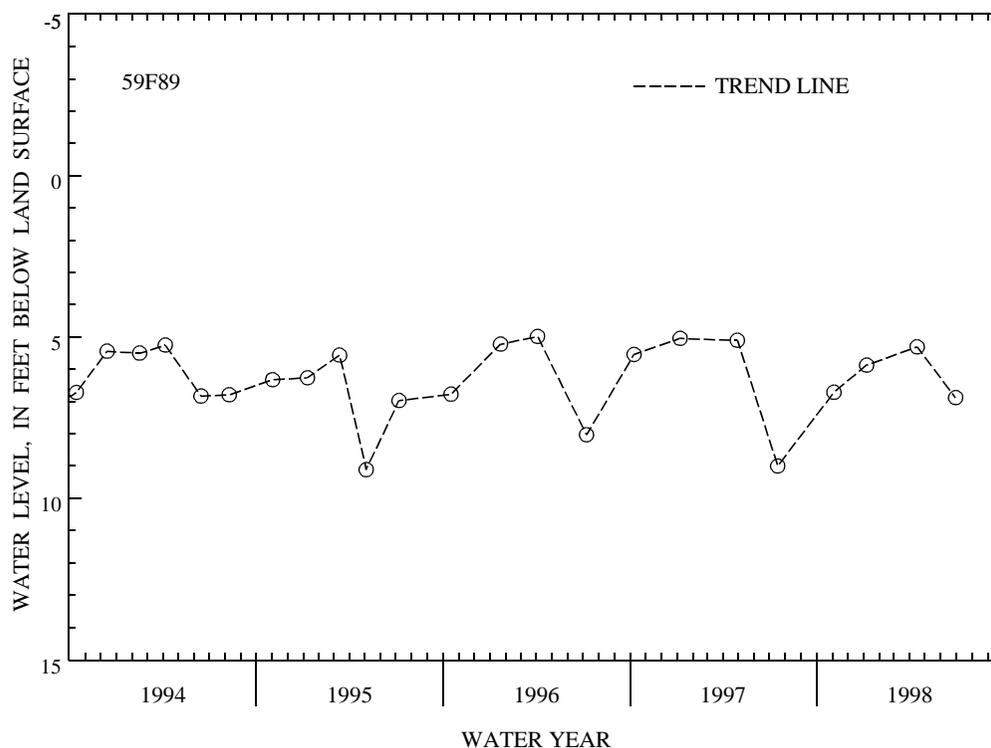
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.86 ft below land-surface datum, Dec. 15, 1992; lowest measured, 9.11 ft below land-surface datum, May 4, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	6.71	JAN 07	5.87	APR 16	5.30	JUN 30	6.88
WATER YEAR 1998 HIGHEST		5.30	APR 16, 1998				
LOWEST		6.88	JUN 30, 1998				



GROUND-WATER LEVELS

YORK COUNTY

371053076252203. Local number, 59F 96 SOW 189B.

LOCATION.--Lat 37°10'53", long 76°25'22", Hydrologic Unit 02080108, 500 ft north of State Highway 617, 0.6 mi north-east of intersection of State Highways 620 and 617, and 1.3 mi northeast of Dare. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 15 ft, screened 5 to 15 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 4, 1991, to July 7, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sept. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 4.77 ft above sea level. Measuring point: Top of casing, 1.6 ft above land-surface datum.

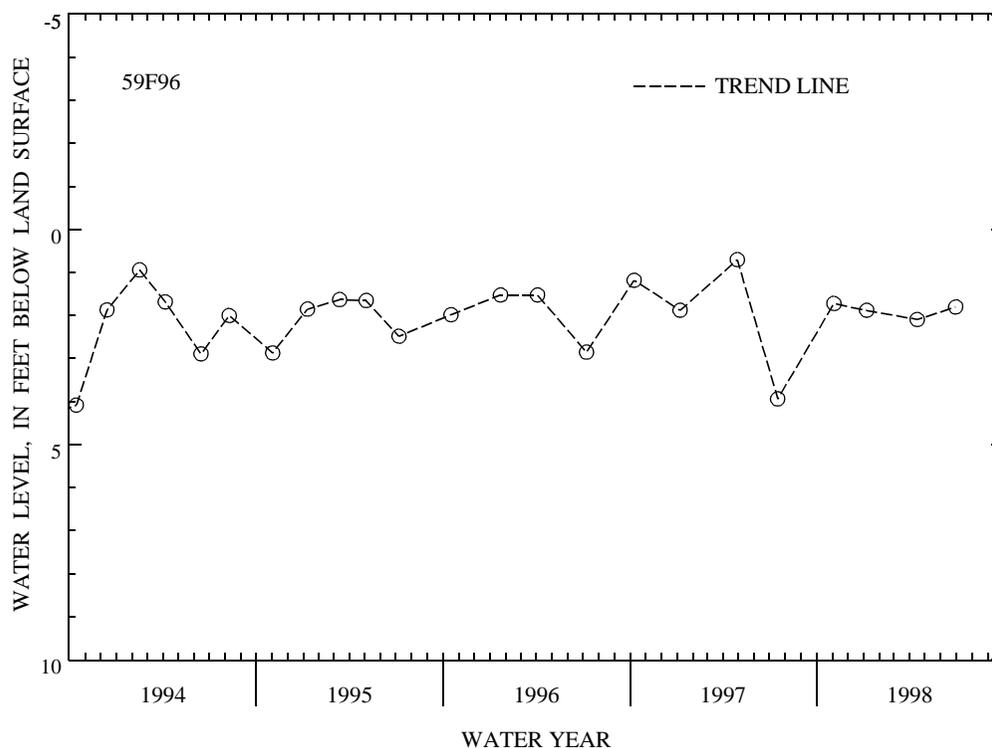
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.70 ft below land-surface datum, Apr. 29, 1997; lowest measured, 4.68 ft below land-surface datum, June 11, 1991.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL		
NOV 04	1.72	JAN 07	1.88	APR 16	2.09	JUN 30	1.80		
WATER YEAR 1998		HIGHEST	1.72	NOV 04, 1997		LOWEST	2.09	APR 16, 1998	



GROUND-WATER LEVELS

YORK COUNTY

371314076252203. Local number, 59F 99 SOW 190B.

LOCATION.--Lat 37°13'13", long 76°25'25", Hydrologic Unit 02080107, 50 ft north of State Highway 629, 0.8 mi north-east of intersection of State Highways 173 and 629, and 1.8 mi north of Seaford. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 15 ft, screened 5 to 15 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 4, 1991, to July 7, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sept. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 3.49 ft above sea level. Measuring point: Top of casing, 1.5 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.04 ft below land-surface datum, Apr. 29, 1997, Feb. 15, 1994; lowest measured, 3.62 ft below land-surface datum, June 11, 1991, Aug. 18, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL		
NOV 04	0.37	JAN 07	0.29	APR 16	0.52	JUN 30	0.59		
WATER YEAR 1998		HIGHEST	0.29	JAN 07, 1998		LOWEST	0.59	JUN 30, 1998	

